“Not If You Were the Last Man on Earth” and Other Stressful Sexual Situations:

A Critique of the Rape as a Psychological Adaptation Model

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Rape is considered a major social problem in many societies today. However, rape is not uniformly explained, recognized, or experienced across cultures. Rape is a sensitive topic because it involves the intimate violation of one person by another. In today’s modern Western world, rape is not defined simply as rough sex but more complexly as an act that uses sex as a means for power and control. It follows that ideas about rape are tied to ideas about sex. Sex can be constructed with different meanings, it can be performed different ways, and it can have specific functions within the structure of a society. Sex is also essential for reproduction. Human sexual behavior almost asks to be explained by evolution by natural selection. Sexual behavior is linked to survival and reproduction of the fittest and thus sex is essential for evolution. However, behavior varies within and across groups. One topic of biological anthropology is explanation of human variability (Bindon, 2003). Human adaptation studies offer such an explanation for physical characteristics, social traits, and adaptive behavior. Adaptation studies of sexual behavior attempt to explain the diversity and roots of that behavior.

The purpose of this paper is to examine and critique the argument of evolutionary psychology about rape as a male adaptation. I will begin with an outline of the rape-adaptation argument from a review of the literature. Second, I will review definitions of adaptation and limits of the rape-adaptation argument. Third, I will consider limits of the evolutionary psychology model. Fourth, I will present other limitations of a rape-adaptation argument based on evidence and other arguments about rape, including a critical view of laboratory data, cross-cultural differences in sexual behavior, different types of rape, and rape prevention. Finally, I will discuss
the limitations and biases of this critique, conclusions about the rape-adaptation argument, and a call for continued research on causes and prevention of rape and all gender-based violence.

**Literature Review**

**Rape as a Psychological Adaptation**

*The Hypothesis from evolutionary psychology*

Thornhill and Thornhill (1991) put forth the following hypothesis about sexual coercion, which they say is derived from evolutionary biology:

Men’s coercive sexuality reflects sex-specific psychological adaptations to rape, that is, psychological features of men designed by a history of evolution by selection in the context of coercive sex and having the evolutionary function of motivating and regulating men’s coercive sexuality (Thornhill and Thornhill, 1991:91)

*Basic premises of evolutionary psychology.*

In the theory of evolutionary psychology, all human behavior is motivated by psychological adaptation (Thornhill and Thornhill, 1992; Thornhill and Thornhill, 1991) The reason is that “all psychological change...and all behavior are the products of psychological mechanisms processing environmental information, and environmental information processing requires psychological structure/adaptation” (Thornhill and Thornhill, 1992:404). Psychological mechanisms echo psychological structure (Thornhill and Thornhill, 1991). Psychological adaptations are mechanisms that process information and solve problems that affect individual survival and reproduction (Thornhill and Thornhill, 1992). The mechanisms process environmental information and guide feelings, emotions, learning, and behavior toward reproductive goals (Thornhill and Thornhill, 1992).
Behavior can be explained by ultimate and proximate levels of causation, however it is noted that ultimate and proximate levels can compliment, not contradict, each other (Thornhill and Palmer, 2000). Proximate mechanisms refer to the short term and immediate causes of behavior; proximate causes can include genes, hormones, physiological structures, brain mechanisms, environmental stimuli (Thornhill and Palmer, 2000). Proximate causes make something to happen, whereas ultimate causes relate to why mechanisms exist (Thornhill and Palmer, 2000). Thus, evolutionary psychology is primarily interested in ultimate causes.

The evolutionary psychology definition of adaptations refers to phenotypic features present because they were favored by natural selection (Thornhill and Palmer, 2000). Phenotypic features include morphological structures, physiological mechanisms, and behaviors. In this model of adaptation, a phenotypic feature solves an environmental problem that affected individuals for long periods of time thus causing cumulative, directional selection (Thornhill and Palmer, 2000). According to the glossary, adaptation is “a bodily trait that is a product of direct selection for the adaptation’s function (includes psychological traits)” (Thornhill and Palmer, 2000:209).

