Sex Roles (2011) 64:732–747
DOI 10.1007/s11199-010-9895-y

ORIGINAL ARTICLE

# Evolution and Rape: A Feminist Darwinian Perspective

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Published online: 27 November 2010
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**Abstract** It is commonly thought that feminist and evolutionary explanations of rape cannot be integrated. As I aim to show, this view is incorrect. Although feminist and evolutionary approaches are not compatible on all fronts, theories incorporating factors from both perspectives have been proposed, on theoretical as well as empirical grounds. Unfortunately, the debate between feminist and evolutionary scholars is frequently characterized by a lack of mutual openness and by the use of illegitimate arguments. The book *A Natural History of Rape* (Thornhill and Palmer 2000), and the controversy it provoked, is a case in point. I will highlight a more productive interaction of both perspectives by discussing the work of the feminist evolutionary biologist Barbara Smuts.

**Keywords** Rape · Feminism · Evolution · Dominance · Control

## Introduction

Just as there is no single feminist theory of rape, there is no single evolutionary theory of rape. Yet both approaches differ in important respects. The predominant view within feminism (and the social sciences) holds that men learn to rape, and that a rapist is motivated primarily not by a desire for sex but by the desire to dominate and control women, in an attempt to preserve a system of male supremacy (e.g. Brownmiller 1975; Buchwald et al. 2005; Card 1996; Herman 1990; Ward 1995). Although feminist theorists have taken a variety of positions on the sex/power question, in general they have emphasized the goals of dominance and control (Muehlenhard et al. 1996). An evolutionary perspective challenges this view of rape as being a product of patriarchy and as having little or nothing to do with sexual desire. According to evolutionary scientists, rape's origins predate the emergence of our species, one of the arguments being that forced copulation is widespread in the animal world (e.g. Clutton-Brock and Parker 1995; Palmer 1989b). In this view, which is informed by Robert Trivers's parental investment theory (Trivers 1972), rape is ultimately caused by differences between male and female evolved sexuality. It can either be an adaptation, which means it was directly favored by selection because it increased male reproductive success, or it can be a by-product of other evolved dispositions that were adaptive in ancestral times. Either way, rape is seen as condition-dependent, with different hypotheses proposed about the conditions favoring rape, and nonsexual motives allowed an input ranging from substantial to almost non-existent.

Although evolutionary theories of rape have been around since 1979, they only gained major attention in 2000, with the publication of *A Natural History of Rape: Biological Bases of Sexual Coercion* by the evolutionary biologist Randy Thornhill and the anthropologist Craig Palmer. The book's reception attested to a state of affairs condemned strongly in the book itself: the strong hostility of many feminists and social scientists to the possibility that biology or the evolutionary sciences might contribute to our understanding of the human mind and behavior. As I have acknowledged elsewhere, this hostility is to some extent understandable, given the history of male bias in science and given the danger that appeals to biology might be used

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as justification for repressive policies, as they often have. Yet, as I have argued, feminism will have to forsake this hostility if it wants to retain its intellectual credibility. The evidence is overwhelming that we are not born as blank slates or psychosexually neutral (Vandermassen 2004, 2005; see also Geary 2010; Tooby and Cosmides 1992). The nature-nurture dichotomy is not just outdated; from a modern scientific perspective terms like nature and nurture do not even make sense. They are, as the philosopher of science Harmon Holcomb III says, "rooted in the naive realism that what exists is divided up in the same way in which we organize our thought" (1993, p. 307). Applying basic, well-established knowledge from the evolutionary sciences to the study of the human mind can only enrich our understanding of ourselves. In this paper I will discuss prevailing evolutionary theories of rape from a feminist Darwinian perspective. I will argue that feminist and evolutionary accounts need not be as incompatible as they are often perceived to be, by feminists as well as evolutionists. My particular focus will be on *A Natural History of Rape*, as this book has come to represent *the* evolutionary analysis of sexual coercion. I will demonstrate that evolutionary approaches more congenial to feminist theories are available than Thornhill and Palmer suggest, and that, much as these authors may be right in suspecting some critics of a Darwinian approach of being ideologically motivated and of not coming up to the mark scientifically, their work contains serious biases and flaws as well.

Before proceeding, it is important to clarify a distinction that is of major significance within evolutionary biology: that between proximate and ultimate levels of analysis. Proximate (immediate) causes of a trait or behavior refer to causes operating during an organism's lifetime, such as genes, hormones, brain mechanisms, individual life experiences, and sociocultural influences. One question always remains, however: why do these proximate mechanisms exist? Why do humans have the psychological equipment that they have, and why does it interact with given environmental stimuli in some ways rather than others? Answers to "why" questions are to be found in the evolutionary processes by which a trait came to be characteristic of a species. They are called ultimate (evolutionary) explanations. Proximate and ultimate levels of explanation are complementary, and both need to be addressed if we want to understand fully any feature of life. Rather than just being an "extra," the use of an ultimate level of explanation is highly informative for the study of proximate causation, for the mental mechanisms processing an individual's experiences were created by the process of evolution by selection. In that sense our evolutionary history "is just as directly causal to a person's actions as any present stimulus or past experience" (Wilson and Daly 1993, p. 110). A consideration of the way the human mind has been shaped by evolution can guide hypothesis formation on proximate levels of analysis, for it makes the existence and design of some proximate mechanisms more probable than others. That human males and females should have evolved to be psychologically identical, for example, is a theoretical impossibility, and, indeed, turns out to be untrue (see, e.g., Geary 2010; Symons 1979).

## Evolutionary Views of Rape

In 1979, the psychologist Richard Hagen, the evolutionary biologists Richard Alexander and Katherine Noonan, and the anthropologist Donald Symons were the first to apply evolutionary theory to the subject of human rape. Their starting-point was Trivers's parental investment theory, which explains why in sexually reproducing species males are usually more indiscriminate when it comes to sexual partners, whereas females are usually the more sexually choosy sex (Trivers 1972). Among mammals in particular, females must invest a huge amount of time and energy in each offspring in order to reproduce at all, whereas males can reproduce simply by delivering some sperm. Various sex differences in sexual behavior follow from this asymmetry in initial parental investment, Trivers showed. For males more than females, reproductive success is limited by the number of fertile partners they mate with. For females more than males, on the other hand, reproductive success is limited by the time and energy required to successfully raise offspring. Males therefore are usually more eager than females to mate at any time with any partner who may be fertile, whereas females are usually more choosy than males: they look for mates who seem likely to provide good genes, protection, parental care, or resources. The resulting conflict of interest between the sexes can lead males to use force or the threat of force in order to get sexual access to females. No conscious strategizing is implied here, as it never is within evolutionary discourse. The point is that behavioral strategies which increase an organism's fitness relative to others will spread through the population and become evolutionarily successful.

Hagen (1979) had little patience with the feminist idea that rape is a crime of violence and power rather than lust. He dismissed the view as "silly" (p. 97), and proposed an adaptive explanation: men have been selected to be prone to stealing sex when the perceived risk is low. Men who do so passed on more genes, and hence their raping propensities, than their more risk-aversive counterparts, he contended. Alexander and Noonan (1979) suggested that in human evolutionary history forcing a female into sex might have been a viable male reproductive strategy, since her unwillingness would sometimes imply a romantic relation-

ship, and hence the possibility of paternal care from her unsuspecting partner.

