



# Current Hot Topics

## EVOLUTIONARY MODELS OF WHY MEN RAPE

### Acknowledging the Complexities

**MARY P. KOSS**

*University of Arizona*

RANDY THORNHILL AND CRAIG PALMER'S NEW BOOK *A Natural History of Rape: Biological Bases of Sexual Coercion* (2000a) sets up a stark contrast between evolutionary theory and feminist theory that performed perfectly in its intended role as a media hook (for a summary of the book, see Thornhill & Palmer, 2000b). The authors have appeared on CNN, *Dateline*, and other television programs, and on National Public Radio disseminating their position. Victim advocates, National Organization of Women officers, experts on evolutionary biology, and Susan Brownmiller herself rebutted these authors. This media phenomenon was a sad incident for rape prevention advocates, evolutionary biology, and science itself. The framing of the issues by Thornhill and Palmer increased the resistance to evolutionary analysis,

ill represented the process of science, and encouraged harmful prevention suggestions. This commentary examines in more depth than permitted in the public media their thesis, supporting evidence, and recommendations for rape prevention. The complexity of the causal analysis of rape is highlighted, including the consensus of expert panels on violence against women that no theory emphasizing a single cause is adequate to explaining why men rape, no matter what its ideology is.

### THE EVOLUTIONARY THESIS

Not only do Thornhill and Palmer have some evolutionary ideas to advance, they want to do so on a battlefield. The authors frame their presentation as a battle of evolution versus the

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AUTHOR'S NOTE: The author would like to express her deepest appreciation to Aurelio José Figueredo and Patricia Rozée for their comments on earlier drafts and sharing their expertise in the development of this article. Correspondence concerning this article may be directed to Mary P. Koss, 2223 E. Speedway Boulevard, Tucson, AZ 85719; telephone: 520-318-7177; fax: 520-318-7226; e-mail: mpk@u.arizona.edu. EDITOR'S NOTE: From time to time, *Trauma, Violence, & Abuse* has the opportunity to bring you important information about a breaking issue in the minds of the public. The following Current Hot Topics contribution by Professor Mary P. Koss provides a careful analysis of an issue that is currently occupying public attention. How this issue is understood has far-reaching implications for the field and for our clients.

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social sciences, likening those who reject a reproductive explanation for rape to right-wing fundamentalists. As Thornhill and Palmer see it, evolutionary biology is armed with a knowledge-based approach to the issues, whereas social science mounts only an ideologically driven advance. They repeatedly put on the armor of science. The battle cries that are echoed include the following: "Science is value free," "Science is the only road to the truth," "Science has the answers," "Science solves diseases and can solve social problems," and "Science will win." Most of these sentiments are naive from the perspective of the social construction of science—no theory or measurement is free from being shaped by the human mind. Paradigms guiding designs of studies are human creations and are well known for their resistance to change, even in the face of compelling empirical data. In addition, as soon as statements about the meaning of results are made, numbers become subject to interpretation. As Moore and Travis (2000) note, "Biologically based science has the nice quality of disguising politics" (p. 36). By cloaking themselves in science talk ("bio-proof"), Thornhill and Palmer aim to camouflage their unstated ideological agenda, deflect attention away from the obvious flaws in their logic and supporting evidence, and inflate the importance of their own work. They succeeded only in diminishing the stature of science and fueling the public's anti-intellectualism.

Now that we have examined the framing of the issues, let us inspect the evolutionary arguments themselves. Thornhill and Palmer's primary aim is to challenge the idea that rape is an expression of power, which they correctly identify as the prevailing view in the advocate community. The book actually presents two alternative hypotheses of human rape. The first is the idea that rape is a special adaptive strategy that human males have developed because it helps them to sire more offspring. The second is that rape is a by-product of male sexual desire and a preference for higher numbers of sexual partners. The latter alternative is totally undeveloped, and the entire text is designed to describe, support, and consider the implications of rape

