

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/245333283>

An evolutionary-based model integrating research on the characteristics of sexually coercive men

Article · January 1996

CITATIONS

79

READS

443

1 author:



[Neil M Malamuth](#)

University of California, Los Angeles

139 PUBLICATIONS 13,915 CITATIONS

SEE PROFILE

CHAPTER EIGHT

An evolutionary-based model integrating research on the characteristics of sexually coercive men

Neil M. Malamuth

*Communication Studies and Psychology, University of California,
Los Angeles, USA*

In ancestral environments in which the human mind evolved, males could achieve reproductive success by engaging in strategies that involved "converging" or "diverging" interests with those of females. Psychological mechanisms evolved designed to increase effectiveness in each of these types of strategy, with early life experiences calibrating relevant mechanisms to prepare the individual for later interactions. Using this conceptual framework, a model of the characteristics of men who use sexually coercive tactics is presented. It integrates many seemingly independent correlates of sexual aggressors within three major constellations of characteristics: (1) a general personality orientation to assert one's own interests at the expense of others; (2) a short-term mating orientation likely to create a conflict of interests with females; and (3) a constellation of emotions and attitudes priming coercive tactics for dealing with strategic interference or conflict. While each of these three constellations makes a unique contribution to the likelihood that a man will use sexual coercion, it is argued that their confluence is particularly likely to characterize sexual aggressors. A series of interrelated hypotheses derived from this model is described and supporting data are presented.

Dans les environnements ancestraux dans lesquels l'esprit humain a évolué, les mâles pouvaient atteindre le succès reproductif en adoptant des stratégies qui comportaient des intérêts "convergers" ou "divergents" par rapport à ceux des femelles. Des mécanismes psychologiques se développèrent afin d'accroître l'efficacité de chacun de ces types de stratégies, alors que les premières expériences de la vie servaient à étalonner des mécanismes pertinents préparant l'individu à des interactions futures. À partir de ce cadre conceptuel, l'auteur présente un modèle des caractéristiques des hommes qui utilisent des tactiques sexuellement coercitives. Il intègre plusieurs corrélats apparemment indépendants d'agresseurs sexuels dans trois constellations majeures de caractéristiques: (1) une orientation générale de la

personnalité vers la revendication de ses propres intérêts aux dépens des autres; (2) une orientation de l'accouplement à court-terme susceptible de créer un conflit d'intérêts avec les femelles; et (3) une constellation d'émotions et d'attitudes amorçant des tactiques coercitives pour se charger des interférences stratégiques ou des conflits. Bien que chacune de ces trois constellations apporte une contribution unique à la probabilité qu'un homme ait recours à la coercition sexuelle, l'auteur soutient que leur confluence est particulièrement apte à caractériser les agresseurs sexuels. Il élabore une série d'hypothèses intimement reliées qui sont dérivées de ce modèle et présente des données à leur appui.

INTRODUCTION

The causes and consequences of violence against women are topics of international concern. Some studies indicate that about 25% of women have experienced an attempted or completed rape (Koss, Gidycz, & Wisniewski, 1987; Russell, 1984). Research with cohabiting and married couples suggests that about 20% of all women will experience physical violence at the hands of their male partner (Hotaling & Sugarman, 1986; Straus & Gelles, 1986). There are also indications that battered women may be particularly likely to be victims of marital rape (e.g. Hanneke, Shields, & McCall, 1986).

Research has documented the occurrence of serious long-term consequences of aggression against women. Studies indicate similar effects on victims of both stranger and acquaintance rape (Koss, Dinero, Seibel, & Cox, 1988). Physical abuse among co-habitants is known to have serious consequences not only for the participants and their children but it appears to be an important factor in the transmission of violence from one generation to the next (Straus, 1987).

It is essential to understand the etiology of these behaviors and to develop strategies to predict and prevent them. Research suggests that the characteristics of male perpetrators of aggression against women provide an important basis for understanding such aggression (e.g. Hotaling & Sugarman, 1986; Markman, Floyd, Stanley, & Storaasli, 1988). While the primary focus of this chapter is on the characteristics of men from the general population who commit sexual aggression¹ against women, the theory and data are also relevant to understanding the causes of other forms of male aggression against women (e.g. Malamuth, Sackloskie, Koss, & Tanaka, 1991).

Much of the research in this area has consisted of independent lines of investigation focusing on a correlate or small group of correlates of sexual aggression. The factor(s) chosen by investigators has reflected their disciplinary and theoretical orientation. Criminologists often focused on variables contributing to various kinds of antisocial behavior, viewing sexual coercion as just one of

¹ For the purposes of this article I interchangeably use terms such as *sexual aggression*, *sexually coercive tactics* and *coercive sex* to refer to non-consensual sex. The term *rape* similarly refers to non-consensual intercourse. Although I recognize that finer distinctions can be made among such terms, these are not particularly relevant to the focus here.

many manifestations of delinquent acts. The variables studied within this framework included abusive home environments and delinquent adolescence (Ageton, 1983). Feminists and cultural anthropologists primarily focused on factors such as dominance motives (Sanday, 1981a; 1981b), attitudes condoning violence (Burt, 1980) and hostility towards women (Check, Malamuth, Elias, & Barton, 1985). Sociologists considered the role of sexual experiences, norms and expectations (Kanin, 1985). Psychiatrists and clinical psychologists focused on sexual arousal in response to aggression (Abel, Barlow, Blanchard, & Guild, 1977) and fantasy patterns (Greendlinger & Byrne, 1987). Personality psychologists identified the role of general personality traits (Rapaport & Burkhart, 1984), including lack of empathy or sympathy for others (Hanson, 1997; Gold, Fultz, Burke, Prisco, & Willett, 1992). Each of the groups of investigators from these diverse traditions found support for the particular characteristics they focus on as correlates of sexual aggression. Although these studies have been valuable in identifying correlates of sexually aggressive behavior, these findings need to be integrated within a unified framework. The present chapter attempts such an integration within a unified theoretical and empirical model.

AN EVOLUTIONARY-BASED MODEL

The evolutionary framework

Overview. Evolutionary psychology applies knowledge of evolutionary processes to understanding the human mind and behavior (Buss, 1995; Tooby & Cosmides, 1990). The psychological mechanisms that constitute the human mind were designed in response to the recurrent adaptive problems faced by our ancestors over many generations, with the "bottom line" for selection being reproductive success (Dawkins, 1986). To understand emotions, thoughts and behaviors in contemporary environments, therefore, it is essential to analyze the *function* of the psychological mechanisms that evolved in ancestral environments. The mechanisms and the type of environmental input they can process are not two separable causal processes, but elements of the same evolved package (Tooby & Cosmides, 1990). The function of psychological mechanisms cannot be understood solely in terms of current environments which in modern technological societies are radically different in many respects from the types of environment that were a relatively stable feature during most of human evolutionary development. Although evolutionary processes continue, of course, in current environments, the processes of natural selection typically take many generations to significantly change features of the human mind. Therefore, evolutionary psychology contends that it is important to contextualize the development of the mind within ancestral environments because the mind's mechanisms developed to their present form in those environments and have undergone only minor changes since then (Cosmides & Tooby, 1987).

Psychological mechanisms which are adaptations were naturally selected in the evolutionary history of our species. Human responses may be the result either of adaptations, by-products of adaptations or "noise" (e.g. mutations, genetic drift, etc.). Just because a behavior was adaptive in evolutionary environments in the sense that it contributed to reproductive success does not mean that such a behavior contributes to reproductive success in current environments nor that it is desirable, moral or inevitable. One of the fallacies about this approach is that it suggests that humans are "hard-wired" or do not make choices. On the contrary, evolutionary approaches focus on the interaction between organisms and their environments and under what conditions organisms change their behavior in different environments (Crawford & Anderson, 1989).

There are two interrelated aspects of evolutionary psychology's conceptualization of behavior that are particularly relevant to the model presented later of the characteristics of sexual aggressors. The first pertains to variability in human behavior and the second to gender differences.

Variability in human behavior. Some critics erroneously assume that evolutionary approaches do not allow for variability. It is correct that evolutionary psychologists have generally assumed that selective pressures are essentially the same for all humans in most domains where problem-solving adaptations occurred (e.g. how to regulate heat, how to detect cheaters, etc.). These mechanisms are therefore considered human universals (i.e. species-typical; Tooby and Cosmides, 1990). Although the mechanisms are fundamentally the same, there are variations in degrees and their calibration levels (e.g. all humans have anger-producing mechanisms, but these differ in threshold for elicitation and range of expression). These differences can result from genetic variability within the species as well as environmental differences, both developmentally and contemporarily.

There is often confusion in equating evolutionary psychology with some form of genetic determinism. Although genes obviously play a role in enabling and limiting the range of all human behaviors, the algorithms underlying human development in different domains differ in the extent to which they are open to influence by environmental conditions. A *facultative developmental algorithm* is a relatively open mental program that directs development via interaction with particular features of the environment whereas an *obligative developmental algorithm* is a mental program that is minimally affected by variations in environmental conditions (Alcock, 1984). The degree of genetic contribution to individual differences in various domains is a function of the extent to which the mental programs are facultative or obligative.

Facultative developmental programs may also differ in the extent to which certain environmental influences, particularly during critical periods, may "fix" mechanisms at certain levels as compared to those that remain more flexible to changes throughout the lifespan. The evolutionary paradigm provides insights

into the reasons that varied mechanisms have differing periods of neurological plasticity and degrees of flexibility in response to environmental input (e.g. Gazzaniga, 1992). Additionally, it is noteworthy that inherited and developmental-experiential differences may systematically affect how people select their environments (Loehlin, 1992). For example, children of differing physical size or strength may be differentially reinforced for choosing differing strategies for dealing with conflict (e.g. compromise or aggression). These early experiences may help shape life-long patterns.

Gender differences. Evolutionary metatheory provides a framework for predicting when gender differences are or are not expected, the direction of the differences, and why these differences are predicted—a set of testable predictions typically not made in advance by other gender differences theories (Buss, 1995). Males and females are expected to have the same psychological mechanisms in those domains where natural selection has favored the same solutions to adaptive problems for all humans regardless of their gender. Correspondingly, in some domains the problems faced in evolutionary history by males have not been identical to those faced by females. In this case, mechanisms are expected to have evolved differently, because the identical solution for the different genders would not have been optimal for dissimilar problems.

One cannot consider either gender's mechanisms superior or inferior to the other (Buss, 1995). Rather they form a co-evolved strategy, each representing the *evolutionary-based interests* (i.e. costs vs. benefits affecting reproductive success) of those engaging in such strategies, which sometimes complement and sometimes compete with others' strategies of the same or of the opposite gender (i.e. *convergent or divergent interests*). Although considerable individual differences would be expected in some aspects of female versus male sexual strategies, they should be considered gender-linked differences (such as height), rather than gender-absolute (such as the ability to give birth). These gender-linked differences may be best described as differences in threshold levels (Money, 1986).

The study of aggression within an evolutionary framework

Before turning to specifically focus on the topic of sexual aggression, it is important to briefly consider an evolutionary-based perspective on aggression generally (Daly & Wilson, 1987; 1994). Other models have often conceptualized aggression as a form of pathology because of the terrible harm and suffering that it can cause. From an evolutionary perspective, pathological behavior involves the failure of a set of mechanisms to function in the way they were designed by evolutionary forces, owing to such factors as decay or subversion by competitive forms of life (e.g. viruses). Although some aggressive acts may result from such pathology, aggressive behavior generally does not reveal such characteristics or

those that might be associated with other possibilities, such as by-products of other adaptations. Instead, aggression shows characteristics of functional design revealing an evolved adaptation which resulted in fitness-promoting consequences for the aggressing individuals, at least in some recurring ancestral environments (see Daly & Wilson, 1994, p. 269):

The relationship-specificity of human violence bespeaks its functionality: circumstances eliciting it are threats to fitness, and the targets of violence are generally not merely those available but those with whom assailants have substantive conflict . . . and hence have something to gain by subduing them. Threats to fitness as a result of others' actions depend not only on the nature of the threats but also on the relationship and the reproductive value of the parties, and on the alternative avenues to fitness of each. The utility of using violence to protect, defend or promote fitness in past environments can be discerned by an analysis of the complex functionality of morphology and psychology.