The functional design of the trait reveals the particular selective pressure, which allows one to determine the nature of the selective pressure responsible for the adaptation (Thornhill and Palmer, 2000). An adaptation is formed directly from a selective pressure, and by-product traits can be formed indirectly in this process (Thornhill and Palmer, 2000). This sets up one of the research questions: is rape a

Ultimate explanations can account for all proximate causes, whether the ultimate mechanisms are direct or by-product adaptations. For Thornhill and Palmer, evolution by individual selection is “the general theory of life” (Thornhill and Palmer, 2000:12) and therefore it can give the best insights about proximate causes. They further justify their research by stating that “identifying proximate causes is key to changing human behavior” (Thornhill and Palmer, 2000:13).

Psychology or brain adaptation works like adaptation for the rest of the body (Thornhill and Palmer, 2000). In evolutionary psychology theory, the brain “contains evolved structures that process environmental information in a manner that guides feelings and behavior toward ends that were adaptive in past human environments” (Thornhill and Palmer, 2000:15). Providing solutions to environmental problems faced by past ancestors is the “function” of adaptation (Thornhill and Palmer, 2000:16). The brain is a physiological part of the body, and controls the rest of the body’s physiology and anatomy by processing environmental information (Thornhill and Palmer, 2000).

The past human environment in evolutionary psychology refers to the Evolutionary Environment of Adaptation (EEA). Hagen (2002) explains that the EEA is not a specific time or place, but it is the environment to which a species is adapted. The EEA is described further as the set of reproductive problems faced by members of a species over evolutionary time (Hagen 2002). One may think of it as a composite of the selection pressures that caused the design of an adaptation (Cosmides and Tooby
The EEA allows one to understand how the modern mind works by realizing that the brain was designed to solve the day-to-day problems of our hunter-gatherer ancestors, not of modern Americans (Cosmides and Tooby 1997).

The framework of evolutionary psychology accounts for all behavior, why it is present and how it developed, both ultimately and proximately.

Arguments and definitions.

In the Thornhill and Thornhill article (1992), which is arguing the case from evolutionary psychology as whole, adaptation refers to “complexly organized, purposefully designed, phenotypic features of individual organisms that exist because they solved a specific environmental problem during evolutionary history” (Thornhill and Thornhill, 1992:363). To be an adaptation, alternative behavioral processes must be distinct entities, because an adaptation is “a precise and distinct aspect of a phenotype” (Palmer, 1991:367). This relates to rape either being a specific adaptation or a by-product of another adaptation.

Evolutionary psychology makes the assumption that men and women have different sexual psychological adaptations (Thornhill and Thornhill, 1992). Men are less discriminating about partners, more motivated to have many partners, and more eager to engage in copulation. For females, on the other hand, selection favored females who could access males with resources and whose traits could promote the survival of the offspring (Thornhill and Thornhill, 1992). Learning, during human sexuality development, is directed by special-purpose psychological adaptations “that influence perception, cognition, memory, and information evaluation in a way that is
specific to rape” (Thornhill and Thornhill, 1992:365). The rape-adaptation hypothesis does not imply heritability, referring to variation in rape inclination from genetic variation. Instead, the hypothesis implies the underlying genes for psychological traits are “virtually fixed or invariant in the human gene pool” because sex-specific and species-typical, coercion varies with environmental not genetic conditions (Thornhill and Thornhill, 1992:365).

Men’s mating strategy crosses a range of tactics from courtship to seduction to coercion (Palmer, 1991; Thornhill and Thornhill, 1992). Vulnerability of the victim is the essential environmental factor influencing a male to choose the rape tactic (Palmer, 1991). According to the rape-adaptation hypothesis, during evolution, directional selection favored males with traits that solved the problem of sex with an unwilling partner through force, which in turn produced psychological inclinations toward rape specifically (Thornhill and Thornhill, 1992). If there are no other options for copulation, the potential benefits of rape outweigh the costs (Thornhill and Thornhill, 1992). Palmer (1991), however, challenges that a theory about a specific rape adaptation must show evidence for a mechanism that links rape to an absence of alternative reproductive opportunities and that this must be demonstrated not assumed.

Anything biological, according to the evolutionary psychology argument, is tied to evolution. Biological refers to anything living or once living, therefore a developmental product of gene-environment causal interaction (Thornhill and Palmer, 2000). The interaction of genes and environment is inseparable. According to Thornhill and Palmer (2000), any phenotypic trait is biologically or evolutionarily
determined (Thornhill and Palmer, 2000), implying that biological determination is synonymous with evolutionary determinism.