as a special adaptation. In so doing, Thornhill and Palmer commit the same error for which their work has already been taken to task by numerous published commentaries (e.g., Figueredo, 1992). The peer review process is the best system yet devised to ensure that science moves forward and that bad ideas are separated from good ideas. Given the mantle of science that the authors have gathered around them, it is surprising to see so little attention devoted to acknowledging and responding to the peer criticism of which they have long been aware. Elaborating the by-product model would have been more palatable to the general public because its links with reproduction are more indirect and would have provided a basis for the integration of feminist thought about rape. However, in the media world, controversy sells, and some scholars fall prey to its lures. In the field of sexual violence, we have seen this all before.

Grasping the gist of rape as a reproductive strategy involves a short overview of the principles of Darwinian natural selection. As Moore and Travis succinctly summarize (2000),

The general principles of natural selection are not inherently sexist and simply stated propose that individuals vary; some variations are more favorable than others; some of this variation is heritable; differential reproductive success may occur; and differing gene frequencies may result. (p. 44)

The special adaptation model views rape as one of three strategies that have ostensibly evolved to help males find mates, gain sexual access, and produce offspring bearing their genes. These strategies are possessing physical attractiveness, being a powerful warrior, and when all else fails, raping. Thornhill and Palmer argue that men resort to rape when they cannot gain access to women through looks, wealth, or status. To the extent that offspring have been conceived by rape, any genes associated with raping are passed along.

A cornerstone of Thornhill and Palmer's treatise is their interpretation of the old concept of differential parental investment (Trivers, 1972). It states that male and female animals differ in their potential to reach maximum breeding

potential. Females are choosy about their mates because raising offspring, especially a higher primate or human baby, is a lengthy and effortful investment that is most likely to reach a successful conclusion when the father contributes emotionally and materially to their care. Because the male's minimum investment in children is limited to fertilizing the egg, the parental investment theory states that they best ensure their genes will be represented in future generations by mating with a large number of females. From this viewpoint, if they cannot obtain mates through other strategies, rape is better than leaving no offspring.

To support their model, Thornhill and Palmer follow a confirmatory strategy, listing the predictions that logically flow from it and providing purported supportive evidence. The major predictions that Thornhill and Palmer make about rape as a special adaptation include the following:

1. Most rape victims will be women of childbearing age.
2. Rapists will not seriously injure their victims.
3. Rape victims who experience more violence will suffer less emotional distress.
4. Vaginal penetration will be more distressing than other forms.
5. Married women and women of childbearing age will experience more psychological distress over rape than single women or menopausal women.

The logic behind Predictions 1 and 2 is that, for rape to be a special adaptation, you need to show that it has reproductive consequences, in this case, by demonstrating that it is done primarily to women who could bear children as a result and who were not so seriously injured by the forced impregnation that they died, miscarried, or gave birth to defective offspring. Predictions 3 through 5 are based on Palmer's work with his former wife Nancy Thornhill. Her thinking was that women's emotional distress should be greater the more rape affected their reproductive interests. The link of these hypotheses to the special adaptation model is never explained, and they appear tangential.

Although most of the documentation provided by Thornhill and Palmer concerns insects and birds, they also used standard social science data. They tested their deductions with a second-

dary analysis of a data set originally presented by McCahill, Meyer, and Fischman in the pioneering work *The Aftermath of Rape* (1979). The data came from rape survivors seeking services at a Philadelphia emergency room. The authors fail to address the potential concerns with these data, such as validity: How well were the constructs assessed given that the data collection predated the formulation of the theory? Was the measurement of the constructs reliable and valid? In addition, the generalizability to the universe of rape survivors was not examined. The validity is certainly questionable given that only 5% of them sought emergency room care, according to the national survey conducted for the U.S. Department of Justice (Tjaden & Thoennes, 1998).