It is worth emphasizing that, although the capacity to aggress may reflect the workings of adaptive mechanisms, this does not imply that aggressive behavior is justified or inevitable. The recognition of such a capacity is no more "biological pessimism" than the recognition that the mechanisms underlying the capacity for empathy, attachment and cooperation are "biological optimism". Such recognition in no way minimizes the importance given to factors such as culture, individual experience, and situational variables in the development, nurturance and activation of such mechanisms. The existence of evolved mechanisms potentiating such behaviors may be a necessary condition for their occurrence under some conditions, but they are clearly not a sufficient condition. As Lore and Schultz (1993, p. 16) note, "Even in so-called violence-prone animals, aggression is always an optional strategy . . . All organisms have coevolved equally potent inhibitory mechanisms that enable them to use an aggressive strategy selectively or to suppress aggression when it is in their interest to do so".

An evolutionary-based model of the characteristics of sexual aggressors

The frequency of sexual coercion. An issue relevant to an evolutionary-based model of sexual coercion is its frequency in human history. As Wrangham & Peterson (1996, p. 138) note, "evolutionary theory suggests that any behavior occurring regularly or consistently has a logic embedded in the dynamics of natural selection for reproductive success". Various data suggest that sexual coercion has not been rare in human evolutionary history and that there continues to be some propensity to rape in the psychology of many men. First, it appears that male abduction of females from neighboring groups was quite common in our species' evolutionary history (Chagnon, 1994). Such acts were probably accompanied by sexual coercion. Second, there are several sources of

data (see Brownmiller, 1970; Stiglmeier, 1994) suggesting that when fear of punishment is reduced, many men do rape and this is particularly evident in times of war. Noteworthy examples include the 1937 case where Japanese men raped 20,000 women in a single month in the city of Nanking (Friedmann, 1972); the rape of hundreds of thousands of German women, including victims of Nazi concentration camps, by the Allied troops during the 1945 liberation of Berlin (Stiglmeier, 1994); and the recent rapes in Bosnia-Herzegovina and Croatia (Allen, 1996). Further, cross-cultural surveys reveal that male attack and rape of women occurs with considerable frequency in most societies today (Broude & Greene, 1978; Levinson, 1989; Sanday, 1981b). Moreover, it is interesting to note that even relatively rape-free societies described in such surveys (e.g. Sanday, 1981b) have various mixes of high internal and external mechanisms counteracting male tendencies for sexual aggression, suggesting that there may be a universal "risk" for such behavior. In addition, research indicates that approximately one-third of the male population says that they would coerce a woman into sexual acts if they could be assured that they would not suffer any negative consequences and that they would find such acts sexually arousing whereas a much smaller percentage of women indicate such a potential (e.g. Malamuth, 1981; 1989a; 1989b; Young & Thiessen, 1991). Related to these data are findings that fantasies involving the use of sexual coercion are quite common among men (Greendlinger & Byrne, 1987), and that such fantasies and other forms of imagined sexual aggression are associated with risk factors predictive of actual sexual aggression (Dean & Malamuth, 1997; Malamuth, 1981; 1988a; Seto & Kuban, 1996). Imagined aggression may reveal important information regarding evolved mechanisms of the mind (Ellis & Symons, 1989; Kenrick & Sheets, 1993). Finally, although great caution must be exercised in generalizing from one species to another, it may be instructive to consider the data for other primates. Although clearly not universal in primates, Smuts (1992) concludes that male use of aggression toward females in a sexual context is common in primates, particularly in some of our closest relatives (e.g. chimpanzees and orangutans).²

² The characteristics of male orangutans more likely to use sexual coercion provides an example in another species of how studying the characteristics of sexual aggressors can provide insight into motivations for such behavior. Wrangham and Peterson (1996) describe two distinct classes of orangutan males, large compared to small ones. Rape of females in this species is common (accounting for about one-third to one-half of all copulations), but it is virtually exclusively perpetrated by the small males. Wrangham and Peterson propose that size is a critical feature here because small size results in a relative failure to succeed in mutually consensual sex but is an advantage in using sexually coercive tactics. Specifically, in this species females do not appear to be attracted to the small males who therefore have little opportunity to mate based on mutual attraction with females. However, their size gives these small males a distinct advantage in implementing coercive sex. Females can easily escape from the large males, if they choose, because, the big males can't move quickly in the rainforest trees. But the small males, about the same size as the females, can travel as fast as them, and are, therefore, much more successful than the large males in catching the females and using coercive sex.

As noted earlier, it appears that sexual coercion has not been a rare act, particularly if used in a strategic way that takes potential punishment and other contingencies into consideration. The capacity to engage in such acts under some circumstances may have contributed to male reproductive success with sufficient frequency to have played a role in natural selection for certain characteristics associated with such acts. Granted, there may be some important differences among the characteristics that lead to such coercive behavior in varied situations (e.g. dating relations, in non-acquaintance rape, in times of war, etc.). Unfortunately, comparisons between the characteristics of rapists during war and peacetime conditions are not available. However, comparisons of the characteristics of men who imagine aggressing, commit sexual aggression in dating relations and convicted rapists (who typically coerce non-acquaintances) reveal considerable similarities (Dean & Malamuth, 1997; Malamuth, 1981; 1988a).

The mate deprivation model. As Quinsey & Lalumiere (1995) note, evolutionary approaches to sexual offending may be conceptualized in terms of either (1) psychological mechanisms contributing to reproductive success in ancestral environments; or (2) pathology caused by psychological mechanisms gone awry. In keeping with the evolutionary approach to aggression already summarized, the models of the characteristics of sexual aggressors that have appeared in the literature have typically used the first of these conceptualizations. Perhaps the most well known is the mate deprivation model (Thornhill & Thornhill, 1983; 1992). This model essentially argues that all males have the potential to use sexual coercion. Experiencing lack of success in competition for the resources and status necessary to attract desirable mates activates this potential by triggering, via specialized psychological mechanisms for such behavior, the use of sexually coercive tactics. This mate deprivation model is similar in some respects to clinical theories describing rapists as lacking in the heterosocial and intimacy skills necessary to form successful relationships (e.g. Marshall, Hudson, & Hodgkinson, 1993; Stermac & Quinsey, 1986).

There have been some data offered in support of the mate deprivation model. In particular, it has been reported that arrested rapists generally come from lower social strata (Thornhill & Thornhill, 1983) and that some rapists lack relationship skills (Marshall et al., 1993). However, there also have been considerable data inconsistent with this model, particularly in studies focusing on non-incarcerated sexual aggressors. For example, sexually coercive men often report having more sexual partners than their non-coercive counterparts (Kanin, 1985; Malamuth et al., 1991). In a particularly direct test of the mate deprivation model, Lalumiere, Chalmers, Quinsey, and Seto (1996) found considerable contradictory data: sexual aggressors had higher self-perceived mating success, significantly more extensive sexual histories, and did not report lower relative earning potential.

The confluence model. From the perspective of evolutionary psychology, conflict between individuals is related to the degree to which their reproductive interests are at odds (e.g. Alexander, 1979; Hamilton, 1964) and male aggression against females often reflects male reproductive striving (Smuts, 1992). Using this framework, the confluence model described here suggest that the use of sexually coercive tactics can be understood within the larger context of reproductive strategies and varied tactics used to implement those strategies.³ The mating of two individuals may involve convergence of their reproductive interests (e.g. mating with each other and raising common offspring reflects their best reproductive alternative) or in situations where their mating may reflect a divergence of interests (e.g. such mating may represent a net reproductive gain for one person but a reproductive loss for the other; Crawford & Galdikas, 1986).

Psychological mechanisms are presumed to have evolved that are relevant to the implementation of divergent vs. convergent interests strategies. These mechanisms are presumed to be species-wide characteristics that for varied individuals become calibrated at different levels or thresholds as a function of such factors as genetic differences and environmental experiences. Here I shall focus only on environmental factors as setting the threshold or calibrating these mechanisms. Calibration of psychological mechanisms for success using a convergent interests strategy creates more effective evaluation of the needs of others. This enables a better fit for the convergence of interests and for increasing what Buss (1996) has labeled "strategic facilitation." For example, emotions such as sympathy function to enhance processing of the other's feelings and difficulties, which can serve to inform and better respond to the other's interests.⁴ In contrast, calibration of psychological mechanisms for a relatively divergent interests strategy mobilizes or energizes behaviors that reduce strategic interference by others so as to override or circumvent such interference (Buss, 1989). For example, anger can "energize" aggressive behavior and can communicate threat in a way that may reduce victim resistance. Similarly, sexual arousal to force can provide a pleasurable cue associated with the imposition of one's own will

³ The importance of male sexual coercion as a means of limiting female choice and thereby her "reproductive success" has been emphasized by evolutionary theorists Barbara Smuts (1992) and by Sarah Blaffer Hrdy (1997). In this view, sexual coercion should be considered in Darwinian theory as one of the three major processes of "sexual selection" (with equal importance as male-male competition and female choice). Hypotheses regarding the possibility that coercive sex is related to reproductive success include those suggesting direct reproductive benefits for some males (e.g. Thornhill & Thornhill, 1992) and indirect reproductive benefits by increasing the general ability of a male to dominate a female (Smuts & Smuts, 1993).

⁴ Buss (1988) found that both men and women rated a man's "showing sympathy to a female's troubles" as one of the ten most effective mating tactics. Also, while it may be useful to distinguish between such concepts as sympathy and empathy (Wispe, 1986), I consider them here as interrelated constructs that involve both heightened awareness and feeling for another's plight.

at the expense of the other's. At least in some aspects, calibration of the psychological mechanisms to effectively implement one of these two strategies may be in opposition to the effective implementation of the other (e.g. greater feelings of sympathy for another person may subvert ignoring their interests).⁵

At its current stage of development, the confluence model suggests that there are *three constellations of characteristics* that when calibrated in particular directions create divergent interests conditions likely to result in the use of sexually coercive tactics. These three constellations are encompassed within a hierarchical approach that includes both general personality characteristics relevant to divergent and convergent strategies as well as more specific characteristics directly relevant to sexual coercion:

1. A reproductive interests perspective suggests that there may be some general personality characteristics reflecting the extent to which a person solves adaptive problems by focusing exclusively on his own interests as contrasted with incorporating the interests of others. For this purpose, we have relied on what are considered by many theorists as the two most basic or pure dimensions of personality (Wiggins & Trapnell, 1996). They have been referred to by various names: surgency and agreeableness; agency and communion; and dominance and nurturance. Wiggins (1991, p. 89) defined the first dimension as a concern for "mastery and power which enhance and protect (the self)", and the second as a concern for "intimacy, union and solidarity with (other people)".