Thornhill and Palmer define culture as socially learned behavior and posit that cultural behavior is a product of gene-environment interaction (Thornhill and Palmer, 2000). Culture is behavior, thus in the realm of biology and thus in the realm of natural selection (Thornhill and Palmer, 2000). To become a behavior of a culture, a trait must be influenced by genes and the environments from generation to generation (Thornhill and Palmer, 2000). The reasoning goes as follows: “Innate behavior, learned behavior, and cultural behavior are all products of brains. Brains are products of gene-environment interactions. Gene-environment interactions are subject to natural selection” (Thornhill and Palmer, 2000:27).

Individual behavior within a culture is always dependent on the human evolutionary history of selection for individual reproductive success (Thornhill and Palmer, 2000). Rape, Thornhill and Palmer claim, is associated with enhanced reproductive success during human evolutionary history (Thornhill and Palmer, 2000). Smuts and Smuts (1993) define sexual coercion in terms of evolution. It is “the use by a male of force, or threat of force, that functions to increase the chances that a female will mate with him at a time when she is likely to be fertile, and to decrease the chance that she will mate with other males, at some cost to the female” (Smuts and Smuts, 1993:2)

In evolutionary psychology, men rape because of evolved adaptations that helped individuals overcome obstacles to individual reproductive success (Thornhill and Palmer, 2000). The male psyche, Thornhill and Palmer (2000) argue, could
contain various potential adaptations: mechanisms to evaluate potential victim’s vulnerability; mechanisms to motivate men without sexual access to females; mechanisms that produce differential sperm counts in rape versus consensual sex; mechanisms that produce differences in sexual arousal from rape and consensual sex. For women, rape victimization could have resulted in reduced female reproductive success (Thornhill and Palmer, 2000). However, negative influences on female reproductive success would set the stage for counter-adaptations to rape (Thornhill and Palmer, 2000). For example, “a rape victim’s psychological pain is a function of reduced reproductive success caused by rape” (Thornhill and Palmer, 2000:102). Also, for young women, one finds other psychological mechanisms to reduce rape: more fear of rape and avoidance of high risk environments (Thornhill and Palmer, 2000).

Thornhill and Palmer (2000) support the idea that cross-culturally rape is found in all Homo sapiens. From this universal, it is concluded that males possess genes that can lead to raping behavior in the right environment, and every examined culture has had the necessary environmental factors (Thornhill and Palmer, 2000). According to Thornhill and Palmer, social science says “socialization alone causes sex differences that produce rape,” however Thornhill and Palmer go on to explain that “the ‘social control of rape,’ not rape itself is...socially learned (Thornhill and Palmer, 2000:143).

Present Evidence

To argue for either a specific rape adaptation or rape as a by-product in evolution, Palmer (1991) suggests using evidence across species and across cultures to
observe the presence and influence of rape. Thornhill and Thornhill (1992) use evidence from situational descriptions and laboratory studies. Coercion is a major part of general male sexual activity, and men frequently combine coercion and noncoercion in sexual pursuits (Thornhill and Thornhill, 1992). For example, identified rapists often are in a relationship and men will self-report sexual coercion as a part of sexual pursuit (Thornhill and Thornhill, 1992). In the evolutionary psychology view of the world, men date hoping for sex and women date hoping for courtship (Thornhill and Thornhill, 1992).

The bulk of Thornhill and Thornhill’s evidence (1992) is a review of studies around coercive and noncoercive stimuli in the laboratory. In the lab, reaction to stimuli is measured by engorgement of the penis. “Penile erection is the only physiological response in men that occurs almost exclusively during sexual arousal,” and thus measurement can “best reflect men’s sexual arousal and preference” (Thornhill and Thornhill, 1992:369). In lab studies, of incarcerated and other men, similar sexual arousal is garnered from depictions of consensual sex and of rape, thus Thornhill and Thornhill (1992) conclude that ancestors were able to be sexually aroused by willing and non-willing women, suggesting that consent is not required for arousal.