The presentation concludes with suggestions for rape prevention activities. Thornhill and Palmer confidently predict that any prevention effort will fail unless based on an understanding that rape evolved as a form of male reproductive behavior. Their recommendations include the following:

- Educating youths that all men are potential rapists who must learn to inhibit their natural impulses
- Sensitizing women to the biological proclivities of men and to the role that women's apparel plays in triggering rape
- Recommending that women exert more control over the circumstances of dating, socializing only in public places
- Providing a Darwinian perspective to women undergoing counseling to help them understand why they are distressed about being raped

## THE EVIDENCE

*Disputing the facts.* Had each of the deductions been the subject of a peer-reviewed, empirical paper, they would have been examined in the context of related findings from the existing literature. Thornhill and Palmer make virtually no reference to other empirical findings on sexual assault. The bulk of the available data makes fiction of the facts, thus eliminating all the data that the authors purport to be supportive of their theory, except for their observations of insect and bird behavior.

*Many rape victims are children, not women of reproductive age.* Contrary to the assertion that rapists favor reproductive-age women, the Rape in America national survey (Kilpatrick, Edmunds, & Seymour, 1992) reported that exactly one third of victims were younger than 11 years old when first raped and that a total of two thirds were younger than 17 years old. The National Violence Against Women Survey (Tjaden & Thoennes, 1998) reported that 22% of rape victims were younger than 12 years old when first sexually assaulted and that 32% were between 12 and 17 years old. Even without taking into account the data on rapes of postmenopausal women, men, and boys, these figures establish that a sizable number of rapes are lacking in reproductive consequences.

*Women of childbearing age do not experience the most distress.* The literature of the impact of sexual trauma fails to support the linkage of childbearing potential to distress. Instead, child sexual abuse is consistently associated with the most severe, broad, and long-lasting effects, including lifelong elevated risks of physical problems, emotional distress, and more unsafe health behaviors like smoking, excessive drinking, and lack of physical activity (see Boudreaux, Kilpatrick, Resnick, Best, & Saunders, (1998); Saunders, Kilpatrick, Hanson, Resnick, & Walker, 1999; Walker et al., in press; Walker et al., 1999; for a review, see Heise, Ellsberg, & Gottemoeller (1999); Messman & Long, 1996). In terms of the greatest fear, the elderly suffer from rape the most (Muram, Miller, & Cutler, 1992; Warr, 1985).

*Distress does not vary inversely with the rapist's violence.* The idea that less violence causes more distress is not only contrainuitive, it is also at odds with the bulk of trauma literature. Recent nationwide studies established that the major predictors of post-traumatic stress disorder were the objective severity of the violence inflicted, the subjective fear of death or serious injury, and whether penetration of the body occurred (Epstein, Saunders, & Kilpatrick, 1997). Also important were how much a woman blamed herself for what happened and how

threatening the rape was to her worldview (Frazier, 1990; Frazier & Schauben, 1994; Koss, Figueredo, Prince, & White, 2000; Norris & Kaniasy, 1991). Most people intuitively understand these findings because they support the obvious: The harder you are hit, the more it hurts.

*All unwanted penetration is traumatic in women of all ages.* Is vaginal rape, because of its potential for impregnation, more traumatic than other forms of penetration? This hypothesis is faulty on its face because it overlooks the invention of modern methods of birth control, including postconception interventions that restore to women control over reproduction and render moot any selective advantage for rape. Even if this issue had the importance attributed to it by Thornhill and Palmer, there are several methodological obstacles that raise questions as to whether they or anyone else could establish that vaginal penetration is most distressing. The following are some barriers to establishing a clear-cut relationship:

- The meaning of different forms of penetration is culturally conditioned, precluding universal statements about how they would be viewed by the survivor.
- Many rapes may involve multiple forms of penetration, thereby resisting categorization.
- The amount of injury caused by rape is highly significant and would need to be measured and controlled for before the relationship between distress and the form of penetration could be disentangled.

Current literature establishes that all unwanted penetration is traumatic. It may not really matter if a Chevy truck or a Ford truck hits you; in either case, you are seriously harmed.