Needed to support an adaptive account, however, is the identification of psychological mechanisms designed specifically for rape. Symons, in his seminal book *The Evolution of Human Sexuality* (1979), contended that available data were not "even close to sufficient to warrant the conclusion that rape itself is a facultative adaptation in the human male" (p. 284). According to Symons, rape is better seen as a by-product of evolved differences between male and female sexuality. As he argues the case, as a result of sexual selection, men typically exhibit a greater desire for sex-partner variety than women. They are more eager to copulate, more willing to engage in impersonal sex, and less discriminating when it comes to sexual partners. In Symons's view, these psychological mechanisms are the adaptations underlying rape. They give men a taste for low-cost, impersonal sex, which can lead to rape whenever rape is perceived to entail little risk. Symons, however, acknowledging the complexity of human motivation, leaves much room for nonsexual drives as well:

> Sex and power are not antithetic; human motives are complex, intertwined, and often conflicting (…). Surely no completed rape has ever occurred in which the rapist did not experience some sexual feeling, and very likely no rape has ever occurred in which this was the only feeling the rapist experienced. (Symons 1979, p. 283)

More pioneers were to follow, most notably the evolutionary biologists William Shields and Lea Shields (1983), and the evolutionary biologists Thornhill and Thornhill (1983). These scientists were the first to address in detail the available evidence on patterns of human rape, and to develop more elaborate models. Both couples support an adaptive position, viewing rape as an evolved condition-dependent alternative within the reproductive behavioral repertoire of men. The Thornhills suggest that raping behavior will be employed by men who lack the status and resources necessary to attract women. In our evolutionary history, sexually unpopular men willing to incur the costs associated with rape would have had more reproductive success than non-rapists, thereby passing on this propensity to the next generations. Most of the evidence, however, refutes the Thornhills' hypothesis: sexually coercive men tend to be more, rather than less, sexually experienced than other men, and rape is by no means restricted to low-status individuals (e.g. Lalumière et al. 1996). The Shieldses, in contrast, hypothesize that *all* men will rape in the appropriate circumstances. According to them, all men possess a repertoire of three behavioral alternatives: honest courtship, deceitful courtship, and forcible rape. The most successful men, they argue, will be those who change tactics depending on variables such as the vulnerability and reproductive value of potential victims, and the perceived costs of raping. In discussing the rapist's motivation, the Shieldses allow for a considerable role of anger and hostility:

> Ultimately men may rape because it increases their biological fitness and thus rape may serve, at least in part, a reproductive function, but in an immediate proximate sense it is as likely that they rape because they are angry or hostile, as the feminists suggest. (Shields and Shields 1983, p. 122)

As they put it, warmth and affection are antithetical to a potential for violence, so it is likely that feelings of anger and hostility are associated with forced sex. Hence, the theory of the Shieldses accommodates feminist views of rape, at least in reference to proximate causes. It is also congenial to feminist perspectives in that it assumes all men to be potential rapists. Ultimately, however, in their view rape may share a common reproductive function with consensual sex. It is crucial to emphasize that the phrase "reproductive function," and evolutionary explanations in general, do not imply that rapists are, consciously or unconsciously, seeking to propagate their genes. Evolution by selection just retains those characteristics that led to greater reproductive success. If a male psyche disposed to raping under appropriate conditions (low costs) was reproductively more successful than a male psyche incapable of sexual coercion, the genes underlying the design of the former would have proliferated. The facultative disposition would have become typical of men in general, but it does not tell us anything about men's motivation for raping. Evolutionary function and psychological motivation should not be conflated.

A few years later the sociologist Lee Ellis (1989, 1991) posited what he called the "synthesized theory of rape." The theory holds that rape is motivated by two largely unlearned drives: the sex drive, which is on average stronger in men than in women, and an accompanying drive to possess and control anything that is valuable to one's survival and reproduction, such as resources and sex partners. As the drive to possess and control motivates people's (and most other animals') efforts to acquire sex, rape is sexually motivated, Ellis contends, and the aggressive and dominating behavior of rapists largely reflects tactics rather than goals. It is unclear, however, what this postulated drive to possess and control adds to the analysis of rape specifically, as it is assumed to motivate *all* sexual behavior. That men and women are often extremely sexually possessive of one another seems, moreover, hardly convincing evidence for such a drive in humans as Ellis considers it to be.

In 1991 the anthropologist Craig Palmer critically examined the adaptive explanations put forth by Shields and Shields (1983) and Thornhill and Thornhill (1983). He concluded, as had Symons in 1979, that there was insufficient evidence to support a rape-as-adaptation view in humans. Palmer and R. Thornhill would finally join forces, exploring their respective hypotheses (non-adaptive versus adaptive) in a book that would set back by years the relationship between feminism and evolutionary psychology: *A Natural History of Rape: Biological Bases of Sexual Coercion* (2000).

## *A Natural History of Rape*, or a Missed Opportunity to Integrate Perspectives

*A Natural History of Rape: Biological Bases of Sexual Coercion* (henceforth ANHR) created a storm of controversy, partly because of its authors' relentless, adversarial criticism of feminist and social scientific accounts of sexual aggression (they refer to these accounts as "the social science explanation of rape"). The book makes many provocative claims about the apparent uselessness of feminist and social scientific research, such as the claim that for social scientists "accepting the evolutionary approach would amount to admitting that their previous approach was not valid" (pp. 115–116), and that "[t]he choice between the social science explanation's answers and the evolutionarily informed answers provided in this book is essentially a choice between ideology and knowledge" (Thornhill and Palmer 2000, p. 188).

Few critics for their part understood, or seemed willing to understand, what the book was about. Most comments, whether written by science writers or by academics, were riddled with misrepresentations, misunderstandings, political insinuations, and terms of abuse. Thornhill and Palmer's hypotheses were dismissed, inter alia, as "extra-special loony" (Brownmiller 2000), as "mind-bogglingly sloppy science" and "rubbish" (Wertheim 2000, pp. 31–32), and as "ludicrous" and "scientific pornography" (Rose 2001, pp. 727–728). Hilary Rose (2001) suggested that the possessive pronoun in the authors' dedication "for the women and girls in our lives" was indicative of their male-centeredness. Natalie Angier (2000) insinuated that the book's political purpose was to keep women in line. One commentator, Dorothy Einon (2002), even fabricated a quote, citing the authors as claiming, on page 132 of ANHR, that "a man's sole motivation for committing rape (is) a desire for sexual gratification" (p. 453). To be found on that page, however, is simply the question: "Isn't it possible for a male's sole motivation for committing a rape to be a desire for sexual gratification?"

The predominantly hostile press coverage it received makes it hardly surprising that ANHR quickly became, as the evolutionary psychologist Geoffrey Miller (2000, p. 53) calls it, "an ideological touchstone:" people who wanted to demonstrate their sympathy for rape victims or women in general learned that they must dismiss the book as sexist, reactionary pseudo-science. It was none of those, but neither was it the instance of impeccable scholarship one would expect, given the confidence with which its authors position themselves against what they call the "largely political rather than scientific" literature produced by feminism and the social sciences (Thornhill and Palmer 2000, p. xiii).