In the lab, men were more aroused by sexual and violent depictions and not violence alone (Thornhill and Thornhill, 1992). Thornhill and Thornhill account for arousal from the depiction of control through force because “it represents an evolved cue that mating can now be successfully obtained” (Thornhill and Thornhill,
A psychological adaptation makes physical control of unwilling women facilitate men’s sexual arousal (Thornhill and Thornhill, 1992).

Other influences of arousal relate to reputation. Thornhill and Thornhill (1992) note some evidence of young age and low social status, being “socioeconomically deprived,” factors associated with increased likelihood to use force (Thornhill and Thornhill 1992:373). In general, rape is most acceptable to a perpetrator when there is no chance of getting caught or losing status because men do not want to hurt their social reputations (Thornhill and Thornhill, 1992). According to Thornhill and Thornhill (1992), this is reflected in the lab studies that show men are uninhibited by removed accountability. Stemming from this interpretation, Thornhill and Thornhill conclude that “men’s motivation to appear moral appears to serve as a restraint on their tendency toward sexual coercion” (Thornhill and Thornhill, 1992:374). Men might have an evolved tendency toward coercion, but cultural values stepped up to counter the psychological adaptation.

**Study Results: Critiques**

**Of Use of Adaptation**

How adaptation is defined is of great importance when the theory being argued is about adaptation. The evolutionary psychology perspective focuses on the individual and specifically the brain and the mechanism for processing environmental information. Anthropology offers a broader definition of adaptation. Frisancho (1993) defines adaptation as a process through which an organism attains a beneficial adjustment to the environment, temporary or permanent, through short-term or life long processes. Adaptations “may involve physiological, structural, behavioral, or
cultural changes” that help an organism function under stress (Frisancho, 1993:4). Put another way, an adaptation is any change allowing more efficient functioning after exposure to a new environment (Frisancho, 1993). Mazess (1975) offers the possibility of adaptive domains having different criteria at each level. Mazess’ definition of adaptation (1975) includes the idea of benefit or necessity relative to stress; adaptation occurs at all levels of biological and social hierarchy.

In contrast with the anthropological definitions, the evolutionary psychology ideas about adaptation seem to have gaps. The need and challenge for males to mate is mentioned, but stress is not. Perhaps it would be argued that the individual brain is the most important level of evolution because that is where mechanisms are evolved, which results in all behavior. However, individuals do not exist in isolation. No consideration is made of how rape could affect the group, from fecundity to cooperation to relationships, which would have been significant factors in the EEA. Nor do the arguments discuss what happens after birth and how children fit into the picture of sexual behavior. Simply mentioning that learning is controlled by evolved, adapted mechanisms does not explain how people are interacting. Additionally, behavior may be tied to other physiological functions or responses. Mechanisms in the brain are part of a system of organs, all of which work to maintain homeostasis. The neural pathways in the brain are not static but are conditioned by the present, not evolutionary, developmental environment of the individual.

In every statement about adaptation, the evolutionary psychologists seem fixated on reminding the audience that adaptations reflect evolutionary past or ancestors in the past or past environments. While it is good to point out that what
was once an adaptation may not be adaptive now, adaptation sounds like it happened once upon a time and after adaptations evolved they were fixed. Evolution is not a static process. The evolutionary psychologist may be ready to say farewell to adaptationism if it does not play a large part in their arguments, but ignoring the dynamic and continuous process of adaptation seems to indicate instead they cannot account for it. Though similarities may exist across time, the environment in which coercion or a mechanism evolved is not static (Langley, 1992). Rape today may have more benefits and fewer costs than in the EEA. Genes in the ancestral environment directed the formation of mechanisms favored by selection but this says nothing about the contemporary psychological mechanisms (Kitcher, 1992). And even if the genes are fixed today, it doesn’t imply that in the developmental environments the genes directed the formation of the same mechanisms (Kitcher, 1992).

**Critique of Model of Adaptation**

The evolutionary psychology model of adaptation makes a neat package. Psychological adaptation underlies all behavior, behavior is the product of psychological mechanisms, mechanisms reflect structure, “thus, rape must reflect psychological adaptation” (Thornhill and Thornhill, 1991:93). Langley (1992) asserts that the model validates itself because the claim is that a behavior is evolved because it exists and then it is used to infer how evolution produced it. Making a blanket statement that all behavior is evolved means arguments can start from behavior to explain how it is an adaptation. Additionally, Mazess (1975) notes that showing a characteristic remains over time is not enough to show it is a result of adaptation. In balancing the argument between specific or general adaptation, Palmer (1991) points
out that mechanisms related to visual stimulation, autonomous sex drive, desire for a
variety of partners, more willingness to engage in impersonal sex, and less
discrimination in choosing partners, could produce raping behavior but they could
have been selected for because they helped males reproduce in general. However,
these mechanisms may have no genetic basis to select for or against.