*Although rapists rarely kill, life threat is high.* Thornhill and Palmer conclude that rapists rarely harm their victims. This statement is somewhat true for half the picture. According to the Rape in America study, 28% of rapes involved some degree of physical injury. However, as we saw earlier, postassault impact is predicted not just by objective severity but also by subjective severity. Half of all women feared that they would be seriously harmed or killed during their rape.

## PREVENTION RECOMMENDATIONS ARE NAIVE AND HARMFUL

Although good scientific practice dictates not generalizing beyond the capability of the data, Thornhill and Palmer move from the consideration of insects and lower animals to making recommendations for preventing human rape and treating rape survivors. They address prevention at the individual level of causation. They ignored the need for prevention initiatives at broader societal levels. Even from their biological perspective, several societal-level strategies would be helpful, such as revamping the legal system to better deter rape by enforcing penalties for men who fail to restrain themselves or advocating legislation that would continue to guarantee women access to the means to control the outcomes of forced sexual contact. Bioprevention based on the flawed assumptions listed below will not solve the rape problem.

*Men as potential rapists.* One of the critical problems faced by those who design rape prevention education is the backlash that results in male attendees leaving even more resentful and angry at women than before the program (Lonsway, 1996). Thornhill and Palmer suggest that prevention programs for young men teach them about their biological propensities to rape and warn them of the need to inhibit these impulses. In short, men should be taught that they are all potential rapists. Years of experience in rape prevention have taught me that this approach is not productive. Men vociferously challenge any presenter who fails to distinguish between rapists and regular guys who want emotional relationships with women who they will eventually end up with, raising kids who they love and invest in. In addition, the recommendation is not grounded in established fact. The jury is still out on men's potential to rape, even among evolutionary psychologists. When pushed, many who assert that all men are potential rapists limit their assertion only to the moment of birth. From there on, the potential is shaped by social and environmental influences that render most men incapable of raping. This is similar to saying that all humans are potential killers at birth.

Men differ greatly in the extent to which they are aroused by sexual aggression and in their self-reported likelihood that they would force sex on a woman. Few men say that they would rape even if they were guaranteed not to be caught or punished, and even with a softer wording about forcing a woman to have sex, only a minority indicate any likelihood of sexual coercion (Malamuth & Dean, 1991).

Thornhill and Palmer's suggestion that time in rape prevention should be spent explaining Darwinian theory is laughable from the practical perspective. Even when rape seminars are marketed as how-to-be-a-better-lover workshops, attendance by men is low and limited to the already converted. What would attendance be for a lecture on Darwin? In addition, presenting such material takes away precious time from more critical prevention targets for men, such as teaching them how to get affirmative consent from a woman so that they are certain their advances are reciprocated and educating them about what acts constitute rape. For example, young men need to know that having sex with a drunken woman, something commonly seen as a stroke of good luck, is actually rape under the law. They need to know that adding a little speck of a party drug to her drink elevates the crime to an aggravated level with the harsh sentences typical of the country's war on drugs.

*Women should dress to avoid rape. . . . How?* How would you advise women to dress to avoid rape? There have been rapists who were acquitted because the victims dressed provocatively in a turtle neck sweater and a midcalf skirt (Bublick, 1999). Where would it end? The mind-set behind this advice is the same as that of countries where women are required by law to dress in shapeless, head-to-toe, black bags with a mask and two slits for the eyes so as not to provoke sexual attacks.

As Thornhill and Palmer see it, the capacity for women to avoid rape has been selected because those female ancestors who reproduced most successfully were very distressed about rape and learned how to identify the circumstances that resulted in rape and avoided them. The implication is that many women today

know how to avoid rape, but prevention programs are needed for those poor souls who do not know. We are not told how these highly vulnerable women would be identified.