In the book Thornhill and Palmer argue that rape will be understood only by letting us be guided by the most powerful scientific theory concerning life on earth: the theory of evolution by selection. As they observe, a Darwinian perspective throws light on many questions about sexual coercion, such as why it occurs in all known cultures, why rapists are overwhelmingly young men and their victims overwhelmingly young women, why rape is such a horrendous experience for the victim, and why it is often treated as a crime against the victim's husband. They contend that, while multiple motives may be involved in rape, the act is primarily caused by men's evolved sexuality. Thornhill favors a slightly modified version of the adaptive explanation he explored in earlier papers with N. W. Thornhill (Thornhill and Thornhill 1983, 1989, 1990a, b, c, 1991, 1992a, b). Palmer favors a non-adaptive explanation, suggesting that rape is a by-product of men's greater interest in promiscuous, impersonal sex. After examining the evidence, the authors conclude that the question of whether rape is an adaptation or a by-product cannot yet be definitively answered. They do agree, however, and I agree with them, that the ultimate explanation of rape lies in the distinctive evolution of male and female sexuality. If women had been selected to be willing to have sex with any man under any circumstances, rape would not occur. If men had been selected to be more sexually discriminating, rape would be far less frequent.

Part of the book is devoted to a sharp critique of "the social science explanation of rape:" the view of sexual coercion as a product of patriarchy and motivated by anger, dominance, and control rather than by sexual desire. Thornhill and Palmer consider this analysis to be deeply flawed, for several reasons. First, they explain, the view of an individual's psychology as being determined solely or mostly by socialization is entirely at odds with current evolutionary knowledge. Second, the arguments used to support the claim that rapists are not sexually motivated cannot withstand skeptical analysis. Third, the ethnographic evidence does not support the claim that learning is needed in order for rape to occur. Fourth, learning perspectives cannot account for the occurrence of rape in other species. Fifth, these perspectives rest on two metaphysical assump-

tions: the view of culture as an abstract, reified entity mysteriously causing people to act in certain ways, and the dichotomy of mind and body, with men apparently being able to go through all the physiological processes of sex without their minds experiencing any sexual motivation.

The data and theoretical arguments presented in ANHR support the authors' contention that theorists defending a "power, not sex" analysis are, indeed, committing major errors, and that sexual motivation is fundamental to rape (see also Palmer 1988, 1989a, b). Contrary to what Thornhill and Palmer suggest, however, this does not invalidate these perspectives wholesale. Although it cannot be true that all men would be united in an attempt to dominate all women, there is nothing in evolutionary theory that precludes factors such as hostility, anger, and the drive for power and control as non-trivially affecting the incidence of rape. Indeed, as we have seen, Shields and Shields (1983) deemed it likely that on a proximate level feminists might be correct in postulating hostility and anger as major motivating drives in rapists. Further on in this paper I will consider evolutionary researchers working from an explicitly feminist orientation. They too have suggested that the male drive to control female sexuality and hostility against women are major components of sexual coercion, thereby demonstrating that feminist and evolutionary approaches need not be incompatible on all fronts.

## Explanatory Gap

Thornhill and Palmer rightly insist that "[n]o aspect of life can be completely understood until both its proximate and its ultimate causation are fully known" (2000, p. 5). Yet there is little indication that they are open to a more than accidental role of nonsexual motives in rape causation. They do admit that an individual rapist may be motivated by nonsexual desires as well, but fail to engage seriously with theories proposing that there might be more to sexual aggression than merely an evolved male sexuality interacting with specific aspects of the environment. (Developmental cues affecting men's interest in rape as identified in ANHR are father's absence, a lack of enduring or committed relationships in general in the rearing environment, and poverty. These experiences are felt to mold a boy's sexual strategy, making him perceive the social environment as hostile and unstable, which makes him choose an exploitative mating strategy. Evolutionary psychology generally assumes that all individuals (of a given gender) share the same basic evolved psychological mechanisms and developmental programs, but these mechanisms and programs will produce variable behavior given different environmental conditions.) The authors' exasperation with the "not sex" view seems to make them unwilling even to consider the possibility that feminists and social scientists might have a point at all. Any possibility of integrating perspectives is dismissed out of hand:

> *in direct contrast to the social science explanation of rape*, the clearest implication of evolutionary theory is that the motivation for rape is a result of the differences between male and female *sexuality*. (Thornhill and Palmer 2000, p. 171, first italics added)

That there is no theoretical need to take such an extreme position is demonstrated by earlier work by R. Thornhill himself. In a 1992 paper co-authored by N. W. Thornhill, the authors readily admit to the importance of learning and socialization as causal factors in rape. They call the "view that the adaptationist and sociocultural perspectives are mutually exclusive" "erroneous" (Thornhill and Thornhill 1992b, p. 404). At that time, moreover, R. Thornhill did not consider a by-product hypothesis of rape merely to involve *sexual* adaptations. Whereas the Thornhills themselves defend an adaptive scenario, they hypothesize that, alternatively, rape might be a by-product of *two* kinds of adaptations: non-coercive sexual psychological adaptations together with coercive nonsexual psychological adaptations (Thornhill and Thornhill 1992a,b). In ANHR the notion of compatibility with sociocultural perspectives and the suggestion that nonsexual adaptations as well are needed to explain rape are no longer to be found. Ultimately as well as proximately, in the end rape comes down to differences in sexuality: "[t]he ultimate causes of human rape are clearly to be found in the distinctive evolution of male and female sexuality" (p. 84) and "the proximate causes of human rape lie in the different adaptations of male and female sexuality that were formed by selection in human evolutionary history" (p. 84).

> ANHR's by-product explanation as defended by Palmer holds that mechanisms in the human male concerning visual stimulation, autonomous sex drive, desire for a variety of partners, greater willingness to engage in impersonal sex, and less discriminating criteria of sexual partners could be sufficient to produce raping behavior. (Palmer 1991, p. 379)

But could they? Lust and a taste for impersonal sex may be prerequisites for rape, but going from experiencing sexual desire actually to forcing oneself unto an unwilling, struggling victim is a huge step. There is no theoretical reason why the former should lead to the latter. The male mind could have evolved to contain all the psychological mechanisms described by Palmer, and yet not generate any inclination to keep pursuing sex if a woman shows obvious

signs of distress. Although sexual desire may be sufficient to explain some "soft" cases of date rape, additional psychological mechanisms must be at play in most other rapes. Sexual adaptations alone cannot account for the fact that a man is able to ignore his victim's suffering, and that he might, in some cases, even be aroused by it. At the very least, the use of violence implies a *motivation* for the use of violence. Without it the rapist would desist in the face of resistance. This in turn implies the need for the study of the cognitive and emotional adaptations underpinning the use of violent tactics in sexual coercion. In what sense might the use of force reflect the activation of more general adaptations to resort to aggression to achieve one's goals? How do the psychological adaptations underlying sexuality and those underlying coercion interact to produce sexually violent behavior? Might there be other adaptations at work as well?