Because the rape-adaptation model is concerned primarily with individual
psychology, the different levels for adaptation from this challenge cannot be
addressed. Furthermore, the model of evolutionary psychology does not account for
change in or alternatives to behavior. Deviations are only discussed in terms of
maladaptive or ineffective responses (Thornhill and Palmer, 2000), which will be
selected against and removed.

Although the evolutionary psychology argument recognizes the essential
interaction of genetics and environment in the evolution and development of
individual traits, the model accounts for neither genes nor environment or the
interaction of the two. Futterman and Zirkel (1992) contest that to show coercion is
a result of natural selection, “a pattern of phenotypic differences must be present
within a population, the differences must be inherited, and differences must lead to
differential reproductive success” (Futterman and Zirkel, 1992:385). Here a true
history of rape would be beneficial for evolutionary psychology. Differences and
changes have most likely come and gone through time, but in a population there will
be patterns of sexual behavior, for example, and different patterns in behavior can
reveal conditions influencing evolution. Additionally, rape is not a single homogenous
phenotype but means different things in different social and historical contexts (Futtermann and Zirkel, 1992).

Futtermann and Zirkel (1992) reduce rape-adaptation to a just-so story for reproductive advantage, without an account history, context, or variation. Other researchers (Kitcher, 1992; Smuts, 1992) also suggest evolutionary psychology as providing a just-so story about sexual behavior. They challenge the idea of a male human reproductive strategy that has been shaped by selection to favor men who can copulate as much as possible and that men are more eager to copulate and use force when necessary (Kitcher, 1992; Smuts, 1992). To discuss adaptation in historical environments, Kitcher (1992) introduces the need of evolutionary psychology to offer precise models of costs and benefits, even mathematical modeling. Evolutionary psychology must show exactly how rape yields a reproductive advantage and account for assumptions about the environment and reasonable behavior strategies (Kitcher, 1992).

In addition to the definition and use of adaptation, there are issues to take with other explanations in the argument and other oversights of the model. Thornhill and Palmer (2000) discuss leaving out social science and other non-evolutionary models because if psychological adaptations underlie every behavior, the other proximate explanations cannot add to the ultimate explanation. Thornhill and Thornhill (1992) consider six hypotheses about the tendency to rape today that follow from the statement that rape is an evolved conditional mating tactic. Archer (1992) notes that alternative hypothesis can account for the outcomes of sexual behavior and that alternative mating tactics and circumstances have costs and benefits. Not
accepting the psychology-behavior premise as ultimate or alone, then other causes must be considered.

To use the idea from Darwinian evolution that adaptation evolve through natural selection, the behavior must be shown to have been achieved with adequate precision, economy, efficiency, and complexity to rule out chance or general mechanisms (Mealey, 1992). Mealey (1992) contends that sexual coercion can be explained better by a continuum of strategies that arise from less specific adaptive rules. However, behavior is not necessarily an adaptation. Natural selection requires heritability and behavior is often is result of culture not genes.

Another issue with the rape-adaptation argument is that it is male-oriented, ignoring female countertactics such as preventing rape or minimizing possibility of conception (Archer, 1992). Also, Archer (1992) presents the idea that the environmental conditions where rape would be an adaptation in human evolution would be limited. Without a history or a thorough description of the environment, evolutionary psychology cannot refute this claim. In discussing adaptation and evolution and ancestors, evolutionary psychology may point to the EEA, but the argument is filled with fewer facts and more just-so’s.