The entire premise is based on an empirically unfounded assumption that women can protect themselves from rape. In fact, there has been no success in separating those women who have and who have not been raped on the basis of routine activities, personality, or beliefs. Although there have been isolated reports that women who drink in bars have a high rape rate (Parks & Miller, 1997), a longitudinal study demonstrated that alcohol use is triggered by past victimization and does not predict future victimization (Kilpatrick, Acierno, Resnick, Saunders, & Best, 1997). Furthermore, sexual assault is an exception to the rule in criminology that routine activities have some power to predict vulnerability to crime (Mustaine & Tewksbury, 1998). To the extent that rape can be predicted, a history of sexual abuse in childhood is the most prominent factor. However, even sexual abuse fails the test of practical significance. Chance would allow for 15% of rape victims to be predicted correctly, whereas child abuse increases that figure only to 19% (Abbey, Thompson-Ross, McDuffie, & McAuslan, 1996; Himelein, 1995; Koss & Dinero, 1989). Thus, it has not been for the lack of study that no powerful correlates of vulnerability are known.

It is also hard to see how formulating an acquaintanceship would be protection against rape. Fully 86% of rape victims knew the man who raped them, and 20% of married women have been raped by a spouse (Bergen, 1996; Browne, 1993; Tjaden & Thoennes, 1998). Furthermore, socializing in public places is not going to eliminate rape. Among women raped by nonstrangers, the U.S. Department of Justice (Bureau of Justice Statistics, 1997) reported that 32% of rapes occurred in the street or in a restaurant or bar, commercial building, parking lot, school, park, or playground (these figures are virtually identical to those for women raped by strangers). Giving up going out at night would not help either—30% of rapes happened in the daytime. The most scientifically appropriate reading of the data is that rape is most predict-

able on the grounds of being female, and the best protection would be avoiding all men, including family members.

Advice on women's dress and conduct should be rejected not only because it is unscientific but also because of its tacit assumption that women have a responsibility to act reasonably and live their lives in fear of men. This thinking is absolutely unacceptable in a democratic society. Because rape is a gendered crime, such recommendations harm equality by infringing more on women's liberties than on men's. "Women citizens have a legal entitlement to act on a day-to-day basis on the premise that others will not intentionally rape them" (Bublick, 1999, p. 1443). The U.S. Constitution guarantees freedom of movement, a right to travel, a right of locomotion, and a right to associate with others. In other words, women have the right to use public transportation, travel geographically, socialize with whom they choose, and express themselves through their dress in anyway they find comfortable that does not violate public decency laws. If, as a society, we are to have a citizen duty to take reasonable steps to avoid crime, the steps should be the same for sex crimes as other crimes and, by extension, be the same for men as for women.

### *Problems With Bioprevention*

From a public policy perspective, conceptualizing rape largely as a biological issue reframes it as "a problem to be punished but still expected in certain unavoidable numbers of occurrences, rather than as social problem with the possibility of social remediation" (Moore & Travis, 2000, p. 47). The work becomes misguided "when the biology of sexual reproduction is taken as a general template or justification for a wide range of stereotypic gender role behaviors, often producing prescriptions for behavior that limit individual opportunity and choice" (Moore & Travis, 2000, p. 50). Biologically based public policy recommendations in the area of rape are downright scary. Jones (1999) moved beyond calls for restrictions in women dress and activities. He advocates consideration of

- implementing chemical castration as the penalty for rape;
- varying punishments for rape by the age of the victim, with lesser penalties for older women as they are purportedly less traumatized by rape;
- having male judges refrain from making judgments on rape due to inherent sex differences that render them incapable of making assessments of female psychology;
- repealing the Violence Against Women Act of 1994 on the grounds that gender animus as a motivation for rape is inconsistent with biological models;
- legalizing prostitution to make voluntary sex partners available to men;
- and using evolutionary material on relative harm by form of penetration, amount of violence, and age of victim to set damages in civil trials.