Thornhill and Palmer address the issue of the use of force only by pointing out that one must distinguish between instrumental force, which is the force actually needed to complete the rape, and excessive force, which goes beyond what is needed to subdue the victim and which occurs only in a minority of rapes. As they say, the use of forceful tactics to reach a desired goal (such as sex) does not imply that these tactics are goals in themselves. This is surely correct; only, the figures presented in ANHR show that needless force characterizes nearly one out of five rapes, which is not a negligible percentage. Thornhill and Palmer argue that the occurrence of excessive violence can often be explained without any reference to hostile motivation. Rapists who murder their victims may do so simply in order to remove the only witness to the crime. The fact that men who rape their deserting partners are more likely to inflict needless injuries than rapists who have other relationships to the victim may merely reflect men's evolved sexual proprietariness. It would seem, however, that for this psychological mechanism to motivate a man to rape, one of the feelings it needs to generate is hostility. That Thornhill and Palmer may not be open to any potential role of hostility is also suggested by their discussion of rape in war, which they explain merely in terms of a combination of soldiers' anonymity and impunity, and the high vulnerability of the victims. This may, indeed, be sufficient to explain the "non-violent" rape cases. Rape in war, however, is sometimes associated with sadistic violence and murder. During the "Rape of Nanking," many of the 20,000 rape victims were killed and mutilated after the act (Brownmiller 1975). In the Rwandan civil war, women who were raped were often sexually mutilated and sometimes subsequently murdered (Oosterveld 1998). In the war in former Yugoslavia, the rape of Bosnian women by Serbian men sometimes entailed killing the victims, with the rapes and murders frequently involving severe beatings and torture (Niarchos 1995). These are just a few examples out of a long list. The sadism might be a specific feature of modern war: in pre-state societies war typically entails the capture of fertile women as wives or concubines, with the women usually not being harmed in any other way (Keeley 1996). In modern war, however, the sadism is sometimes blatant. Acknowledging these findings would have made it harder for Thornhill and Palmer to discuss wartime rape merely in terms of heightened opportunities and reduced costs for perpetrators.

Wartime rape is also touched upon by the evolutionary anthropologist Michael Ghiglieri (1999), in the context of a broader reflection on feminist theories of sexual aggression. His flat-out dismissal of feminist perspectives ("men rape women for sex and not because they hate or wish to dominate women," p. 95) and the lack of delicacy with which he discusses rape in war (as "offer(ing) young men their very best opportunity for sex," p. 92) are probably not the kind of approach that will help the discussion any further. The evolutionary psychologist Steven Pinker (2002), in defending ANHR, at least credits feminists for putting issues of coercion and consent center-stage. This is the only contribution Pinker allows feminists to have made in the fight against rape, however. Much as his arguments against the rape-is-not-sex view are correct and important to be heard, Pinker neglects to discuss the possibility that sometimes there might be *more* to rape for the rapist than just sex.

## The Dominance and Control Hypothesis Revisited

A Darwinian framework leaves more room for nonsexual motives than suggested by Hagen (1979), Ghiglieri (1999), Thornhill and Palmer (2000), and Pinker (2002), even at an ultimate explanatory level. A feminist awareness can, moreover, contribute to an evolutionary explanation of the causes of rape. I will illustrate this claim by discussing the work of a feminist evolutionary researcher who argues that feminist and evolutionary explanations of sexual aggression can be integrated: the evolutionary biologist Barbara Smuts.

As contended by Smuts (1995), feminist theory and evolutionary theory are, to a large extent, concerned with the same basic issues: those of power and sexuality. Evolutionary theory, however, goes one step further than conventional feminist analysis in searching for the origins of male motivation to gain power over females. As Smuts writes, evolutionary theory

> not only considers *how* men exercise power over women, as feminist theory does, but also investigates the deeper question of *why* males want power over females in the first place, which feminists tend to take as a given. (Smuts 1995, p. 2, italics in original)

A Darwinian perspective can, moreover, also explain why this attempt at controlling women so often revolves around female sexuality. The ultimate answer lies in the differential parental investment of women and men. As I set out earlier, in an evolutionary sense it pays the less-investing sex (often, but not always, the male) to be more interested in mate quantity, whereas it pays the more-investing sex (often, but not always, the female) to be more interested in mate quality (Trivers 1972). The ensuing conflict of interest between the sexes can lead males to resort to aggression in order to get sexual access to females. The use of male coercive tactics to overcome female resistance is found in many mammal species, including many primates. Killing infants sired by other males in order to get females back into estrus sooner, physically attacking females to break down their resistance, violently forcing them to copulate, and preventing other males from mating with "one's own" females are four such tactics.

Females have developed a variety of counterstrategies against male aggression and sexual coercion, such as banding together with female kin against males, forming consortships with protective males, and induced abortion. The outcome of this power struggle between the sexes varies widely, with the females of some species, such as hamadryas baboons, being especially vulnerable to male coercion, and the females of other species, such as bonobos, being successful at thwarting male attempts to control them sexually (Smuts and Smuts 1993). As observed by Smuts (1995), many human societies show a more extreme pattern of male control of female sexuality and other aspects of female behavior than is characteristic of most other primates. She proposes six major historical causes of this extensive degree of gender inequality among humans: a reduction in female allies owing to patrilocal residence, increased alliance formation among men, increased male control over resources, increased hierarchy formation among men, female complicity, and the development of gender ideology. As she has illustrated (Smuts 1996), the first four of these variables correlate with women's vulnerability to male aggression and male sexual coercion across human societies. Gender ideology, in turn, supports male aggression against women in "myriad ways" (1996, p. 251).

The point is this: in many primates, and across mammals in general, males do not just have an evolved sexual psychology that functions to increase sexual access to females; they have an evolved *coercive* sexual psychology that functions to that effect. In these species sex and aggression are linked, with the specifics of the tactics being used, and with the counterstrategies developed by females, depending on the socioecological conditions that prevailed during the species' evolutionary history. The very broadness of the male coercive repertoire suggests strong selection pressures for a coercive male mindset in those species where female parental investment exceeds that of males. This finding might lead to an evolutionary hypothesis about rape in humans that is wider in scope than Thornhill and Palmer's: that, as contended by Smuts (1995), the ultimate goal of sexual aggression is the same in humans as it is in non-human animals: to gain control over female sexuality and reproduction. Men want power over women because they have an evolved desire to control female sexuality and the offspring women produce (in order to ensure paternity), and one ultimate tactic to achieve this goal is violence. Ultimately, as Smuts argues, the drive to gain control of female sexuality, and the willingness to use force or violence to that end, evolved because it contributed to male reproductive success.

Both Smuts (1995, 1996) and Thornhill and Palmer (2000) agree, as would any evolutionary scientist, that male motivation to coerce females sexually predates the emergence of the human species, and that what ultimately underlies it are sexual conflicts of interest, owing to differential parental investment. There is, however, a major conceptual difference between their theories. The two ultimate explanations of rape as proposed in ANHR, rape as adaptation and rape as by-product, give rise to a proximate scenario in which the interaction of men's *sexual* psychological adaptations with specific aspects of the environment in principle suffices to explain rape, although some room is left for an additional role of nonsexual drives. Smuts, in contrast, proposes the existence of an evolved male drive to *control* women sexually as the adaptation underlying rape (stressing, as do Thornhill and Palmer, that this does not imply rape's inevitability. Indeed, most men do not rape). The element of control makes her analysis more compatible with traditional feminist accounts of rape than Thornhill and Palmer's—although, of course, she partially locates the origins of this male drive elsewhere than feminists typically do. An evolutionary perspective implies another qualification to traditional feminist theories of rape: owing to intrasexual competition, it cannot be true that men as a group are fundamentally united against women as a group.