**Critique of Evidence Presented and of Other Arguments**

Considering the definition of adaptation relating to particular environmental conditions and favorable traits, lab data would need to replicate the environment to make a case for explaining evolution in a particular historical environment. Or, the phenomenon would have to be observed in real life, for example, an extant foraging population, looking first for differential fertility and then the genes. Either way, it
seems creating a situation of high competition, a threatening environment, a need for cooperation, a desire for copulation, and a refusal from women, is necessary. Though this may sound like modern life, it seems that the stresses for ancestors in the EEA would be different. The EEA describes small, dependent family groups that relied on cooperation. Without a full natural history, however, those stresses cannot be brought in. Still, to make a dire situation and watch to see if a man raped a women, one might need to create a “last man on earth” scenario and see if the woman would have sex with the man, and what happens if she or he refuses.

Thornhill and Thornhill (1992) assert that “lab studies can control confounding variables and identify the actual environmental conditions that men are adapted to process (Thornhill and Thornhill, 1992:375). Keeping psychology in mind, awareness that it is a lab situation will always be in the back on the mind, and even if confounding variables were controlled, a lab cannot create 100% the same conditions. A lab setting would be nothing like the EEA. A focus on individual psychology may obscure the fact that people exist in nonrandom groups within a culture. In the EEA, within small groups, dependency and closeness would not be conducive to coercion. From some culture theories, the idea is introduced that culture is more than the sum of its parts. Even an in-depth ethnographic study with participant-observation cannot describe what makes the experience of the whole culture.

The laboratory, however, is the best that can be done without a time-machine. Frisancho (1993) supports the study of individuals in natural and laboratory situations, exposed to stressful conditions to understand adaptation mechanism. The lab situations Thornhill and Thornhill (1992) invoke, however, did not expose subjects to
the stress of not being able to mate but elicited responses from stimuli. Recognizing
the premise that all behavior is adaptive, then subjects’ responses would identify
adaptation. The responses, however, would not reveal mechanisms.

Langley points out that “patterns of sexual stimulation . . . have not been
shown to relate directly to reproductive strategy” (Langley, 1992). In the laboratory
data, some cases show that certain traits exist, but existence does not provide
evidence for evolution (Langley, 1992). Langley also favors a natural history,
specifically delineating the needs of such a study as “percentages, frequencies,
observations of individuals over long times or under different environmental
conditions” (Langley, 1992).

Malamuth (1992) also critiques Thornhill and Thornhill’s use of the lab results,
many of which came from his investigation. Malamuth corrects Thornhill and
Thornhill’s conclusion about violence and says that violence does in fact inhibit most
men’s sexual arousal (Malamuth, 1992). Malamuth also brings up a fallacy in the
arguments about sexual coercion. Thornhill and Thornhill (1992) describe mating
tactics from courting to coercion to force, stating that men mostly likely use many
or a range of tactics in pursuing females. The problem is that Thornhill and Thornhill
(1992) are making a specific adaptation to rape argument and at the same time
arguing for a continuum of mating tactics (Malamuth, 1992; Palmer, 1992).

Another point of evolutionary psychology is that the expression of coercion
varies with environmental conditions. However, the evolutionary psychology theory
does not mention an alternative source of variation in biological theory: individual
responses to the same conditions (Smuts, 1992). Individuals in the same environment
may have various responses to stress or stimuli. Additionally, taking the average of responses in lab studies ignores variation within the group of subjects. As an extension from the evolutionary idea that what was adaptive once may no longer be adaptive, Smuts (1992) suggests that discrepancies between psychology of modern men and ancestor are also likely to exist. A further critique of Thornhill and Thornhill overlooking variation in data, Smuts (1992) says development in different environments can result in different psychologies, and without the comparative methods to understand difference, the evolutionary psychology argument is a just-so story.

Although the incidence of rape varies across cultures (Sanday, 1997), evolutionary psychology views the mere universal existence of rape as further evidence of a cross-species adaptation. The reasoning presented ties into a nice package: rape is found in all Homo sapiens, thus males possess genes that can lead to raping behavior in the right environment, and every examined culture has had the necessary environmental factors (Thornhill and Palmer, 2000). The proximate cause of socialization and the cultural context of rape are discredited in Thornhill and Palmer’s reasoning. They claim cultural encouragement of rape is not necessarily a precursor to rape because cross-cultural support of rape is not universal yet the existence of rape is universal (Thornhill and Palmer, 2000). However, the use of culture is flawed because evolutionary psychologists view mental culture preceding material culture, whereas different schools in anthropology view culture as different things and arising from different sources. Even in theories about the mental aspects of culture preceding the material, change is possible and part of culture. Thornhill
and Thornhill criticize social science as saying “socialization alone causes sex differences that produce rape” (Thornhill and Palmer, 2000:143), but this generalization does not hold across all disciplines. Take physical anthropology for example, in which many people favor a biocultural model to explain human diversity.