The first constellation of characteristics included in this confluence model uses these two personality dimensions of dominance vs. nurturance to reflect

⁵ In the development of species over the evolutionary landscape, mechanisms promoting divergent interests' behavior (e.g. aggression elicited by competitive struggle over a resource) evolved millions of years earlier from those promoting convergent behavior (e.g. sharing a resource elicited by love; Eibl-Eibesfeldt, 1971, 1990). As Lorenz (1966, p. 217) notes, "intra-specific aggression can certainly exist without its counterpart, love, but conversely there is no love without aggression". Parental care that evolved in certain fishes, birds and mammals is viewed by these ethologists as the major source of the development of bonding mechanisms which inhibit aggression against offspring and foster their nurturance. A second source of long-term bonding mechanisms in humans and a few other primates that evolved to reinforce the parental bond is borrowed from the sexual repertoire for appeasement (Eibl-Eibesfeldt, 1971). These bonding mechanisms can therefore be particularly useful in inhibiting aggression against long-term sexual mates and facilitating cooperation among them in the nurturant rearing of their young. These mechanisms later generalized, at least to some degree, to encompass individuals other than one's offspring or mates. Data supporting the inverse relationship between mechanisms associated with aggressiveness and parental care are illustrated by the findings of Wingfield, Hegner, Dufty, and Ball (1990). These investigators concluded that among males of socially monogamous species, there are only temporary surges (a few minutes to hours) of circulating testosterone. These surges are designed to meet antagonistic challenges but a major cost of high levels of this hormone was an interruption of male ability in parental care. In contrast, they found that males of socially polygynous species tend not to engage in parental care but maintain high levels of circulating testosterone for long periods (days to weeks).

the degree to which a person is oriented to assert his own interests at the expense of others. It is reasoned that if a person's mechanisms are calibrated in a way that his dominance characteristics are relatively high compared with his nurturance characteristics, his general personality mechanisms are more aligned with a divergent interests strategy and he is more at risk for using sexually aggressive tactics. As elaborated on later, we believe that this constellation may be particularly relevant to whether aggressive potential is actually carried out in behavior or remains at the level of imagined aggression.

- To reiterate: the first of the three constellations of characteristics included in the confluence model is a general personality assessment of the calibration of a man's mechanisms along the *dominance vs. nurturance* dimensions. Although this constellation is a relatively recent addition to our model (for an earlier version see Malamuth, 1996; Malamuth & Heilmann, in press), it is presented first because conceptually it is considered as a relatively general framework for understanding the workings of the more specific mechanisms.
2. While this general personality constellation is viewed as having some relevance to the likelihood that a man uses sexually coercive tactics, the next two constellations are seen as having even more direct bearing. One is what has been referred to in the literature as mating strategies (Buss & Schmitt, 1993) and sociosexuality (Gangestad & Simpson, 1990; Simpson & Gangestad, 1991), which we have referred to in the context of the development of the confluence model as *impersonal vs. personal sexuality* (e.g. Malamuth et al., 1991).

As various evolutionary writers have noted and as described in greater detail below, a man who is oriented to a short-term sexual strategy as compared to a long-term strategy would be more likely to be in conflict with a woman's reproductive interests. In adopting a long-term mating strategy, a male is more likely to take into consideration the intersection of the male and female fitness interests and find ways of compromising with each other's interests. Here both individuals are given the opportunity to evaluate and choose each other as mates (Hirsch & Paul, 1996). In contrast, male attempts to pursue a short-term mating strategy are likely to contribute to a situation of divergent interests. Therefore, the calibration of mating mechanisms in the direction favoring a short-term mating strategy is the second constellation increasing risk for sexual aggression.

3. The calibration of a third constellation of characteristics is also important as to whether sexually coercive tactics are likely to be used. We describe this as an associative network of emotions (e.g. hostility toward women) and attitudes (e.g. acceptance of the appropriateness of aggression against women) and motor tendencies (e.g. impulsivity) that directly "mobilize" or prime the use of coercive tactics for dealing with strategic interference or conflict. When calibrated in the direction of increasing the likelihood of such coercion, this

network has been labeled as *hostile masculinity*. It contains two interrelated components: (1) an insecure, defensive, hypersensitive and hostile orientation, particularly toward women; and (2) gratification from controlling or dominating women (Malamuth, Heavey, & Linz, 1993).⁶

Antecedents of mechanisms calibration. The next question that is important to consider is how do these three constellations of mechanisms become calibrated at various levels? The approach taken here is in keeping with a common evolutionary analysis that humans share the same basic underlying mechanisms or a common evolved psychology. As suggested by various theorists (Belsky, Steinberg, & Draper, 1991; Draper & Harpending, 1982; Trivers, 1972), part of this evolved psychology is an adaptation to permit the individual to "identify" the relevant aspects of the environment early on and choose the strategy most suited to his attributes and the local conditions. Particularly relevant to the constellations of characteristics described here may be the "harshness" or "exploitativeness" of early social environments in the home and among peers that may calibrate the relevant mechanisms to anticipate and deal with relatively more exploitative or cooperative interactions, particularly with women. Identifying early on whether one is likely to succeed in using the tactics associated with convergent or divergent strategies and calibrating mechanisms accordingly would make particular sense if the calibration most suited for the mechanisms associated with one of these strategies generally undermine effectiveness with the other one.

These early experiences may "lock" a person into one reproductive strategy to the exclusion of others that could have developed if environmental inputs had been different. More specific to the current analysis, it is suggested that in harsh early environments in which exploitation occurs frequently, mechanisms may be calibrated in line with divergent strategies, including a general self-centered personality, a short-term mating strategy, and hostile masculinity. However, there may be different elements of those environments that provide the particularly relevant information to specific constellations of mechanisms. For example, perceived strategic interference from women, such as a history of rejection, may be particularly likely to affect the calibration of the hostile masculinity characteristics. A more specific analysis of the particular features of early environments relevant to each of the three constellations of characteristics should be undertaken in future research.

Figure 8.1 provides a visual display of some of the ideas just described. It suggests that in differing ecological conditions natural selection may affect the frequency of certain genetic characteristics and cultural norms. These interact

⁶ An evolutionary model of rapists that also focuses on the role of three somewhat similar dimensions has been presented by Ellis (1989). There are, however, many central differences between the present model and Ellis' conceptualization of these dimensions.

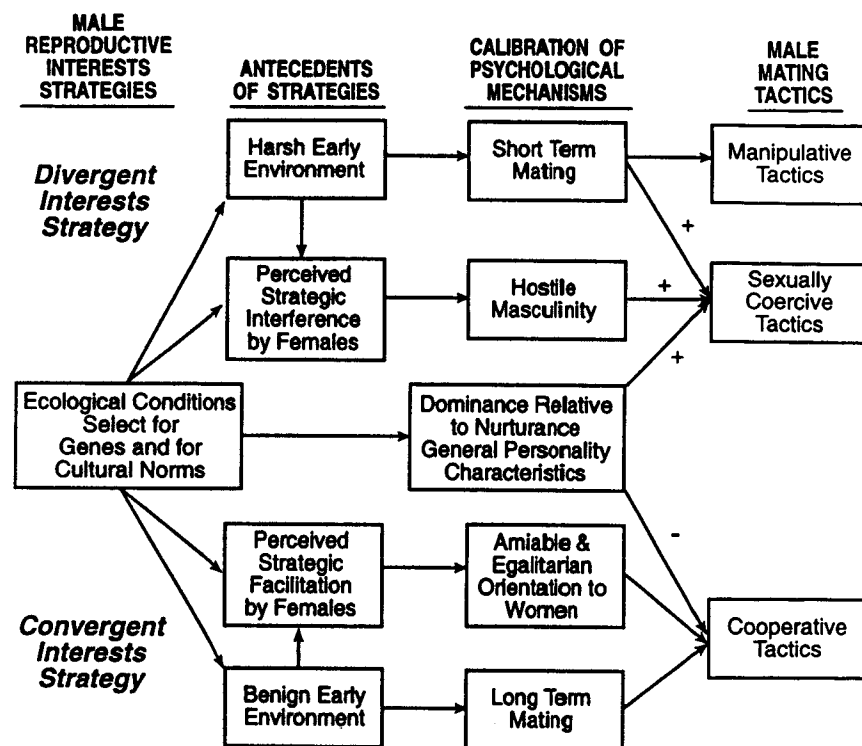


FIG. 8.1 Hypothesized confluence model of the characteristics of men who use sexually coercive tactics shown within the framework of divergent vs. convergent interests strategies. Plus signs indicate the paths of the three major constellations of characteristics hypothesized to synergistically contribute to sexual coercion, whereas the minus sign indicates hypothesized reverse association with the use of cooperative tactics.

with the environmental effects on the calibration of characteristics relevant to the use of sexually coercive tactics. At the center of the figure, the relevance of the general personality constellation of dominant relative to nurturant personality characteristics is shown: Relatively high dominance and low nurturance contributing to sexual coercive tactics and having the opposite effect on cooperative tactics. This figure also displays (at the top vs. bottom parts) the opposite patterns of mechanism calibration shunting men into relatively divergent or convergent interests strategies with women. Although not all of the hypothesized connections are shown here, the major ones are indicated by arrows. Plus signs at the right side of the graph leading into sexually coercive tactics show the confluence or synergistic impact of the three major constellations. On the bottom of the figure, the calibration in the direction of a convergent interests strategy—high nurturant personality, long-term mating, and an amiable and egalitarian orientation to women—is expected to increase the use of cooperative tactics,

such as open and honest communication, allowing ample opportunity for mutual evaluation and choice before sexual intimacy, etc. (see Hirsch & Paul, 1996 for further examples). Finally, at the very top of the graph it is suggested that a short-term mating orientation alone may increase the use of manipulative tactics.

RESEARCH ON SEXUAL AGGRESSORS' CHARACTERISTICS

Testing interrelated hypotheses about sexual aggressors

Several interrelated hypotheses are subsequently described which focus on particular elements of the confluence model just presented and summarized in Fig. 8.1. These are not intended as a full list of the testable hypotheses that can be derived from the ideas presented but as an analysis of the major components of the model presented and amplification on some of the assertions made. They are organized into three sets of two related hypotheses, totaling six hypotheses. Each set includes a hypothesis relevant to the connection between the calibration of the three constellations of characteristics and the use of sexually coercive tactics (i.e. where the three *plus signs* appear in Fig. 8.1) and a hypothesis focusing on antecedents of such calibration. In a later section, analyses are presented that simultaneously test several aspects of the full model.

An evolutionary-based understanding of the environmental antecedents contributing to the three constellations of characteristics focused on in this chapter would benefit from attention to both variations between groups of people (i.e. culture) and within such groups (i.e. individual experiences). Due to limits of space, discussion of the role of cultural factors will only be included in discussion of the antecedents of general personality characteristics affecting convergent vs. divergent strategies, whereas the discussion of antecedents of the other two constellations will focus primarily on individual experiences.

Hypothesis 1a: Men whose general personality characteristics are calibrated as high in dominance and low in nurturance are more likely to use sexually coercive tactics.

Explication of hypothesis. Another way of describing the characteristics typically included in these two personality dimensions is self-directed (dominance) as compared with other-oriented (nurturance; Ballard-Reisch & Elton, 1992). Examples of self-descriptors encompassed in the dominance dimension are "dominant" and "self-sufficient." Examples of items assessing the nurturance dimension are "sympathetic," "compassionate," and "sensitive to the needs of others." As suggested earlier, the actual use of coercive tactics that cause pain

or suffering is likely to be inhibited by relatively high feelings of compassion and sensitivity to others' feelings and needs. In contrast, individuals low in nurturance but high on the dominance dimension would be expected to have a self-centered personality with little concern for the negative consequences of their actions on others.