## Intrasexual Competition, Male Coalitions, and Gender Ideology

Susan Brownmiller (1975) famously wrote that rape "is nothing more or less than a conscious process of intimidation by which *all* men keep *all* women in a state of fear" (p. 15, italics in original). An evolutionary approach suggests a more complex picture. As argued by David Buss (1996), men and women are mainly in competition with members of their own gender over members of the

opposite gender. Men strive for status and resources at the expense of other men, because this makes them desirable to women. Women as well compete among themselves for those things that enhance their mate value, such as signs of youth and beauty. Members of both genders engage in strategies designed to make their rivals look less favorable. This intrasexual competition implies that men as a group cannot be said to be united in their interests against women as a group. Murder and war dramatically highlight the intensity of male-male conflict: murder victims are overwhelmingly other men, and war too is largely a male against male affair. Another reason why the idea of shared interests is incorrect is that men offer benefits to certain women, such as wives, mothers, and sisters. Women, moreover, often ally with certain men in the service of their own interests. Indeed, as also asserted by Smuts (1995), in pursuing their own material and reproductive interests women sometimes behave in ways that reinforce male dominance, such as by preferring resource-rich men and by actively supporting customs that control female sexuality (e.g. claustration, clitoridectomy).

Yet, as mentioned by Buss (1996) and discussed more in detail by Smuts (1995, 1996), when compared with the males of other species, human males are unusually strong at forming male coalitions (which are used against coalitions of other men), whereas women's coalitions are relatively weak compared with those formed in many female-bonded species. Whereas it is unclear why the latter is so, men's coalition formation apparently evolved in the context of intrasexual competition for status and resources. It substantially increased male ability to control female sexuality. Observations of the few other species with stable male alliance formation, such as chimpanzees and lions, indicate that male alliances will not only be used against other males, but also to coerce females sexually (Smuts 1995). Women's sexual autonomy was further reduced as human societies became increasingly hierarchical. As has been found by many scholars, the degree to which men dominate women and control their sexuality is positively associated with the degree to which some men dominate others (e.g. Betzig 1993; Lerner 1986). Smuts (1995) offers an evolutionarily informed interpretation of this finding: in a fairly egalitarian society other men will always have the power to intervene if a woman is coerced. The more some men can accumulate political power and resources at the expense of other men, however, the more these powerful individuals will be able to monopolize control over women. Intervening becomes increasingly ineffective for other men, because they cannot provide as many material benefits to a woman, and because female behavior is constrained.

Smuts (1995) adds another factor to her analysis of the origins of patriarchy: the development of gender ideologies. It seems likely, she writes, that ideologies justifying male dominance over women were among the first ever invented. Although unique to humans, the motivation behind them—to achieve control over females—antedates the evolution of our species by millions of years. In societies characterized by egalitarian relationships between men, men might have less to gain from controlling female sexuality very strictly, for this would limit their opportunities to gain sexual access to other men's wives. In this case gender ideologies might basically be expected to benefit all men. In hierarchical societies, however, we may expect powerful individuals to manipulate the system to their own advantage, creating highly restrictive gender ideologies that give them maximum control over their wives' sexuality, for they have the power to gain simultaneous access to the wives of lower status men in any case. Hence Smuts's evolutionary analysis entails that, for hierarchical societies,

> whenever we consider any aspect of gender inequality, we need to ask how it affects female sexuality and reproduction in ways that benefit some men at the expense of women (and of other men). (Smuts 1995, p. 22)

Smuts (1996) offers several examples of the many ways in which gender ideology supports male aggression against women, such as the widespread belief that a husband has the right to beat a spouse who is suspected of committing adultery, and the likewise widespread belief that a woman who ventures out on her own is looking for sexual adventure and is therefore fair game for sexual assault. She refers to the work of Thomas Gregor (1990), who has documented what may be one of the most blatant cases of a link between male dominance and sexual coercion. Gregor studied small sedentary societies in South America and New Guinea where men achieve dominance through the "men's house:" a space where men conduct sacred rituals and that is forbidden to women. Women who intrude on it or who see any of the sacred objects, even if by accident, are punished by gang rape. The Mehinaku men of South America justify the tradition by saying that it keeps the women afraid of them. It does indeed: the threat of gang rape looms large in the lives of Mehinaku women. Thornhill and Palmer's (2000) argument that the use of rape as a punishment does not prove the absence of sexual motivation is correct—Mehinaku men do perceive the rape as a sexual act—but the overt aim of the behavior is clearly to maintain control over women as a group. As the men's house is the center of religious and political activity, the tradition keeps women from participating as equals (Gregor 1990).

These examples do not stand alone. Ideologies propagating male superiority and condoning violence against women who step out of line are found cross-culturally. Throughout history male coalitions have tried to restrict

female behavior and sexuality in the most diverse ways. In the second half of the nineteenth century, for example, clitoridectomy was practiced in Europe and the United States to eliminate masturbation and a strong sexual appetite in women, with the last known procedure in the United States being performed in 1948 on a child of five (Ehrenreich and English 2005; Sheehan 1997). Laws prohibiting women from studying, working, voting, moving around freely, or dressing as they like used to be ubiquitous in the West and are still found in other parts of the world. These and similar laws and practices typically apply to the entire female population. They seem to reflect a male desire to control not just particular women but as many women as possible. Although many of these practices may initially have been instantiated by elite men, in an effort to defend their own reproductive interests, they may be copied or defended by other men, because of the status associated with them.

ANHR mentions the male goal of controlling female sexuality merely in the context of romantic relationships: cross-culturally, men sometimes use violence or the threat of violence in attempts to control the sexual behavior of their romantic partners. According to the evolutionary psychologists Wilson and Daly (1992), male sexual proprietariness is an adaptation designed to prevent cuckoldry, and is likely to evolve in any species with internal fertilization and paternal care. In these species being cuckolded is selected against, for the cuckold may fail to produce any offspring himself while helping the cuckolder's offspring to survive. A male mind containing mental mechanisms designed to decrease this risk, such as a tendency to mate guarding and a willingness to resort to violence to protect paternity certainty, was evolutionarily more successful than a non-proprietary male psychology. Following Wilson and Daly, Thornhill and Palmer (2000) situate men's sexual proprietariness within the context of romantic relationships (Wilson and Daly add attempts by a woman's male kin to control what is a reproductively valuable resource to them).

As suggested by Smuts, however, the range of action of men's drive to control women's sexuality may be much wider. Her analysis implies a connection between phenomena that seem hardly related from ANHR's point of view: those of sexual coercion, other forms of aggression against women, gender inequality, and institutionalized patriarchy (defined here as a sociopolitical system that allows men to dominate women in the familial and the suprafamilial sphere, such as by permitting marital rape, by holding rape victims more accountable if they have a sexual history, or by disadvantaging women in the job market). It entails that the role of gender ideology should be taken more seriously than ANHR does. Beliefs about male and female nature and about appropriate male and female behavior will and do often serve to control female sexuality and to maintain a system of male dominance. Smuts's analysis is also consistent with the radical feminist claim that sexual control is at the heart of patriarchy (e.g. MacKinnon 1987).