Evolutionary psychology also points to reports of rape in non-human species to derive support for arguments about specific adaptation (Thornhill and Palmer, 2000). Certain insects, for example, have physical features that are designed for the male insect to hold onto and immobilize the female insect. Is the claim being made that insects have the same type of mentality as humans in terms of sense of self or individual rights? Evolutionary psychologists may argue that fish choose to rape because it is part of their mating strategy, but human rape is defined by consent, which would place the evolutionary psychology argument into the discussion on animal rights and cognition.

The nature of human experience, human sexual behavior for example, is different from other species, because behavior is tied to intentional mental events and self-awareness. Sexual interaction involves interpretation of physical acts as parts of behavior, endowed with meaning (Akins and Windham, 1992). Environmental cues, activation, and the circumstance of rape are intentional contexts, meaning there are different intentional states that can be expressed different ways. Thus to perceive the circumstance of rape, a man must interpret a women’s behavior which indicates her mental state (Akins and Windham, 1992). Intentional contexts, expression, and interpretation are part of what people claim as human to differentiate *Homo sapiens* from other animals.
Thornhill and Thornhill (1991) do account for types of rape by the numerous motives to rape, which usually include desire for sex. They hypothesize that men’s motivation for sex and the motivation for domination and control are “functionally integrated in the sexual psychology of men as a result of evolution by selection” (Thornhill and Thornhill, 1991:104) to control women’s sexuality to control paternity. However, the issue of history is met again because there could be different, more, or less rape types today than in the past. Three patterns of rape are described in the present-day Western culture (Groth, 1979): power rape, the expression of conquest and control, often to compensate for perceived inadequacy; anger rape, the expression of hostility; and sadistic rape, expression of eroticized anger and power, often characterized by intentional maltreatment and enjoyment of victim suffering. How does evolutionary psychology account for the seemingly differently motivated acts? The power rape may be most closely related to rape used to increase copulation; however, other types of rape may reflect further evolution of mechanisms or perhaps independent mechanisms. The bottom line is that the situation may not be so cut and dry.

A final arena for critique comes from feminist responses to evolutionary psychology. Though later arguments discuss female mentality in the natural history of rape, (Thornhill and Palmer, 2000), describing differences is not the same as explaining exact causes. For example, choosy females are cited as a male obstacle, but why would women be choosy and why couldn’t men be choosy. Though Thornhill and Palmer (2000) claim to avoid popular notions of gender, it seems that it would be challenging to know the exact gender roles of the past without a natural history.
Additionally, scientific inquiry may view itself as being objective, but I think at this point, the influence of Western notions about gender and gender roles are revealed as being already in the reasoning of science.

Another point of gender contention is that within-sex variation of behavior may be greater than between-sex variation (Gowaty, 1992). Gowaty states that the study of sex is a way to “socially construct meaning in our gendered world” (Gowaty, 1992:389). Not all men and all women fit neatly in the separate sociobiological gender categories. In the range of sexual alternatives and attitudes, one cannot simply compare men and women’s behavior as representative of two distinct and precise parts of a whole (Gowaty, 1992). Gowaty (1992) also supports the importance of considering the natural history of rape by first describing the variation in the expression of the trait and the variants of the trait to fit rape into a comprehensive picture of human sexuality. Accounts of variation must extend beyond the industrialized Western world.

Another feminist response cautions that sexual coercion and rape are not synonymous (Brownmiller and Mehrhof, 1992). Rape is defined “as a crime of violence committed against women as a demonstration of male domination and power,” (Brownmiller and Mehrhof, 1992:382). Though Thornhill and Thornhill (1992) claim female resistance does not discourage males, many perpetrators respond to resistance of rape with a flight reaction (Brownmiller and Mehrhof, 1992). Brownmiller and Mehrhof further critique the specific rape-adaptation hypothesis, stating that the reasoning is “reductive and reactionary to isolate rape from other forms of violent
anti-social behavior and dignify it with adaptive significance” (Brownmiller and Mehrhof 1992:382).