Relevant data. Wiggins & Holzmuller (1981) concluded that Bem's (1974) masculinity and femininity scales are some of the best measures of the broad personality dimensions of dominance and nurturance. Using these scales, Dean & Malamuth (1997) recently created a single score assessing the extent to which men were relatively high on dominance relative to nurturance. They found that this measure—which directly taps personality characteristics bearing on the extent to which a person's general personality is oriented to imposing his own needs only (i.e. divergent interests) as compared with also incorporating others' needs (i.e. convergent interests)—correlated significantly with sexual aggressivity. Similarly, men's sexual aggressivity has been shown to inversely correlate with nurturant characteristics such as empathy levels (e.g. Lisak & Ivan, 1995; Rice, Chaplin, Harris, & Coutts, 1994; Seto & Barbaree, 1993). In keeping with the hierarchical approach advocated in our research program (e.g. Malamuth, 1988b), recent research indicates some differences in general empathy measures but even stronger differences in rape empathy among men with differing proclivities to engage in sexual aggression (Osland, Fitch, & Willis, 1996). Also relevant are studies showing that sexual aggressors score lower on measures of relationship intimacy than non-aggressors. Some of these indicate that sexual offenders are even lower on intimacy measures than other offender groups such as incest offenders or wife batterers (e.g. Seidman, Marshall, Hudson, & Robertson, 1994). Other studies reveal differences with nonviolent offenders but similar reductions in measures of intimacy and empathy as other violent nonsexual offenders (Ward, McCormack, & Hudson, 1997).

The most comprehensive study of variations in sexual aggression across cultures has been conducted by Sanday (1981a; 1981b). Two general hypotheses guided the research: (1) the incidence of rape varies cross-culturally; and (2) a high incidence of rape is embedded in a distinguishably different cultural configuration than a low incidence of rape. Using the anthropological record, this research coded a representative sample of the world's known and well-described societies. The complete sample consists of 156 societies, ranging in time from 1750 BC to the late 1960s. Sanday found that the societies' rates of rape related strongly to the overall ideologies pertaining to dominance of and aggression towards others and to dominance of women. A common feature of rape-prone societies was the need for a man to prove his status and worthiness by displaying dominant qualities such as the ability to be aggressive and not displaying nurturant qualities, such as compassion and tenderness, which were often perceived as weaknesses in those cultures.

Hypothesis 1b: The antecedents influencing dominance and nurturance include cultural and individual socialization.

Explication of hypothesis. Cultures that developed in ecological conditions where male destructive capacities created a competitive advantage are likely to have norms socializing boys to accentuate traditionally masculine characteristics (i.e. dominance) and to inhibit traditionally feminine or nurturant qualities, such as compassion and tenderness (Sanday, 1981a; 1981b). An example of such an environment is one where competition for resources may be relatively high and where dominance, aggressiveness and risk taking in the face of danger may have aided survival and reproductive success. In contrast, environments where resources were relatively abundant, and where dominance, aggressiveness and risk taking in dangerous situations do not provide survival advantage, are far less likely to result in cultures with a high degree of gender dimorphism and associated dominating values (Gilmore, 1990; Sanday, 1981a; 1981b). As well, socialization within cultures (e.g. parental modeling and reinforcement) is expected to influence the development of these personality characteristics.

Relevant data. Hall and Barongan (1997) provide an extensive discussion and relevant findings of the importance of "feminine socialization" in current cultures as a possible factor protecting against the development of sexually aggressive proclivities. Further, in a recent analysis of cooperation and competition in the world's nonviolent societies, Bonta (1997) concluded that while they raise their children with a strong emphasis on nurturant, affiliative qualities they also emphasize the lack of dominant, competitive, achievement oriented and aggressive characteristics. To the extent that one may generalize from such cultural practices to the individual level, these studies suggest that it is the relative balance of nurturant to competitive/dominant personality characteristics that may be most relevant to the display of aggressive behaviors. Similarly, there are studies showing that individual differences in the development and display of traditionally masculine or feminine characteristics are shaped by the social environment's (e.g. parents, peers, etc.) reinforcement and modeling of these characteristics (e.g. Kelly & Worell, 1976; Radke-Yarrow & Zahn-Waxler, 1984;).

Hypothesis 2a: In comparison to a long-term mating strategy, a short-term mating strategy is more likely to be associated with the use of sexually coercive tactics.

Explication of hypothesis. The psychological mechanisms governing male sexuality are not the same as those guiding female sexuality due to the different reproductive consequences of sexual behavior for the two genders, in ancestral

environments. Gender differences in orientation to mating strategies in humans can be traced to the minimum obligatory parental investment (i.e. 9 months of internal gestation for women vs. one sex act for men; Trivers, 1972). Given that females can produce a maximum of about 20 offspring in a lifetime, having sex with a relatively large number of males is unlikely to have adaptive advantages. It is generally far better to invest more in each offspring by carefully selecting a mate with successful characteristics, who will participate in the raising of the offspring. For males, having intercourse with a larger number of fertile females is likely to be correlated with reproductive success, since in ancestral environments contraceptive devices were not available, and the upper limit for siring offspring is in the thousands. Even totally uninvested sex may therefore have favorable reproductive consequences (Buss, 1995). Although females are clearly capable of taking advantage of short-term mating opportunities and in some environmental conditions are particularly likely to do so (Thiessen, 1994), their psychological mechanisms are relatively more consonant with a long-term sexual strategy or personal sex involving some relationship context, emotional bonds or potential ties. Therefore, the goals of a man oriented to a short-term mating strategy are likely to differ from those of a woman oriented to a long-term strategy and are more likely to result in a conflict of interests that might lead to the use of sexually coercive tactics (also see Hirsch & Paul, 1996)⁷.

Relevant data. Hirsch and Paul (1996) and Paul and Hirsch (1996) conducted a series of studies in which people rated their perceptions of and reactions to various tactics that might be used by quality (long-term) and quantity (short-term) mating strategists. Their findings generally supported their predictions that short-term mating is more likely to be perceived as associated with exploitative and coercive mating tactics. While these data show that people believe that there are associations between a short-term mating strategy and the use of coercive tactics, there are considerable data based on men's actual reports of their behaviors and desires which show that those using sexually coercive tactics are more likely to be oriented to a short-term strategy. These data show that sexual aggressors report starting to engage in sexual acts earlier; having more sexual partners over the lifetime; reporting a greater preference for partner variety and casual sex; foreseeing having larger number of sex partners in the future; having less of a need to feel attached to someone to have sex with them; having more extramarital relationships; and being more attracted to and fantasizing more about women with whom they are not personally acquainted (Kanin, 1957; 1984; 1985; Kanin & Parcell, 1977; Lalumiere, Chalmers et al.,

⁷ One important difference between models such as those described by Hirsch & Paul (1996) and the ideas presented here is that only the confluence model specifies the additional characteristics differentiating among short-term mating strategists who are unlikely to use coercive tactics (the majority of such strategists) and those at high risk for such coercion (e.g. those also high in hostile masculinity).

1996; Lalumiere, Seto et al., 1996; Malamuth et al., 1991; Malamuth et al., 1995; Sarwer et al., 1993). Although some investigators (e.g. Ellis, 1989; Kanin, 1984; Kanin & Parcell, 1977) asserted that these data may be due to differences in sex drive (i.e. wanting more sex of any kind), the data appear more consistent with a short-term mating strategy or an impersonal sexual orientation (e.g. desiring more variety of sex partners) rather than differences in sex drive (e.g. Lalumiere, Seto et al., 1996; Malamuth et al., 1995; Tang, Critelli, & Porter, 1993).

Hypothesis 2b: The antecedents of a short-term sexual strategy include relatively harsh home social environments and "acting out" or delinquent acts during adolescence.

Explication of hypothesis. Belsky et al. (1991) presented a developmental model of reproductive strategies. They suggest that early experience may serve as a "switch" or "trigger" at a critical formative period (i.e. the first 5 to 7 years of life) which will shape an enduring reproductive strategy (also see Draper & Harpending, 1982). The environmental input at this critical stage informs the developing child (unconsciously, of course) of the extent to which the social environment (e.g. the trustworthiness of others and the enduringness of close personal relationships) is relatively benign or harsh. Evolutionary pressures would be expected to select for differing reproductive strategies in different ecological conditions. More benign environments are likely to favor a long-term "quality" strategy that involves high investment in relatively few offspring. Harsh environments are more likely to favor a short term sexual strategy; that is, a high "quantity" of offspring with relatively little investment in each. Particularly relevant to the present focus on the calibration of the mechanisms in the direction of a short-term mating strategy (labeled in this research as a promiscuous/impersonal sexual orientation) are "harsh" familial stressors such as marital discord and rejecting, violent or abusive parenting behaviors.

Belsky et al. (1991) also propose that such "harsh" early childhood environments may lead to "problem" behavior patterns involving nonconformity, impulsivity, and antisocial behaviors. They suggest that this oppositional behavior, via some yet unspecified biological mechanism that may involve androgenic activity, stimulates earlier biological maturation that also fosters among boys indiscriminate and opportunistic sexuality, increasing the likelihood of becoming fathers before other men. Belsky et al. (1991) noted that in "harsh" environments such a high quantity orientation would make "biological sense" since it would be more likely to result in successful reproduction than a strategy involving "quality" long-term investment.

Relevant data. Belsky et al. (1991) summarize a large body of cross-sectional and longitudinal data consistent with the configuration of factors just described that I shall not repeat here. In a recent replication and extension of this

work with secondary school students in Italy, Kim, Smith, & Palermi (1997) found that factors such as more parental marital conflict in early childhood and less emotional closeness to parents in childhood were associated with earlier physical sexual maturation for boys (e.g. spermarche), which in turn was associated with more unruliness/aggressiveness, earlier dating, more opposite sex partners, greater likelihood of having intercourse, and more intercourse partners. In addition, various other recent studies (e.g. Dean & Malamuth, 1997; Lalumiere & Quinsey, 1996; Lisak, 1994; Malamuth et al., 1991; 1995) show that a reliable constellation of factors exists consistent with this hypothesis. The constellation of factors consist of harsh home social environments associated with delinquent tendencies in adolescence, and with a short-term mating orientation or what we have labeled an impersonal sexual orientation. These data are described in greater detail later in this chapter.

The findings summarized above are presented as supporting a conditional strategy model or a facultative developmental algorithm (i.e. inherited mental mechanisms that enable individuals reared in differing environments to adjust their strategies in response to information about those environments). However, the data could instead be interpreted as supporting an alternate strategy or an obligative developmental algorithm model (see earlier). Such a model argues that genetic factors alone are responsible for the differences in the various factors incorporated within the "short-term" mating constellation of characteristics (e.g. the genes that make some parents more likely to abuse their children or to have conflict in the home are inherited by these children and it is these genes that cause their children's problem behaviors, early biological development, association with delinquent peers, and promiscuous sexual behavior; Hunt & McNeill, 1997; Rowe & Jacobson, 1997). While it may be premature at this stage of research to conclude in favor of the alternate or conditional strategy models (Cleveland, 1997), it is noteworthy that the confluence model presented here would require relatively little modification to accommodate the alternate rather than the conditional strategy model.⁸

Hypothesis 3a: Men high in hostile masculinity are more likely to use sexually coercive tactics.

Explication of hypothesis. From an evolutionary perspective, characteristics such as emotions are adaptations which function to alert the person to threats

⁸ Although the degree of contribution of genes to individual variation may differ somewhat for the three constellations of characteristics emphasized here (e.g. Rushton et al., 1986; Waller & Shaver, 1994), virtually all individual differences in psychological characteristics are clearly a function of both genetic and environmental factors (i.e. the degree to which inherited developmental programs are obligative vs. facultative). As noted earlier, in this chapter I am largely focusing on the role of environmental factors while recognizing the potential importance of genetic factors as well.

and opportunities and to prepare the organism for strategic behaviors (Tooby & Cosmides, 1990). Emotions are not organized into one general emotional system but each type of emotion (e.g. anger, affection, etc.) is designed to respond to a particular set of delimited conditions (or adaptive problems) as input, and to transform that input into physiological and behavioral output specifically addressing that type of condition (Ellis & Malamuth, 1997; LeDoux, 1996). For example, inputs perceived as strategic interference elicit anger that produces output changes in information processing (e.g. increased sensitivity to cost-inflicting behaviors), the release of certain hormones (e.g. testosterone), and increased arousal (heightened autonomic activity) which prepares the organism to respond with quick "fight or flight" actions that reduce interference (e.g. energizing action such as aggression toward sources of provocation) (Buss, 1989; Ellis & Malamuth, 1997; Malamuth, 1996).