Thornhill and Palmer (2000) do not mention Smuts's (1995) paper. They briefly list the variables that she documented as correlating with men's use of sexual coercion across human cultures in her 1996 study, but her discussion of the role of gender ideology is omitted altogether.

Smuts is not the only evolutionary scientist to have proposed an evolutionary model featuring the drive to control female sexuality as an ultimate cause of rape. The feminist evolutionary biologists Gowaty and Buschhaus (1998) explicitly refer to Brownmiller (1975) in their discussion of forced copulation in birds. They hypothesize that aggressive copulation in birds creates a dangerous environment for females, forcing females to trade future sexual access to particular males for protection from male aggression. The hypothesis—which only applies to species without intromittent organs, such as the large majority of birds—has a major theoretical weakness: it cannot explain why males use sexual rather than nonsexual aggression (Thornhill and Palmer 2000). Most predictions derived from it are, moreover, not confirmed, so it is probably incorrect (Lalumière et al. 2005). The weakness of the hypothesis, however, provides no ground for insinuating, as Thornhill and Palmer do, that it was merely the ideological attraction of Brownmiller's explanation that persuaded Gowaty and Buschhaus to develop it. This insinuation again seems to be an instance of an a priori denial that a traditional feminist might have anything valuable to say about sexual aggression. That this need not be so is proven by the feminist evolutionary biologist Sarah Mesnick (1997), who developed a similar and much more promising proposal, called the bodyguard hypothesis. It holds that in some species, including humans, male sexual aggression is an important factor constraining female behavior. In such situations, entering into sexual alliances with protective males (bodyguards) can be effective in reducing vulnerability to aggression from other males. This may make protection an important criterion of female mate choice (the concept of sexual coercion as a significant force in social evolution was also put forth by Smuts and Smuts (1993)).

The subsidiary hypotheses sparked by the bodyguard hypothesis get much support from field studies of a wide variety of species, and from empirical studies in humans. In species with a high risk of sexual aggression, for example, females are especially attracted to large and/or dominant males. The cross-species distribution of pair-bonding by females is partially accounted for by the risk of sexual aggression. In our species women co-residing with a male partner incur significantly less risk of stranger rape than

women living alone (Mesnick 1997; Wilson and Mesnick 1997). As conceded by Mesnick (1997), it is a risky bargain, since women become vulnerable to sexual aggression from their partners. Yet the persistence of pair-bonding suggests that its benefits to women exceed the potential costs. Mesnick's work demonstrates that theories inspired by feminist views of rape can be scientifically fruitful (she explicitly refers to Brownmiller's claim that it was the fear of rape that led to women's dependency on men).

## Downplaying the Role of Anger, Hostility, and Dominance Motives

The Shields and Shields (1983) ultimate account of rape figures in ANHR, but their remarks about the role of anger and hostility are ignored. Indeed, anger as a motivation for rape is mentioned only once in ANHR; hostility toward women thrice. Both terms only come up in the context of feminist statements about their primary role in rape causation, and Thornhill and Palmer's sole reaction is to tear these statements to pieces. The drive for dominance meets with the same fate: none of the three motives figures in any serious sense in ANHR, except for the authors' concession that "multiple motivations may be involved in any human behavior" (p. 131). In order to be able to treat any important role of anger, hostility, and dominance motives so lightly, Thornhill and Palmer have to ignore, dismiss, or distort existing research demonstrating their contribution to rape.

Peggy Reeves Sanday (1981), for example, has shown that in tribal societies rape frequencies correlate with degree of interpersonal and tribal violence, ideology of male toughness, and a lack of female power and authority. Her study is mentioned in ANHR merely to point out the incorrectness of her claim that rape-free societies exist. That Sanday identifies herself as a feminist seems to suffice for not considering her findings about these correlations worthy of serious attention. The authors simply note that "[t]he similarities between these 'findings' and feminist ideological values is probably not coincidental" (p. 141). As documented by Martin Lalumière et al. (2005), however, Sanday's study of rape frequencies around the world is only one of several, and they yield somewhat comparable results: across societies rape "is associated with male fraternal interest groups, warfare, gender antagonism, constraints on women's sexuality, and generally low status of women" (p. 13).

The classic study *Men Who Rape* (1979), by Nicholas Groth and Jean Birnbaum, also documents how rapists often report feelings of resentment, anger, hostility, and the will to possess and dominate the victim. Thornhill and Palmer present two counterarguments to these findings. First, they note that many studies have found that rapists often cite sexual desire as a sole or partial cause of their actions, and that the importance of lust is also evidenced in *Men Who Rape*. Whereas this is probably correct, it does not constitute a refutation of anger and hostility as regularly motivating sexual coercion as well. The one study serving as a counterexample to the findings of *Men Who Rape* in ANHR, a 1978 PhD dissertation by S. D. Smithyman, illustrates this: it found that, although 84% of the rapists surveyed cited sexual motivation as a sole or partial cause of their acts, no less than 18% of them reported hating the victim. The latter figure is not mentioned in ANHR, but Palmer (1988) uses it to rebut the "not sex" view: he writes that "*only* 18%" of the rapists in this study reported hating the victim (p. 521, italics added). It recalls the familiar problem of the glass being half empty or half full. Both figures are enlightening. The large percentage of rapists reporting sexual desire certainly attests to the major importance of sexual motivation in rape, but the one-out-of-five figure demonstrates the non-trivial role sometimes played by nonsexual motives as well. Both kinds of findings need to be acknowledged to get a balanced picture. Hate, moreover, represents but one extreme on a continuum of negative emotions. As a second counterargument, Thornhill and Palmer refer to a remark made by Symons (1979), who describes a video of a panel discussion with four convicted rapists, with the men in their initial statements stressing power, dominance, and violence as motives for rape, but with sexual motives becoming more evident as the discussion wears on. Symons notes that

> [i]t is difficult to avoid the conclusion that the men's conscious attempts to emphasize their correct attitudes and to minimize their sexual impulsiveness were to some extent calculated to foster the impression that they no longer constituted a threat. (Symons 1979, p. 283)

Thornhill and Palmer represent this suggestion as if referring to self-reports of convicted rapists in general, instead of merely to what four rapists said under highly specific circumstances, and use it to discard dominance and hostility as bearing any major relevance to the study of rape causation altogether. In what seems again like an attempt at keeping nonsexual motives out of the picture, they represent Symons as explaining rape solely in terms of evolved male-female differences in sexual desire. As seen above, however, Symons never denied that at a proximate level anger, hostility, and the desire for control may play an important role in sexual coercion. He only criticizes the view that sexual desire is not involved at all. As he writes, "every interview with a rapist that I have seen or read suggests to me that rapists have mixed motives, and that part of the mixture is sex" (1979, p. 282).