Conceptualizing rape as a sex act alone ignores that it is a serious crime in which the penis is used as a weapon. Clearly, a man is not engaging in a sex act when he screams "You know you like this, bitch" while penetrating a woman and forcefully restraining her. The force behind the criminal act of rape is a mixture of sexual motives and motives to control, dominate, or punish that vary in degree from case to case. My example would be low in sexual motives. Some date rapes might provide scenarios for rapes in which sexual motives appear more prominently. The important semantic distinction is that rape is not a sex act, it is a crime that can be impelled by sexual motives. Acknowledging this mixture of motives is not new. In a 1991 review, Barbaree and Marshall concluded that rape is best defined as an integration of both components and that learning how sex and aggressive elements interact will advance the field.

### DISMISSING ONE-FACTOR THEORIES

As a one-factor, one-level theory, rape as a special adaptation model implicates a single set of causes that reside within individuals. Rape long ago proved itself to be too complex to yield to such simplistic thinking. Although it is cloaked in biology, individual-level evolutionary analysis is also out of step with modern biology's focus on more complex issues, such as the evolution of a successful adaptation between

the species and its environment and the survival of the group and the species (Hyde & Oliver, 2000). It is widely accepted that sexual assault is influenced by causes at multiple levels that range from the broader society to institutions such as the media and religion, family, peer group, intimate relationships, and ultimately, features that are interior to each individual.

Researchers have demonstrated the links of sexual aggression to heredity; physiology; neurophysiology; social learning; gender schemas; sexual scripts; personality traits; attitudes about rape, power, and sex motives; and alcohol as causes of rape that are interior to the individual. At the dyadic level, studies have examined contextual features of relationships such as communication styles, the type and stages of relationships, and features that may render women more vulnerable to sexual predation. Institutional influences that have been linked to rape include family, school, athletic teams, religion, and media promotion of sex role stereotypes that teach or reinforce female and male role imbalances, favor impersonal sex, downplay the seriousness of violence against women, and fail to present successful alternatives to male aggression (for a review, see Crowell & Burgess, 1996).

Evolutionary influences have been acknowledged as part of a comprehensive model of rape by panels of experts such as the National Academy of Science Panel on Violence Against Women (Crowell & Burgess, 1996) and the American Psychological Association Taskforce on Male Violence Against Women (Koss et al., 1994). Those who wish to learn about how evolutionary concepts can be integrated in a model that also addresses environmental and social causation are referred to the work of Neil Malamuth and colleagues (Malamuth, 1998; Malamuth, Linz, Heavey, Barnes, & Acker, 1995; also see Heise, 1998). Alone, biological explanations will not solve social problems because people cannot change their evolutionary history. However, the conceptualization of biological influences, not as hardwiring but as potential pathways that are shaped by the environment, can lead to research with practical implications.

Viewing men as inherently rapacious is hopeless. On the other hand, knowing how harsh environments, the lack of secure attachments, or social learning favor the development of promiscuous male sexuality sets the prevention agenda.

## CONCLUSIONS

Evolutionary psychologists must be pulling their hair out over this book. Having recently changed their name from sociobiology, this is a perfect time to show the public the new face of evolutionary psychology. Instead, they find the spotlight grabbed by a work that is offensive, scientifically flawed, misguided, reckless, and unreflective of the field's contributions to knowledge. It will be much harder now in many quarters to advocate for the explanatory role of evolutionary factors in violence against women. This is unfortunate because scholars on sexual assault, like most scientifically oriented people, place themselves somewhere in the evolutionary camp with regard to the origins of human behavior, confining their contemplation of creationist themes to their spiritual life.

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*Mary P. Koss is a professor of public health, family and community medicine, psychiatry, and psychology in the College of Public Health at the University of Arizona in Tucson. She is the cochair of the American Psychological Association Task Force on Violence Against Women, which in 1994 published No Safe Haven: Male Violence Against Women at Home, at Work, and in the Community, winner of the Washington EdPress award for outstanding book on a social concern in 1994. She served on the National Research Council Panel on Violence Against Women, which in 1996 published its report, "Understanding Violence Against Women." She received the 2000 American Psychological Association Award for distinguished contributions to research in public policy.*