A specific rape-adaptation hypothesis does not account for cross-cultural variation, it is not clear about the use and usefulness of cross-species comparisons, it does not account for within sex variation, and it paints an inaccurate picture of the experience of rape today.

**Discussion**

**Limitations**

I will fully admit my biases. I have tried to be without any blinding bias in my critiques, and I feel I have avoided Thornhill and Palmer’s (2000) list of common errors made in regards to evolutionary psychology theory. However, my desire to critique the evolutionary psychology stems from my bias in viewing the causes of rape from a sociocultural perspective. I also admit to a biocultural bias and a feminist bias. Additionally, I have little background in evolutionary psychology and I can only claim to critique arguments related specifically to the rape-adaptation theories.

**Conclusions**

The argument for understanding the causes of rape and the interest of the researchers in joining the process of understanding rape is valuable. Being able to claim *the* explanation for rape has vast potential for ending rape and a natural history would make evolutionary psychology the best place to start. However, little history is presented, and the combination of present with ancient past is often a leap.
Additionally, I recognize that this science claims to be without value judgments or justifications of rape, however, regardless of whether it is free of value or not, non-evolutionary psychologists might not understand that and jump to the conclusions that this justifies or absolves men who rape women.

While the argument had potential, it also has many failures and does not serve the ultimate goal of ending gender-based violence. First, the use of adaptation is narrow, exclusive, and purposefully selective. The evolutionary psychology model for rape has gaps and fallacies. It does not account for biology or culture or their interaction, nor does it account for change. The biocultural model of human adaptation, on the other hand, allows that there exists a continuous process of past adaptations being modified and developed (Frisancho, 1993). Adaptation always involves a cost, but the process is always beneficial in some domain at some level, and adaptive significance depends on environmental conditions (Frisancho, 1993). Change is recognized and important in the continued process of adaptation.

The research and data presented to support the evolutionary psychology model are narrow, purposefully selective, and contain an interpretive bias. Moreover, the model introduces more questions which it cannot answer. If today’s environment is not the same as the past environment(s), one might say culture became the selection agent, and in the dynamic process, favorable behavioral mechanisms could further adapt to meet cultural standards. In response to the negative environment, the adaptation to rape might change to mechanisms that influence an adaptation not to rape. However, rape continues to exist.
I agree that sex must be considered in understanding causes of rape, quantification and standards are important, but can that capture the environment? Humans do not exist only in biological environment: there is culture, society, individual interaction, perhaps metaphysical. A natural history of rape would need a thorough description of the biological and cultural environments.

**Future Research**

Any theories about rape need to be critiqued. Critical investigations will continue the expansion of knowledge. Though it is essential to understand causes in order to make changes, current education, prevention, and response models cannot be dropped simply because they do not follow from the ultimate cause of rape. When something is planted in the social system, change is only possible by getting in, understanding, and breaking down that structure. Research and understanding of rape will only be possible with continued and needed interest across disciplines. One goal of rape education is to raise awareness about the issues as well as making the issues a serious concern. Science can make people take things seriously. The biocultural model is valuable for contribution to scientific understand because it considers adaptation while also dealing with inequity, the social system, and other cultural issues. Although it may be a matter of semantics, perhaps a *cultural* history of rape would be more useful and accurate for understanding the link between sex and rape.

To end, I will turn to Thornhill and Palmer’s account (2000) of inadequacies of social science, to further highlight how evolutionary psychology can so neatly fit and explain things, leaving little room for argument. In refuting the tendency to use social
facts to explain causes of human behavior, Thornhill and Palmer (2000) maintain that there are evolved human psychological intuitions, resulting from selection for the ability to predict what others will do, thus people are experts at providing proximate causes for human motivation. Another reason for the resistance of social science to “Darwinize” as Thornhill and Palmer (2000) describe it, is the threat to social science ideology and to the status of the researcher. Maybe it is my “evolved psychological intuitions about behavioral causation” misleading me to “believing I know as much as experts about proximate motivations” (Thornhill and Palmer 2000:114). If I do not accept ultimate motivations, certainly it must be a defense mechanism because my ideology and status are being threatened. Someone call the psychologist, it might be “biophobia” (Thornhill and Palmer 2000:122).
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