Yet Symons points out how it is often exactly female sexual choosiness that may be the source of these emotions. It is obvious in many interviews with rapists, he notes, that their anger is partly sexual, aimed at women because women provoke ungratifiable sexual desire. This is also what the journalist Norah Vincent, who spent eighteen months living undercover as a man in order to find out what life is like for men, realized:

> Dating women as a man was a lesson in female power, and it made me, of all things, into a momentary misogynist, which, I suppose was the best indicator that my experiment had worked. I saw my own sex from the other side, and I disliked women irrationally for a while because of it. I disliked their superiority, their accusatory smiles, their entitlement to choose or dash me with a fingertip, an execution so lazy, so effortless, it made the defeats and even the successes unbearably humiliating. Typical male power feels by comparison like a blunt instrument, its salvos and field strategies laughably remedial next to the damage a woman can do with a single cutting word: no.
>
> (…) In the sex clubs I visited and in the dating I did, I inhabited an outlook imposed on me from the outside by culture, by other women and other men, and I glimpsed this deeply disturbing connection between violence and sex and women and self-worth, the hallmarks of male powerlessness, the helpless, worshipful lust and the murderous ire that may come from the same lack, the same lackey status that can turn on an instant. Want me, it all seems to say. Love me. Desire me. Choose me. I need you. You ignore me. You disdain me. You destroy me. I hate you. (Vincent 2006, pp. 127–128)

Vincent's book does not have any scientific pretensions. Yet her lived experiences are consistent with the evolutionary (and supported) prediction that the other gender's strategic interference with one's own gender's evolved sexual strategies will be a major source of anger in both women and men, with women being angered by the male tendency to greater sexual assertiveness or aggressiveness, and men being angered by women's tendency selectively to withhold sex (Buss 1989). As proposed by the evolutionary psychologist Neil Malamuth (1996), who seeks to integrate feminist and evolutionary perspectives on rape causation, when such negative experiences occur recurrently, at critical stages in one's development, or both, this might lead to a relatively fixed hostile personality in both men and women. Malamuth and his colleagues (Malamuth 1996; Malamuth et al. 1991; Malamuth et al. 1993) have developed a model integrating the many variables associated with sexual aggression called the Confluence Model of Sexual Aggression. It proposes two main interacting pathways to sexual aggression: a tendency to engage in impersonal sex (the "impersonal sex path"), and hostile, dominating characteristics (the "hostile masculinity path"). The latter combines a hostile/distrustful orientation, particularly toward women, and gratification from controlling or dominating women. Malamuth and his colleagues trace the ontogeny of both paths partly to abusive home environments, which may foster a hostile outlook on male-female relationships. Singly, the paths do not lead to rape, but together they produce a man prone to sexual aggression. The Confluence Model of Sexual Aggression has been successfully tested many times (e.g. Malamuth 2003) and has received a great deal of recognition (e.g. Polaschek et al. 1997). As noted by Malamuth (1996), it provides considerable confirmation for both the evolutionary approach, which stresses the importance of sexuality, and the feminist approach, which stresses factors such as sex-role stress, attitudes promoting violence against women, and hostility and dominance motives. Sexuality and hostility are, to some extent, related: perceptions of rejection and hurt turn out to be an important component and early precursor of hostile masculinity.

In ANHR the Confluence Model of Sexual Aggression (which is not mentioned by name) features as an example of an explicit evolutionary developmental model of men's sexual coercion. It is rendered highly selectively: Thornhill and Palmer focus exclusively on the impersonal sex path. The second pathway to sexual aggression, the hostile masculinity path, is briefly, and misleadingly, referred to as "sexual proprietariness" (p. 68) and is then ignored altogether. This distortion of Malamuth's findings again seems to testify to Thornhill and Palmer's bias against feminist explanations.

## The Data on Psychological Pain

In their chapter on the pain and anguish of rape, Thornhill and Palmer (2000) claim to have found support for evolutionary predictions about variation in degree of psychological pain experienced by rape victims. They summarize earlier papers by Thornhill and Thornhill (1990a,b,c, 1991) as having shown that reproductive-aged women suffer greater distress than children or older women, that married women suffer more than unmarried women, that vaginal rape is more traumatizing than oral or anal rape, but only for reproductive-aged women, and that the use of violence reduces trauma. These predictions were based on the evolutionary proposition that, just as physical pain serves as a signal that something is wrong, so does psychological pain. Its evolved function is to guide individuals' attention to events that would have been

associated with reduced fitness in ancestral times, and to motivate them to avoid a repetition of these events. Rape not only reduced the victim's fitness by circumventing her partner choice; it also reduced her partner's fitness by lowering his paternity certainty, and that of their relatives. Hence Thornhill and Palmer predict that the greater the negative fitness effect of an event would have been, the more psychological pain will be experienced.

Thornhill and Thornhill tested these predictions in their 1990 and 1991 papers by reanalyzing the data obtained in a study by McCahill et al. (1979) of 790 victims' adjustment patterns to rape. The McCahill study, however, has a number of limitations. For example, the victims were interviewed within only five days of the assault. One might wonder whether it is really possible to assess a victim's degree of psychological adjustment after such a short time. In the case of child victims, carers helped them to respond to the questions or gave their own impressions of the effect of the assault on the child, impressions that might have been rather subjective. Because of the difference in methodology, moreover, the child victim assessment should have been considered as a separate study rather than its results being combined with data on victims over the age of 11. One might also wonder just what the 13 variables used by McCahill et al. (1979) to assess psychological adjustment were measuring. What does it mean when victims report a change in social activities, in feelings toward known men, or in sexual relations with their partner? The instrument used does not seem refined enough to warrant any firm conclusions regarding victim psychological adjustment.

Thornhill and Thornhill, of course, had to manage with the original data set as it is. If the predicted patterns turn up within five days after the attack, this is surely an interesting finding. The problem is that most of them do not, and that this is obscured by the selective way in which the Thornhills present their findings. Whereas it is correct that, as predicted, children experienced less trauma, violence, and vaginal rape than reproductive-aged women, the data do not show an unequivocal difference between reproductive-aged and older women in the suffering of trauma. In the case of violence and vaginal rape they show no difference at all. This is obscured by collapsing older women and children together into a single category of "non-reproductive." In this way the Thornhills, and Thornhill and Palmer, are able to present their hypotheses as supported: reproductive-aged women experienced more trauma, violence, and vaginal rape than non-reproductive-aged victims.

This problem was first pointed out by Coyne and Berry (2000) and Jerry Coyne (2000). Thornhill and Palmer deny the accusation (2001; Palmer and Thornhill 2003a, b), referring to Table 4 and Appendix 3 of the 1990a paper. The analysis summarized in this table, however, applies to *unmarried* women of reproductive and post-reproductive age, numbering about 390. The data on which the analysis is based are listed in Appendix 3. It is unclear how these data can be reconciled with the data in Table 2: the number of unmarried respondents of post-reproductive age on each item is higher than the *total* number of respondents of post-reproductive age on that item. An effect is found for this subset: five out of six listed variables show a significant difference. The direction of the effect cannot be read in the table. When *all* reproductive-aged and older women are compared, only three out of 11 variables reach significance while being in the predicted direction. A fourth variable reaches significance, but is in the opposite direction. The studies on differences in the occurrence of violence and vaginal rape fare even worse: when reproductive-aged and older women are compared, nothing significant turns up. There even seems to be a slight tendency for older women to experience *more* vaginal rape than reproductive-aged women. The statistical effects that are found regarding differences between the three age groups are almost entirely owed to the difference between children and reproductive-aged women—two groups that cannot be truly compared owing to the different method used to assess children's reactions.