Understanding the role of emotions may be facilitated by a concept similar to that of associative networks (e.g. Berkowitz, 1993), which may be thought of as psychological mechanisms forming interconnected emotions, perceptions, cognitions, memories and motor tendencies designed to increase the likelihood of certain actions (i.e. output) consistent with a strategy. These involve "spreading activation" so that individual elements (e.g. emotions) become linked with and can lower the threshold for "turning on" other corresponding psychological mechanisms (e.g. attitudes, sexual arousal patterns, etc.) that collectively facilitate the strategic acts, such as aggression. The "associative network" of perceptions, attitudes and emotions of sexually aggressive men has been set to threshold levels that more easily activate other elements in such networks in a way that potentiates a more effective implementation of coercive behavior in the context of a "diverging interests" strategy. We have labeled this pattern of the "associative network" the *hostile masculinity* pattern.

Relevant data. The above hypothesis may be divided into two components. First, are there a set of perceptual, emotional, and other related responses that are sufficiently interrelated to constitute an "associative network"? Second, do the characteristics comprising such a network affect sexually coercive acts? The existence of a "hostile associative network" of characteristics relevant to sexual aggression is supported by considerable data revealing interrelationships among factors such as hostility toward women, anger proneness, dominance as a sexual motive, sexually coercive fantasies and various ideological beliefs and attitudes condoning aggression against women (e.g. Burt, 1980; Malamuth, Check, & Briere, 1986; Malamuth et al., 1995). These interrelated factors have also been found to be quite strongly linked with other responses such as a distrusting "mental set" of social perceptions of women (Malamuth & Brown, 1994); an "automatic" mental association between power over someone and sexual attraction to them (Bargh, Raymond, Pryor, & Strack, 1995); and sexual arousal in response to aggression (Barbaree & Marshall, 1991;

Malamuth, 1983; Malamuth & Check, 1983; Yates, Barbaree, & Marshall, 1984).⁹ Additional evidence relevant to the existence of an associative network with "spreading activation" (i.e. lower threshold for eliciting related responses) is found in a recent study by Vass and Gold (1995). These investigators used an inventory developed by Mosher and Sirkin (1984) to classify men on their degree of "hypermasculinity" which they and other investigators have found to correlate with sexual aggressivity. This inventory includes some of the components of the hostile masculinity network of characteristics described here. Vass and Gold (1995) randomly assigned men who scored in the upper and lower thirds of the hypermasculinity measure to receive imagined negative, neutral or positive feedback from a woman in guided imagery of an imagined date. In the positive feedback condition, the participant was asked to imagine the woman telling him he was a "great lover" and that she was interested in having a sexual relationship with him in the future. In the negative feedback condition, the participant was asked to imagine the woman telling him he was not a "real man" and that he probably did not know how to "satisfy" a woman. No feedback was imagined in the neutral feedback condition. As expected, the results showed that, in comparison to their lower hypermasculine counterparts, high hypermasculine men reacted with more anger and less empathy to the woman in the negative feedback condition. Interestingly, they also reacted with more anger to her in the neutral condition. The data therefore suggest that men whose mechanisms are calibrated in the hostile masculinity direction have a lower threshold for activating responses such as anger to women.

The assertion that calibration of mechanisms as anger and hostility to women (and the other elements of the hostile masculinity associative network) actually facilitate sexual coercion would be ideally tested by randomly assigning men to have different calibration levels of these characteristics and observing their likelihood of using sexual coercion. Clearly, such methodologies are ethically impossible. There are, however, quite a few cross-sectional and longitudinal studies indicating that various elements of the hostile masculinity calibration predict greater use of sexually coercive tactics in naturalistic settings (e.g. Christopher, Owens, & Stecker, 1993; Malamuth, 1986; Malamuth et al., 1991; 1995; Muehlenhard & Linton, 1987; Spence, Losoff, & Robbins, 1991; Spaccarelli, Bowden, Coatsworth, & Kim, 1997). Additional supportive evidence is provided by laboratory studies showing that some of these characteristics (e.g. dominance as a sexual motive; attitudes supporting violence against women; sexual arousal to aggression) predict men's aggression against women but not necessarily aggression against male targets (Malamuth, 1983; 1988b).

⁹ In the current model, sexual arousal to aggression is considered as part of the hostile masculinity constellation, although it may well be that it should be considered a strong correlate of this constellation but one with separate direct influence on sexually coercive behavior.

Hypothesis 3b: The antecedents of the hostile masculinity pattern include perceptions of relatively frequent rejections by women.

Explication of hypothesis. In the current context focusing on sexual coercion, strategic interference may include classes of behavior performed by women (e.g. sexual rejection, delay of sexual access, attempt to extract resources, perceived deception, etc.) that in our natural selective history regularly interfered with the pursuit of a short-term mating strategy. It is therefore predicted that men who perceive that they have relatively often had such strategic interference from women (e.g. feelings of rejection, betrayal, hurt by women) will be more likely to have characteristics such as anger and hostility to women, gratification from controlling women, and attitudes accepting of aggression against women which can mobilize and energize coercive acts against such targets, thereby functioning to reduce "strategic interference." Although it is difficult to disentangle whether more coercive men have actually experienced more rejection or whether they are more sensitive to such rejections, they are expected to react more strongly (or to have a lower threshold to respond) to such rejections.

Relevant data. Several of the items on the Hostility Toward Women scale (Check, 1984; Check et al., 1985), one of the key measures assessing hostile masculinity, refer to earlier experiences of having been rejected and deceived by women. Lisak & Roth (1988) compared sexually aggressive and non-aggressive college students and focused on the factors underlying their anger and power motivations. They concluded that sexually aggressive men were more likely to perceive themselves as having been hurt by women, including perceptions of being deceived, betrayed and manipulated. They also found that variables assessing such hurt correlated highly with items assessing anger towards women and a desire to dominate them. Similar findings have also been reported by Christopher et al. (1993) who used a more formal path analytic statistical framework to test the role of a variable specifically measuring perceived negative experiences in relationships with women.

Research integrating two constellations of characteristics

Although the aforementioned data provide important support for the hypothesized relationship between sexual aggression and each of the three constellations, it is essential to test the viability of the proposed confluence of these dimensions. The various "risk factors" comprising the constellations discussed earlier may reveal alternative "routes" leading to the same behavior, a possibility not ruled out in our model. Various typology models of this sort have been emphasized by some investigators (e.g. Hall, 1996; Prentky & Knight, 1991). However, our model emphasizes that the three sets of characteristics consti-

tute elements of the "package" within the same persons contributing to sexual aggression. Our model may be described as similar to the type labeled a "cumulative-conditional-probability" type (Belsky et al., 1991). It suggests that the extent to which the same person has more of these interrelated risk factors determines how likely he is to be sexually aggressive.

In more formal terms, such a model suggests three aspects:

1. The probability of the occurrence of certain characteristics within a constellation is affected by the presence or absence of antecedent factors. However, each antecedent does not constitute a necessary condition for the characteristics in a hypothesized sequence (e.g. other antecedents in addition to abusive home environments may contribute to a short-term mating strategy) nor are any of characteristics identified always necessary for the final outcome (sexual aggression) to occur.
2. When there is a combination of "risk" characteristics, the probability of sexual aggression is greater than when a smaller subset of these characteristics is present.
3. While each constellation of characteristics contributes to a higher probability of sexual aggression, a synergistic effect is also predicted such that a combination of the constellations results in more than a simple additive effect of each on sexual aggression.

The research presented next provides data relevant to these predictions.

Initial testing of the confluence model. Using structural equation modeling, Malamuth et al. (1991) considered the role of both the short-term mating strategy constellation (labeled sexual promiscuity/impersonal sex) and the hostile masculinity constellation. In effect, this research integrates several of the individual hypotheses presented earlier within the same statistical model. These investigators hypothesized that more sexually aggressive men would often show characteristics reflecting the confluence of both constellations. Data were gathered from a nationwide representative sample of about 3000 males enrolled in any form of post-high school education (e.g. trade schools, colleges, universities, etc.). The data consisted of subjects' responses to self-report measures and recollections of earlier experiences. The model was tested by using half of the sample for analysis and the second half for cross-validation purposes. The results produced by both "half" samples generally fit the proposed model well.

An example of the findings is shown in Fig. 8.2. They showed that coming from a home with parental violence and/or child abuse was associated with a higher rate of delinquency in adolescence, which in turn was strongly predictive of greater sexual promiscuity (i.e. a short-term mating strategy). This path (labeled the *Sexual Promiscuity/Impersonal Sex* path) contributed to coerciveness against women, as did the other major constellation, which consisted of *Attitudes*

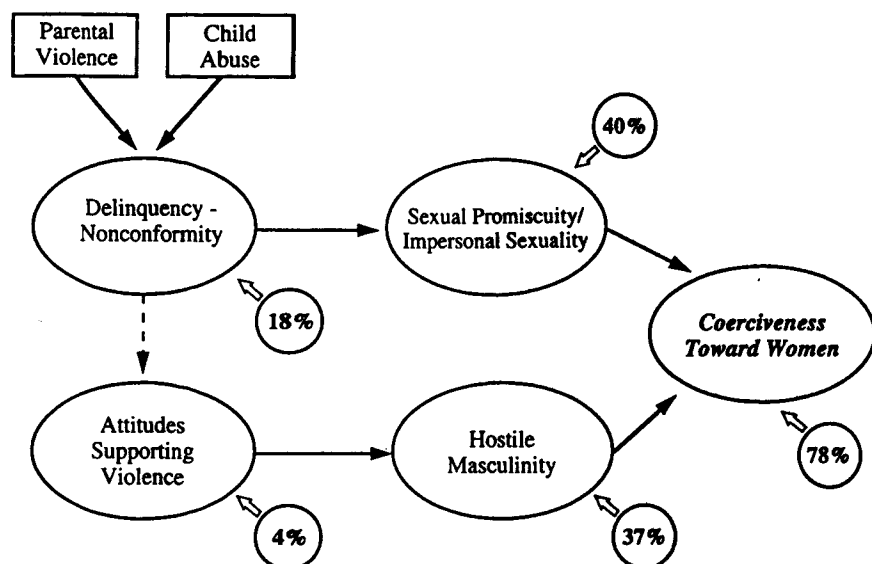


FIG. 8.2 Model of the characteristics of coercive men tested with a national randomly selected sample (based on Malamuth et al., 1991). Percentages indicate amount of latent variance that was successfully accounted for. Solid lines indicate strong paths whereas broken lines indicate weak paths.

Supporting Violence and *Hostile Masculinity* (both elements of the *Hostile Masculinity* path). Together, these two paths accounted for 78% of the latent variance of *Coerciveness Toward Women*, which was indicated by scales measuring sexual and non-sexual aggression against women.¹⁰

Additional analyses presented by these investigators were designed to show the mean differences between nonaggressive men and those displaying sexual and/or nonsexual aggression on the *Hostile Masculinity* and *Sexual Promiscuity/ Impersonal Sex* dimensions. Their sample consisted of 1713 men for whom data were available for both aggression measures. Subjects were divided into two levels on the dimensions of sexual and of nonsexual aggression, thereby creating four groups: (1) Low on both sexual and nonsexual aggression ($n = 1076$); (2) High on nonsexual aggression only ($n = 414$); (3) High on sexual aggression only ($n = 120$); and (4) High on both types of coercion ($n = 103$).

A 2×2 MANOVA was performed using the sexual and nonsexual aggression groups as the independent variables, and scores on *Sexual Promiscuity* and *Hostile Masculinity* as dependent variables. The results revealed very strong multivariate and univariate main effects, except for the effect of nonsexual

¹⁰ A recent meta-analytic review of studies focusing on attitudes toward rape (Anderson, Cooper, & Okamura, 1997) supported a number of elements of the confluence model, particularly the relationship between such attitudes and sexually aggressive behavior as well as the independence of the sexual promiscuity and hostile masculinity constellations.

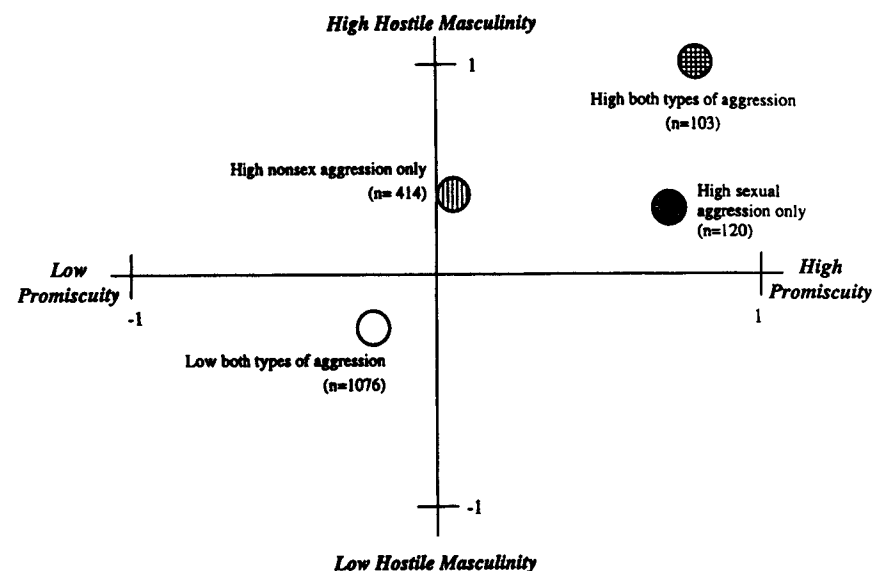


FIG. 8.3 Means of *Hostile Masculinity* and *Sexual Promiscuity* (i.e. short-term mating) dimensions for subjects classified as scoring high or low on sexual aggression and on nonsexual aggression (from Malamuth et al., 1991).

aggression on *Sexual Promiscuity*, which was much weaker. As indicated in Fig. 8.3, men high on both types of aggression also were high on both *Hostile Masculinity* and *Sexual Promiscuity*. Those high only on nonsexual aggression showed moderately elevated levels of *Hostile Masculinity* and were close to the average on the *Sexual Promiscuity* dimension. In contrast, men high only on sexual aggression were also relatively high on *Sexual Promiscuity* and moderately high on *Hostile Masculinity*. Finally, those low on both types of aggression were also relatively low on both the *Sexual Promiscuity* and *Hostile Masculinity* dimensions. Taken together, these data are consistent with the prediction that sexual aggression is associated with the confluence of both a short-term sexual strategy (i.e. *Sexual Promiscuity*) and *Hostile Masculinity*, whereas elevated *Hostile Masculinity* scores alone are associated with the use of coercive tactics in non-sexual conflicts.

Replicating and extending the confluence model. Efforts to refine and extend the confluence model presented earlier were undertaken by Malamuth et al. (1995). In a longitudinal study, the model was used to predict difficulties in men's relationships with women. About 160 men were assessed twice, with an intervening period of about 10 years. The latter assessment focused on four behaviors that might have occurred during the ten years since initial participation: (1) sexual aggression; (2) nonsexual physical aggression; (3) nonsexual verbal aggression; and (4) general relationship quality and distress. The researchers were

able to secure, in many cases, collateral information from the men's partners and to videotape some of the couples, thus lending further validity to the self-report measures. Using cross-sectional data, Malamuth et al. (1995) replicated the findings that were obtained in the 1991 study. More importantly, in extending the model to make longitudinal predictions, it was argued that the two-path "causal structure" would be a useful predictor of sexual aggression assessed 10 years later. The results were indeed in accord with this prediction: information about Hostile Masculinity and Sexual Promiscuity/Impersonal Sex orientation enabled prediction of later aggression above and beyond that achieved based on knowing earlier sexual aggression only. Finally, Malamuth et al. (1995) used the data to successfully test a hierarchical model. It indicated that some of the factors contributing to sexual aggression (e.g. proneness to general hostility) underlie various types of conflict and aggression in intimate relations, whereas other factors (e.g. hostility to women, sexual dominance) are more specific to sexual aggression itself.

Research integrating three constellations of characteristics

Dean and Malamuth (1997) recently extended testing of the confluence model of individual differences by incorporating the third constellation of characteristics described above—they used Bem's (1974) scales to compute for each subject the relative balance of dominance (masculinity) vs. nurturance (femininity). They predicted that calibration of the mechanisms along the first two constellations (Sexual Promiscuity/Impersonal Sex and Hostile Masculinity) was sufficient to create considerable risk for sexually aggressing. However, the characteristics of this third constellation would moderate the actual carrying out of sexually coercive behavior. This research therefore integrated within the same analyses all of the hypotheses described earlier regarding the characteristics of sexual aggressors.

Dean and Malamuth (1997) conducted their analyses in the following way: First, the two-path model developed by Malamuth et al. (1991) of the risk constellations of characteristics predicting sexual coercion was successfully replicated; second, analyses were conducted dividing this sample into two levels on the basis of the relative balance of nurturance to dominance characteristics. In both groups, the basic two-path structure on the "predictor" side of the model remained essentially the same. However, in men with high dominance relative to nurturance, the linkages between the risk characteristics and actual aggressive behavior were strong. In contrast, when the personality profile reflected higher levels of nurturance relative to dominance, the relationship between the risk characteristics and actual aggression was weak or not significant. However, these investigators also demonstrated that even when aggressive behavior may be inhibited, the risk created by the first two constellations (Sexual Promiscuity/Impersonal Sex and

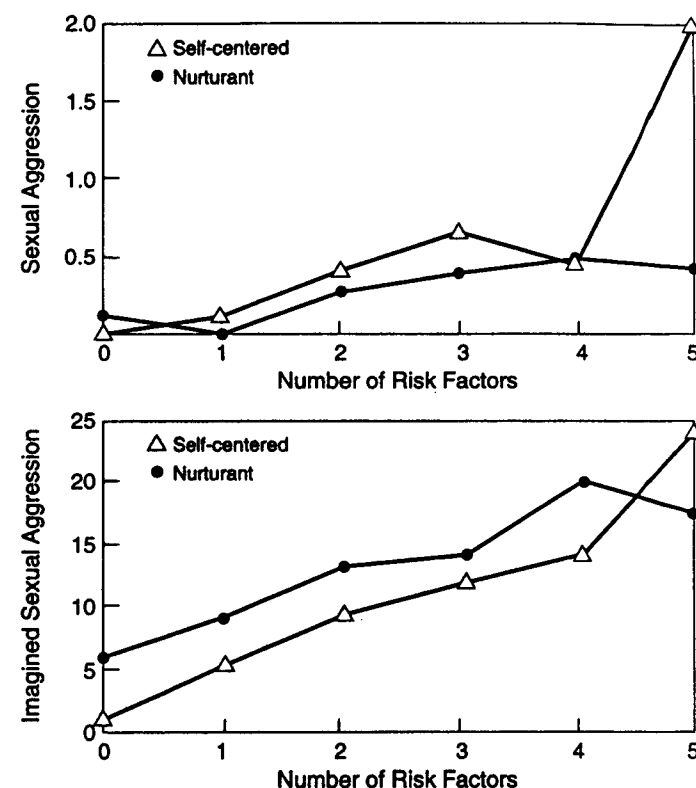


FIG. 8.4 Mean levels of sexual aggression and of imagined sexual aggression as a function of a self-centered versus a nurturant personality and the number of risk factors present (from Dean & Malamuth, 1997).

Hostile Masculinity) is still likely to be revealed in such areas as fantasized sexual aggressivity where actual victim suffering does not occur.

Figure 8.4 presents an illustration of these findings. The authors classified subjects into two types of personalities. Those relatively high on dominance relative to nurturance personality characteristics were labeled *self-centered*, whereas those with the opposite pattern were classified as *nurturant*. A risk analysis was then performed using five predictor variables associated with the Hostile Masculinity and Impersonal Sex (short-term strategy) constellations. Subjects were classified as "having" a particular risk factor if they scored above the median on that factor (e.g. a person scoring above the median on all variables was considered to have all the listed characteristics). As indicated in Fig. 8.4, imagined sexual aggression increased in both the self-centered and nurturant groups with increased number of risk factors. However, actual aggressive behavior showed marked increases only in the self-centered personality

group. This is consistent with the prediction that it is the confluence of all three constellations (short-term sexual strategy, hostile masculinity, and low nurturance relative to dominance) that is the configuration most likely to characterize men who use sexually coercive tactics.

SUMMARY

Using a conceptual framework that distinguishes between converging and diverging interests and focuses on the calibration of psychological mechanisms at varying levels, a model of the characteristics of men who use sexually coercive tactics was presented. It integrates many seemingly independent correlates of sexual aggressors within three major constellations of characteristics: (1) a general personality orientation to assert one's own interests at the expense of the other's (i.e. personality characteristics emphasizing dominance and not nurturance); (2) a mating orientation likely to create a conflict of interests with females (i.e. a short-term mating strategy); and (3) a constellation of emotions and attitudes that prime the use of coercive tactics to deal with conflicts (i.e. hostile masculinity).

The data supported the model's hypotheses regarding the three constellations in showing that sexually aggressive men are more likely to be high on dominance relative to nurturance, pursue a short-term sexual strategy, and have hostile masculinity characteristics. Consistent with a functional analysis of the antecedents of these characteristics, data were described indicating that: (1) differences in socialization in cultural and individual environments affect the extent to which a man's personality accentuates nurturant or dominant characteristics; (2) a short-term sexual strategy is associated with relatively harsh early environments; and (3) hostile masculinity characteristics are associated with high perceived rejections by women. It was also shown that the combination of a short-term mating orientation and hostile masculinity is sufficient to create the proclivity to use sexually coercive tactics (as revealed in imagined sexual aggression) but that the degree to which a person has dominant vs. nurturant personality characteristics moderates whether such proclivity is expressed in actual aggressive behavior.

ACKNOWLEDGEMENTS

The author expresses his deep appreciation to David Buss, Bruce Ellis, Daniel Linz and Jeff Valle for their comments on earlier drafts of this chapter. The writing of this article was facilitated by a Lady Davis Fellowship at the Hebrew University in Jerusalem, Israel. Much of our research reported here was funded by a grant from the National Institute of Mental Health.