A related kind of problem shows up in the inaccurate way in which the evidence for the violence and trauma hypothesis is presented in ANHR. According to this hypothesis, the occurrence of violence during rape will have a moderating effect on the trauma suffered by reproductive-aged victims, especially those in significant relationships. This was predicted because, if a woman exhibits physical evidence of having been forced into sex, her husband or boyfriend will be less inclined to suspect her of sexual infidelity (which would threaten his paternity confidence). Thornhill and Thornhill (1990c) tested the hypothesis by using the variable brutal beating, which they chose because it seemed the most unambiguous indication of the victim's non-consent. After comparing the degree of trauma following violent and non-violent rapes, they conclude that "[t]he data do *not* support the prediction" (p. 314, italics added). Only two of 13 psychological trauma variables reached statistical significance, and neither pattern was in the predicted direction. They then single out married victims and report that two of the 13 trauma variables showed statistical significance in the predicted direction, whereas five of them were in the predicted direction but not significantly so. They conclude that their prediction that the occurrence of violence would moderate "trauma for reproductive-aged, and especially married, reproductive-aged victims" received "some support" (p. 318). This way of stating it (again) disguises the fact that a central part of their hypothesis was *not* supported. It

is, moreover, highly debatable whether two of 13 variables constitute any support at all. A worse problem, however, is the way in which these results are rendered in ANHR. We read that the data collected by McCahill's research team made it

> possible to test whether reproductive-age victims who had not experienced violence exhibited more psychological pain than victims of the same age who had been attacked violently. In fact, this has been shown (Thornhill and Thornhill 1990c). As also predicted, Thornhill and Thornhill found that the married women whose rapes had been marked by violence exhibited less psychological pain. (Thornhill and Palmer 2000, pp. 92–93).

The first statement is false. The second one is at the very least an overstatement. Thornhill and Palmer further try to buttress their claim about the effect of the use of violence by referring to McCahill et al. (1979) as having reported that

> violence accompanying a rape showed an overall negative relationship with psychological distress after the rape. That is, as the violence increased, the psychological pain of the victim declined. (Thornhill and Palmer 2000, p. 92)

This pattern, as they say, surprised McCahill and his colleagues: "they expected more violence to lead to greater psychological trauma in victims" (p. 92). This representation of the relationship between violence and trauma as found by McCahill's team is, however, inaccurate. Whereas it is correct that rapes with little violence resulted in more psychological pain than those involving moderate violence—supporting Thornhill and Palmer's counterintuitive hypothesis about the inverse relationship between violence and trauma—psychological pain increased again as the violence became more brutal—contradicting that hypothesis. That a low level of rape violence resulted in adjustment difficulties as serious as a high level of violence is mentioned in the Thornhills' 1983 and 1989 papers, but has disappeared from view in ANHR. Thornhill and Palmer reiterate in their conclusion that "the mental trauma of rape decrease (s) as physical injuries increase" and that this is "a strong pattern in women's responses to rape trauma" (2000, p. 193).

As an addendum, it might be worth mentioning that Perilloux et al. (2006) found that victims who were harmed physically experienced *more* psychological pain than unharmed victims, thus contradicting the Thornhills' hypothesis. Perilloux et al. also found no difference between the psychological pain suffered by women in a relationship and that suffered by single women.

## Conclusion

It is commonly thought that feminist and evolutionary explanations of rape cannot be integrated. As I hope to have shown, this view is incorrect. Although feminist and evolutionary approaches are not compatible on all fronts, theories incorporating factors from both perspectives have been proposed, on theoretical as well as empirical grounds. The value of these theories can only be decided by taking them seriously and testing them. Unfortunately, the debate between feminists and evolutionists is all too frequently characterized by a lack of mutual openness. ANHR and the controversy surrounding it is a case in point. This long-standing animosity between feminist and evolutionary scholars is a cause for concern. If we aim at a deeper understanding of the causes of rape, we will have to transcend traditional disciplinary boundaries. As argued by Malamuth and Malamuth (1999), only through an integrative approach, incorporating knowledge from evolutionary, genetic, developmental, and cultural levels of analysis, will we arrive at a comprehensive explanation of why (some) men rape. As each level contains knowledge critical to the other levels, each level's existence and causal impact are best viewed within the context of the other levels. Sole concentration on one particular level may be desirable at times, but only an integrative approach will allow researchers to examine how factors emanating from each level interact. Culture, for example, is not sui generis, but develops in light of the characteristics of our evolved mind. Cultures will be similar to the extent that they reflect adaptive problems that humans have had to solve in all environments (e.g. rearing helpless offspring), and dissimilar to the extent that they reflect adaptive problems that vary according to local ecological conditions (e.g. availability of food, presence of hostile neighboring groups). Rape-prone societies probably evolved in ecologies where male destructive capacities created a competitive edge. The norms, values, and ideologies that have emerged in this context may, however, keep persisting for a long time even if conditions have changed considerably, due to our unique capacity for observational learning (Malamuth and Malamuth 1999).

This implies that feminist and evolutionary scholars should start taking into account the findings and hypotheses offered by each other's perspectives. A few have done so, but most do not seem willing to do so. Bias not only risks causing incomplete science; it risks causing flawed science as well. ANHR offers a vivid illustration of how it can lead researchers to become rather careless with the evidence. Thornhill and Palmer's subsequent unwillingness to concede that some critics might have as much as even a minor point (Palmer and Thornhill 2003a, b; Thornhill and Palmer 2001) seems to attest further to the lack of a neutral

scientific spirit. The same goes, however, for many feminist scholars. An a priori dismissal of the role of sexuality in rape, or of evolutionary influences on the human mind and behavior, is hardly indicative of a scientific attitude.

I am not proposing that feminists should uncritically embrace Darwinian models. I am only proposing that they should at least be open to well-established knowledge from the evolutionary sciences. The question is not whether evolutionary principles apply to the design and workings of the human mind, but how they apply. As explained by Buss (1999), evolutionary psychology comprises several levels of evolutionary analysis: general evolutionary theory; middle-level theories, which are well-supported theories that are consistent with general evolutionary theory but that cannot be derived from it (such as Trivers's 1972 theory of parental investment and sexual selection); and specific evolutionary hypotheses. A particular hypothesis (say, about rape as an adaptation) could be proved wrong, even if the theory one level up that led to the hypothesis (Trivers's 1972 theory) is correct.

Some evolutionary biologists may well be highly critical of specific evolutionary psychological hypotheses, as Coyne (2000) and Frans de Waal (2000) are about the rape-as-adaptation view, but they will not question the existence of evolved behavioral gender differences or the role of sexual motivation in rape. Coyne (2000) writes, for example, that "there can be no adequate explanation of patriarchy that completely ignores evolution," and that "it is hard to disagree with Thornhill and Palmer's claim that rape is at least partly a sexual act" (p. 175). Indeed, as ANHR abundantly demonstrates, the belief that sexual coercion is *solely* about power is wrong. The roots of sexual coercion predate the emergence of patriarchy, and sex is a central component of rape motivation. Thornhill and Palmer's suggestion that the evolutionary approach is the only valid one, however, needlessly pits evolutionary perspectives against feminist and social scientific ones. Their position is as unfruitful as a feminist position denying the input of evolved psychological mechanisms in human motivation.

**Acknowledgments** I would like to thank Johan Braeckman, David Buss, Marysa Demoor, Leif Edward Ottesen Kennair, Donald Symons, Jan Verbeeren, and two anonymous reviewers for valuable feedback on earlier drafts of this paper.

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