REFERENCES

- Abel, G. G., Barlow, D. H., Blanchard, E., & Guild, D. (1977). The components of rapists' sexual arousal. *Archives of General Psychiatry*, 34, 895-903.
- Alcock, J. (1984). *Animal Behaviour: An evolutionary approach*. Sunderland, MA: Sinauer.
- Alexander, R. D. (1979). *Darwinism and human affairs*. Seattle, WA: University of Washington Press.
- Allen, B. (1996). *Rape warfare: The hidden genocide in Bosnia-Herzegovina and Croatia*. Minneapolis, MN: University of Minnesota Press.
- Ageton, S. S. (1983). *Sexual assault among adolescents*. Lexington, MA: Lexington Books.
- Anderson, K. B., Cooper, H., & Okamura, L. (1997). Individual differences and attitudes toward rape: A meta-analytic review. *Personality and Social Psychology Bulletin*, 23, 295-315.
- Ballard-Reisch, D., & Elton, M. (1992). Gender orientation and the Bem Sex Role Inventory: A psychological construct revisited. *Sex Roles*, 27, 291-306.
- Barbaree, H. E., & Marshall, W. L. (1991). The role of male sexual arousal in rape: Six models. *Journal of Consulting and Clinical Psychology*, 59, 621-630.
- Bargh, J. A., Raymond, P., Pryor, J. B., & Strack, F. (1995). Attractiveness of the underling: An automatic power-sex association and its consequences for sexual harassment and aggression. *Journal of Personality and Social Psychology*, 68, 768-781.
- Belsky, J., Steinberg, L., Draper, P. (1991). Childhood experience, interpersonal development, and reproductive strategy: An evolutionary theory of socialization. *Child Development*, 62, 647-670.
- Bem, S. L. (1974). The measurement of psychological androgyny. *Journal of Consulting and Clinical Psychology*, 42, 155-162.
- Berkowitz, L. (1993). Towards a general theory of anger and emotional aggression: Implications of the cognitive-neoassociationistic perspective for the analysis of anger and other emotions. In R. S. Wyer & T. K. Srull (Eds.), *Advances in social cognition: Vol. 6. Perspectives on anger and emotion* (pp. 1-46). Hillsdale, NJ: Erlbaum.
- Bonta, B. D. (1997). Cooperation and competition in peaceful societies. *Psychological Bulletin*, 121, 299-320.
- Broude, G. J., & Greene, S. J. (1978). Cross-cultural codes on 20 sexual attitudes and practices. *Ethnology*, 15, 409-430.
- Brownmiller, S. (1975). *Against our will: Men, women, and rape*. New York: Simon & Schuster.
- Burt, M. R. (1980). Cultural myths and supports for rape. *Journal of Personality and Social Psychology*, 38, 217-230.
- Buss, D. M. (1988). The evolution of human intrasexual competition: Tactics of mate attraction. *Journal of Personality and Social Psychology*, 54, 616-628.
- Buss, D. M. (1989). Conflict between the sexes: Strategic interference and the evocation of anger and upset. *Journal of Personality and Social Psychology*, 56, 735-747.
- Buss, D. M. (1995). Evolutionary psychology. *Psychological Inquiry*, 6, 1-30.
- Buss, D. M. (1996). Social adaptation and five major factors of personality. In J. S. Wiggins (Ed.), *The five-factor model of personality: Theoretical perspectives*. (pp. 180-207). New York: Guilford.
- Buss, D. M., & Schmitt, D. P. (1993). Sexual strategies theory: An evolutionary perspective on human mating. *Psychological Review*, 100, 204-232.
- Chagnon, N. A. (August, 1994). How important was "marriage by capture" as a mating strategy in the EEA? *Human Behavior and Evolution Society Newsletter*, 3, 1-2.
- Check, J. V. P. (1984). *The hostility toward women scale*. Unpublished doctoral dissertation, University of Manitoba, Canada.
- Check, J. V. P., Malamuth, N. M., Elias, B., & Barton, S. (1985). On hostile ground. *Psychology Today*, 19, 56-61.
- Christopher, F. S., Owens, L. A., & Stecker, H. L. (1993). Exploring the dark side of courtship: A test of a model of premarital sexual aggressiveness. *Journal of Marriage and the Family*, 55, 469-479.

- Cleveland, H. H. (1997, June). *Environmental and genetic contributions to behavior problems of children of single parents: Support for a biological theory of self-selection into family structures*. Paper presented at the Annual Meetings of the Human Behavior and Evolution Society, Tuscon, Arizona.
- Cosmides, L., & Tooby, J. (1987). From evolution to behavior: Evolutionary psychology as the missing link. In J. Dupre (Ed.), *The latest on the best: Essays on evolution and optimality* (pp. 277-306). Cambridge, MA: MIT Press.
- Crawford, C. B., & Anderson, J. L. (1989). Sociobiology: An environmentalist discipline? *American Psychologist*, 44, 1449-1459.
- Crawford, C. B., & Galdikas, B. (1986). Rape in non-human animals. *Canadian Psychology*, 27, 215-230.
- Daly, M., & Wilson, M. (1987). *Homicide*. New York: Aldine.
- Daly, M., & Wilson, M. (1994). Evolutionary psychology of male violence. In J. Archer (Ed.), *Male violence* (pp. 253-288). London: Routledge.
- Dawkins, R. (1986). *The blind watchmaker*. Burnt Hill: Longman Scientific.
- Dean, K., & Malamuth, N. M. (1997). Characteristics of men who aggress sexually and of men who imagine aggressing: Risk and moderating variables. *Journal of Personality and Social Psychology*, 72, 449-455.
- Draper, P., & Harpending, H. (1982). Father absence and reproductive strategy: An evolutionary perspective. *Journal of Anthropological Research*, 38, 255-273.
- Eibl-Eibesfeldt, I. (1971). *Love and hate: The natural history of behavior patterns*. New York: Holt, Rinehart & Winston.
- Eibl-Eibesfeldt, I. (1990). Dominance, submission, and love: Sexual pathologies from the perspective of ethology. In R. Jay (Ed.), *Pedophilia-biosocial dimensions* (pp. 150-175). New York: Springer.
- Ellis, L. (1989). *Theories of rape*. New York: Hemisphere.
- Ellis, B., & Malamuth, N. M. (1997, June). *Love and anger in romantic relationships: An independence model*. Paper presented at the Annual Meetings of the Human Behavior and Evolution Society, Tucson, Arizona.
- Ellis, B., & Symons, D. (1989). Sex differences in sexual fantasy. *Journal of Sex Research*, 27, 527-555.
- Friedmann, L. (1972). *The law of war*. New York: Random House.
- Gangestad, S. W., & Simpson, J. A. (1990). Toward an evolutionary history of female sociosexual variation. *Journal of Personality*, 58, 69-96.
- Gazzaniga, M. S. (1992). *Nature's mind: The biological roots of thinking, emotions, sexuality*. New York: Basic Books.
- Gilmore, D. D. (1990). *Manhood in the making: Cultural concepts of masculinity*. New Haven, CT: Yale University Press.
- Gold, S. R., Fultz, J., Burke, C. H., Prisco, A. G., & Willett, J. A. (1992). Vicarious emotional responses of macho college males. *Journal of Interpersonal Violence*, 7, 165-174.
- Greendlinger, V., & Byrne, D. (1987). Coercive sexual fantasies of college men as predictors of self-reported likelihood to rape and overt sexual aggression. *Journal of Sex Research*, 23, 1-11.
- Hall, N. G. C. (1996). *A theory of sexual aggression*. New York: Oxford University Press.
- Hall, N. G. C., & Barongan, C. (1997). Prevention of sexual aggression: Sociocultural risk and protective factors. *American Psychologist*, 52, 5-14.
- Hamilton, W. D. (1964). The genetical evolution of social behaviour, I and II. *Journal of Theoretical Biology*, 7, 1-52.
- Hanneke, C. R., Shields, N., & McCall, G. (1986). Assessing the prevalence of marital rape. *Journal of Interpersonal Violence*, 1, 350-362.
- Hanson, R. K. (1997). Invoking sympathy: Assessment and treatment of empathy deficits among sexual offenders. In B. K. Schwartz & H. R. Cellini (Eds.), *The sex offender: New insights, treatment innovations and legal developments* (Vol. 2) (pp. 1-12). Kingston, NJ: Civic Research Institute.
- Hirsch, L. R., & Paul, L. (1996). Human male mating strategies: I. Courtship tactics of the "quality" and "quantity" alternatives. *Ethology and Sociobiology*, 17, 55-70.
- Hotaling, G. T., & Sugarman, D. B. (1986). An analysis of risk markers in husband to wife violence: The current state of knowledge. *Violence and Victims*, 1, 101-124.
- Hrdy, S. B. (1977). Raising Darwin's consciousness: Female sexuality and the prehuman origins of patriarchy. *Human Nature*, 8, 1-49.
- Hunt, C. B., & McNeill, P. L. (1997, June). *Does environment condition the heritability of menarche?* Paper presented at the Annual Meetings of the Human Behavior and Evolution Society, Tucson, Arizona.
- Kanin, E. J. (1957). Male aggression in dating-courtship relations. *American Journal of Sociology*, 63, 197-204.
- Kanin, E. J. (1984). Date rape: Unofficial criminals and victims. *Victimology: An international Journal*, 9, 95-108.
- Kanin, E. J. (1985). Date rapists: Differential sexual socialization and relative deprivation. *Archives of Sexual Behavior*, 14, 219-231.
- Kanin, E. J., & Parcell, S. R. (1977). Sexual aggression: A second look at the offended female. *Archives of Sexual Behavior*, 6, 67-76.
- Kelly, J. A., & Worell, L. (1976). Parent behaviors related to masculine, feminine, and androgynous sex role orientations. *Journal of Consulting and Clinical Psychology*, 44, 843-851.
- Kenrick, D. T., & Sheets, V. (1993). Homicidal fantasies. *Ethology and sociobiology*, 14, 231-246.
- Kim, K., Smith, P. K., & Palermi, A. (1997). Conflict in childhood and reproductive development. *Evolution and Human Behavior*, 18, 109-142.
- Koss, M. P., Gidycz, C. A., & Wisniewski, N. (1987). The scope of rape: Incidence and prevalence of sexual aggression and victimization in a national sample of higher education students. *Journal of Consulting and Clinical Psychology*, 55, 162-170.
- Koss, M. P., Dinero, T., Seibel, C., & Cox, S. (1988). Stranger and acquaintance rape: Are there differences in the victim's experience? *Psychology of Women Quarterly*, 12, 1-24.
- Lalumiere, M. L., & Quinsey, V. L. (1994). The discriminability of rapists from non-sex offenders using phallometric measures: A meta-analysis. *Criminal Justice and Behavior*, 21, 150-175.
- Lalumiere, M. L., & Quinsey, V. L. (1996). Sexual deviance, antisociality, mating effort, and the use of sexually coercive behaviors. *Personality and Individual Differences*, 21, 33-48.
- Lalumiere, M. L., Chalmers, L. J., Quinsey, V. L., & Seto, M. C. (1996). A test of the mate deprivation hypothesis of sexual coercion. *Ethology and Sociobiology*, 17, 299-318.
- Lalumiere, M., Seto, M. C., & Quinsey, V. L. (1996). Self-perceived mating success and the mating choices of human males and females. Unpublished manuscript, Clarke Institute, Toronto, Canada.
- LeDoux, J. (1996). *The emotional brain: The mysterious underpinnings of emotional life*. New York: Simon & Schuster.
- Levinson, D. (1989). *Family violence in cross-cultural perspective*. Thousand Oaks, CA: Sage.
- Lisak, D. (1994). Subjective assessment of relationship with parents by sexually aggressive and nonaggressive men. *Journal of Interpersonal Violence*, 9, 399-411.
- Lisak, D., & Ivan, C. (1995). Deficits in intimacy and empathy in sexually aggressive men. *Journal of Interpersonal Violence*, 10, 296-308.
- Lisak, D., & Roth, S. (1988). Motivational factors in nonincarcerated sexually aggressive men. *Journal of Personality and Social Psychology*, 55, 795-802.
- Loehlin, J. C. (1992). *Genes and environment in personality development*. Thousand Oaks, CA: Sage.
- Lore, R. S., & Schultz, L. (1993). Control of human aggression: A comparative perspective. *American Psychologist*, 48, 16-25.
- Lorenz, K. (1966). *On aggression*. New York: Harcourt.
- Malamuth, N. M. (1981). Rape proclivity among males. *Journal of Social Issues*, 37, 138-157.
- Malamuth, N. M. (1983). Factors associated with rape as predictors of laboratory aggression against females. *Journal of Personality and Social Psychology*, 45, 432-442.

- Malamuth, N. M. (1986). Predictors of naturalistic sexual aggression. *Journal of Personality and Social Psychology*, 50, 953-962.
- Malamuth, N. M. (1988a). A multidimensional approach to sexual aggression: Combining measures of past behavior and present likelihood. In R. Prentky & V. Quinsey (Eds.), *Human sexual aggression: Current perspectives. Annals of the New York Academy of Sciences*. (Vol. 528, pp. 123-132). New York: The New York Academy of Sciences.
- Malamuth, N. M. (1988b). Predicting laboratory aggression against female and male targets: Implications for sexual aggression. *Journal of Research in Personality*, 22, 474-495.
- Malamuth, N. M. (1989a). The attraction to sexual aggression scale: Part one. *Journal of Sex Research*, 26, 26-49.
- Malamuth, N. M. (1989b). The attraction to sexual aggression scale: Part two. *Journal of Sex Research*, 26, 324-354.
- Malamuth, N. M. (1996). The confluence model of sexual aggression: Feminist and evolutionary perspectives. In D. Buss & N. Malamuth (Eds.), *Sex, power and conflict: Evolutionary and feminist perspectives* (pp. 269-295). Oxford: Oxford University Press.
- Malamuth, N. M., & Brown, L. (1994). Sexually aggressive men's perceptions of women's communications: Testing three explanations. *Journal of Personality and Social Psychology*, 67, 699-712.
- Malamuth, N. M., & Check, J. (1983). Sexual arousal to rape depictions: Individual differences. *Journal of Abnormal Psychology*, 92, 55-67.
- Malamuth, N. M., Check, J. V. P., & Briere, J. (1986). Sexual arousal in response to aggression: Ideological, aggressive and sexual correlates. *Journal of Personality and Social Psychology*, 50, 330-340.
- Malamuth, N. M., Heavey, C., Linz, D. (1993). Predicting men's antisocial behavior against women: The "interaction model" of sexual aggression. In G. N. Hall, R. Hirschmann, J. R. Graham & M. S. Zaragoza, (Eds.), *Sexual aggression: Issues in Etiology and Assessment, and Treatment* (pp. 63-97). New York: Hemisphere.
- Malamuth, N. M., & Heilmann, M. (in press). Evolutionary psychology and sexual aggression. In C. B. Crawford, & D. Krebs (Eds.), *Handbook of Evolutionary Psychology: Ideas, issues and applications*. Hillsdale, NJ: Erlbaum.
- Malamuth, N. M., Linz, D., Heavey, C. L., Barnes, G., & Acker, M. (1995). Using the confluence model of sexual aggression to predict men's conflict with women: A ten-year follow-up study. *Journal of Personality and Social Psychology*, 69, 353-369.
- Malamuth, N. M., Sackloskie, R., Koss, M. P., & Tanaka, J. (1991). The characteristics of aggressors against women: Testing a model using a national sample of college students. *Journal of Consulting and Clinical Psychology*, 59, 670-681.
- Markman, H. J., Floyd, F. J., Stanley, S. M., & Storaasli, R. D. (1988). Prevention of marital distress: A longitudinal investigation. *Journal of Consulting and Clinical Psychology*, 56, 210-217.
- Marshall, W. L., Hudson, S. M., & Hodgkinson, S. (1993). The importance of attachment bonds in the development of juvenile sex offending. In H. E. Barbaree, W. L. Marshall, & S. M. Hudson (Eds.), *The juvenile sex offender* (pp. 164-181). New York: Guilford.
- Money, J. (1986). *Lovemarks*. New York: Irvington.
- Mosher, D. L., & Sirkin, M. (1984). Measuring a macho personality constellation. *Journal of Research in Personality*, 18, 150-163.
- Muehlenhard, C. L., & Linton, M. A. (1987). Date rape and sexual aggression in dating situations: Incidence and risk factors. *Journal of Counseling Psychology*, 34, 186-196.
- Osland, J. A., Fitch, M., & Willis, E. E. (1996). Likelihood to rape in college males. *Sex Roles*, 35, 171-183.
- Paul, L., & Hirsch, L. R. (1996). Human male mating strategies: II. Moral codes of "quality" and "quantity" strategies. *Ethology and Sociobiology*, 17, 71-86.
- Prentky, R. A., & Knight, R. A. (1991). Dimensional and categorical discrimination among rapists. *Journal of Consulting and Clinical Psychology*, 59, 643-661.
- Quinsey, V. L., & Lalumiere, M. L. (1995). Evolutionary perspectives on sexual offending. *Sexual Abuse*, 7, 301-315.
- Radke-Yarrow, M., & Zahn-Waxler, C. (1984). Roots, motives and patterns in children's prosocial behavior. In E. Staub et al., (Eds.), *Development and maintenance of prosocial behavior*. New York: Plenum.
- Rapaport, K., & Burkhart, B. R. (1984). Personality and attitudinal characteristics of sexually coercive males. *Journal of Abnormal Psychology*, 93, 216-221.
- Rice, M. E., Chaplin, T. C., Harris, G. T. & Coutts, J. (1994). Empathy for the victim and sexual assault among rapists and nonrapists. *Journal of Interpersonal Violence*, 10, 435-449.
- Rowe, D. C., & Jacobson, K. (1997, June). *Testing the conditional strategy hypothesis for self-reported aggression*. Paper presented at the Annual Meetings of the Human Behavior and Evolution Society, Tuscon, Arizona.
- Rushton, J. P., Fulker, D. W., Neale, M. C., Nias, D. K. B., & Eysenck, H. J. (1986). Altruism and aggression: The heritability of individual differences. *Journal of Personality and Social Psychology*, 50, 1192-1198.
- Russell, D. E. H. (1984). *Sexual exploitation: Rape, child sexual abuse and workplace harassment*. Thousand Oaks, CA: Sage.
- Sanday, P. R. (1981a). *Female power and male dominance: On the origins of sexual inequality*. Cambridge: Cambridge University Press.
- Sanday, P. R. (1981b). The sociocultural context of rape: A cross-cultural study. *Journal of Social Issues*, 37, 5-27.
- Sarwer, D. B., Kalichman, S. C., Johnson, J. R., Early, J., & Akram, A. S. (1993). Sexual aggression and love styles: An exploratory study. *Archives of Sexual Behavior*, 22, 265-275.
- Seidman, B. T., Marshall, W. L., Hudson, S. M., & Robertson, P. J. (1994). An examination of intimacy and loneliness in sex offenders. *Journal of Interpersonal Violence*, 9, 518-534.
- Seto, M. C., & Barbaree, H. E. (1993). Victim blame and sexual arousal to rape cues in rapists and nonoffenders. *Annals of Sex Research*, 6, 167-183.
- Seto, M. C., & Kuban, M. (1996). Criterion-related validity of a phallometric test for paraphilic rape and sadism. *Behaviour Research and Therapy*, 34, 175-183.
- Simpson, J. A., & Gangestad, S. W. (1991). Individual differences in sociosexuality: Evidence for convergent and discriminant validity. *Journal of Personality and Social Psychology*, 60, 870-883.
- Smuts, B. (1992). Male aggression against women: An evolutionary perspective. *Human Nature*, 3, 1-44.
- Smuts, B., & Smuts, R. (1993). Male aggression and sexual coercion of females in nonhuman primates and other animals: Evidence and theoretical implications. *Advances in the Study of Behavior*, 22, 1-63.
- Spaccarelli, S., Bowden, B., Coatsworth, J. D., & Kim, S. (1997). Psychological correlates of male sexual aggression in a chronic delinquent sample. *Criminal Justice and Behavior*, 24, 71-95.
- Spence, J. T., Losoff, M., & Robbins, A. S. (1991). Sexually aggressive tactics in dating relationships: Personality and attitudinal correlates. *Journal of Social and Clinical Psychology*, 10, 289-304.
- Stermac, L. E., & Quinsey, V. L. (1986). Social competence among rapists. *Behavioral Assessment*, 8, 171-185.
- Stiglmayer, A. (Ed.). (1994). *Mass rape*. Arkansas, NE: University of Nebraska Press.
- Straus, M. (1987, August). *Family patterns and research on primary prevention of family violence*. Paper presented at the 1987 meeting of the American Psychological Association, New York.
- Straus, M. A., & Gelles, R. J. (1986). Societal change and change in family violence from 1975 to 1985 as revealed by two national surveys. *Journal of Marriage and the Family*, 48, 465-479.
- Tang, C. S., Critelli, J. W., & Porter, J. F. (1993). Motives in sexual aggression: The Chinese context. *Journal of Interpersonal Violence*, 8, 435-445.

- Thiessen, D. (1994). Environmental tracking by females: Sexual lability. *Human Nature*, 5, 167-202.
- Thornhill, R., & Thornhill, N. W. (1983). Human rape: An evolutionary analysis. *Ethology and Sociobiology*, 4, 137-173.
- Thornhill, R., & Thornhill, N. W. (1992). The evolutionary psychology of men's coercive sexuality. *Behavior and Brain Sciences*, 15, 363-421.
- Tooby, J., & Cosmides, L. (1990). On the universality of human nature and the uniqueness of the individual: The role of genetics and adaptation. *Journal of Personality*, 58, 17-68.
- Trivers, R. L. (1972). Parental investment and sexual selection. In B. Campbell (Ed.), *Sexual selection and the descent of man*. (pp. 1871-1971). Chicago: Aldine.
- Vass, J. S., & Gold, S. R. (1995). Effects of feedback on emotion in hypermasculine males. *Violence and Victims*, 10, 217-226.
- Waller, N. G., & Shaver, P. R. (1994). The importance of nongenetic influences on romantic love styles: A twin-family study. *Psychological Science*, 5, 268-274.
- Ward, T., McCormack, J., & Hudson, S. M. (1997). Sexual offenders' perceptions of their intimate relationships. *Sexual Abuse: A Journal of Research and Treatment*, 9, 57-74.
- Wiggins, J. S. (1991). Agency and communion as conceptual coordinates for the understanding and measurement of interpersonal behavior. In W. M. Grove & D. Cichetti (Eds.), *Thinking clearly about psychology: Vol. 2. Personality and psychology* (pp. 89-113). Minneapolis: University of Minnesota Press.
- Wiggins, J. S., & Holzmüller, A. (1981). Further evidence on androgyny and interpersonal flexibility. *Journal of Research in Personality*, 15, 67-80.
- Wiggins, J. S., & Trapnell, P. D. (1996). A dyadic-interactional perspective on the five-factor model. In J. S. Wiggins (Ed.), *The five-factor model of personality: Theoretical perspectives* (pp. 88-162). New York: Guilford.
- Wingfield, J. C., Hegner, R. E., Dufty, A. M. Jr., & Ball, G. F. (1990). The "challenge hypothesis": Theoretical implications for patterns of testosterone secretion, mating systems, and breeding strategies. *American Nature*, 136, 829-846.
- Wispe, L. (1986). The distinction between sympathy and empathy: To call forth a concept, a word is needed. *Journal of Personality and Social Psychology*, 50, 314-321.
- Wrangham, R., & Peterson, D. (1996). *Demonic males: Apes and the origins of human violence*. New York: Houghton Mifflin.
- Yates, E., Barbaree, H. E., & Marshall, W. L. (1984). Anger and deviant sexual arousal. *Behavior Therapy*, 15, 287-294.
- Young, R. K., & Thiessen, D. (1991). The Texas rape scale. *Ethology and Sociobiology*, 13, 19-33.