*Sexually Violent Media, Thought Patterns, and Antisocial Behavior**

NEIL M. MALAMUTH
Communications Studies
University of California, Los Angeles
Los Angeles, California 90024

I. Introduction 160
A. The 1986 Pornography Commission 160
B. The Focus of This Chapter 161
II. Theorized Effects 163
A. An Indirect-Effects Model 163
B. Hypothesized Processes Affecting Thought Patterns 165
III. Media Characteristics and Diffusion 167
A. The Anatomy of Media Sexual Violence 167
B. Availability and Frequency of Exposure 168
IV. Sexually Violent Media and Arousal 169
A. Does Sexual Violence Stimulate Arousal in the Audience? 169
B. The Etiology of Sexual Arousal to Aggression 172
C. Does Media Exposure Change Sexual Responsiveness? 178
V. Media Exposure, Thought Patterns, and Antisocial Behavior 180
A. From Media Exposure to Thought Patterns 180
B. From Thought Patterns to Antisocial Behavior 185
VI. Other Relevant Data 194
A. Nonsexual Media Violence 194
B. The Media and Social Attitudes 195
C. Longitudinal Research in Other Areas 195

*A briefer version of this article was presented at the Surgeon General's Workshop on Pornography and Public Health, June 22–24, 1986, Washington, DC. It was entitled "Do sexually violent media indirectly contribute to antisocial behavior?" and was reprinted in M. R. Walsh (Ed.), 1987, *The psychology of women: Ongoing debates*. New Haven, CT: Yale University Press. In addition, an earlier version was presented at the International Communication Association Meetings in Montreal, Canada, May 1987, where it received a "top five" rating by the Mass Communication Division.

PUBLIC COMMUNICATION AND BEHAVIOR
Volume 2

D. Jury Studies 196
E. Sexual Harassment and Wife Beating 196
VII. Summary and Conclusions 197
References 198

I. INTRODUCTION

A. The 1986 Pornography Commission

The Attorney General's Commission on Pornography (1986) generated a storm of public debate with a recently published report. This Commission's conclusions were very different from those of the earlier Commission on Obscenity and Pornography (1970). Although the 1986 Commission used various sources of information and distinguished among several categories of pornography, it appeared to rely heavily on social scientific data on sexually violent material.[1] "It is with respect to material of this variety," the Commission explained, "that the scientific findings and ultimate conclusions of the 1970 Commission are least reliable for today, precisely because material of this variety was largely absent from that Commission's inquiries" (1986, p. 324).

With regards to such material, there are three primary elements included in the overall conclusions of the 1986 Commission's Report (pp. 323–355). The first concerns the frequency of such sexually violent materials. The Commission indicates that increasingly these are the "most prevalent forms of pornography" (p. 323). On the basis of the data reviewed later in this article, this is an inappropriate conclusion because violence (or aggression), as defined by social scientists (see, e.g., Baron, 1977; Goldstein, 1986), is not frequently portrayed in sexually explicit media (see also Linz, Donnerstein, & Penrod, 1987). However, more inclusive definitions of violence (see, e.g., MacKinnon, 1987) lead to perceptions of much higher frequency in sexually explicit media.

The second element concerns the link between sexually violent media and violent behavior. The Commission concluded that "In both clinical and experimental settings, exposure to sexually violent materials has indicated an increase in the likelihood of aggression. More specifically, the research, which is described in much detail later in this Report, shows a causal relationship between exposure to material of this type and aggressive behavior towards

[1] The term *pornography* is used in this article to refer to sexually explicit media without any pejorative meaning intended. Also, the terms *aggression* and *violence* are used interchangeably herein, as are the terms *sexually violent media* and *violent pornography*. Although I recognize that meaningful distinctions may be made between such terms, I have not chosen to do so here.

women" (p. 324). The Commission concludes that the increase in aggressive behavior occurs not only in research settings but also includes unlawful sexually violent behavior by some subgroups of the population.

The experimental research that the Commission is referring to are studies that have shown short-term increases in laboratory aggression, following exposure to sexually violent media (see, e.g., Donnerstein & Berkowitz, 1981; Malamuth, 1978). However, this part of the 1986 Commission's report fails to include the findings of the only study examining possible long-term effects of repeated exposure to sexually violent media on laboratory aggression (Malamuth & Ceniti, 1986). That study did not find any such long-term effects. It is noteworthy that it is cited in a different section of the 1986 Commission's report—the "Social and Behavior Science Research Analysis" section (p. 985), prepared separately by a social scientist. Obviously, this information was available to the Commission. In general, the Commission's generalization from the limited data in laboratory settings to infer direct effects of sexually violent media on real-world violence is certainly questionable.

The third element of the Commission's conclusions most closely relates to the material reviewed in the present chapter. The Report concludes that the most recent evidence is "strongly supportive of significant attitudinal changes on the part of those with substantial exposure to violent pornography. . . . We have little trouble concluding that this attitude is both pervasive and profoundly harmful" (1986, pp. 326–327).

The new evidence on the effects of violent pornography on attitudes came primarily from research and testimony provided by my associates and I. My purpose here is to synthesize this research. However, this article is in no way intended as an endorsement of the 1986 Commission's conclusions or legal recommendations.

B. The Focus of This Chapter

The research described below analyzed media stimuli by the "messages" or meanings they convey. Meaning is, of course, a function of both the message and the receiver's interpretations of it. The message given the most attention here involved the consequences of sexual aggression. A series of experiments described here found that rape depictions that showed the victim ultimately deriving physical pleasure from her experience fostered attitudes more condoning of aggression against women. Rape depictions that portrayed the victim abhorring the experience, on the other hand, were less likely to have such effects.

According to these findings, a PG-rated film showing rape in a positive light could be more socially detrimental than an X-rated film not showing

sexual violence. The degree of sexual explicitness may be less relevant than the "message" conveyed by the depiction of sexual aggression.[2]

Besides discriminating among differing "messages" in studying media stimuli, the research presented differentiates among media consumers and attempts to consider the role of other contributing factors. No influence works in a vacuum, and media influences are viewed as combining and interacting with a variety of other individual and cultural factors—sometimes counteracting them, sometimes reinforcing them, and at other times, not having much of any effect.

The current strong interest in exploring a possible relationship between pornography and crime has led to a search for direct links between exposure and deviant behavior. People have sought an immediate causal connection between media action and audience imitation. For example, a civil suit brought against NBC alleged that a rape portrayal in a television movie, *Born Innocent*, resulted in an imitation rape by some juvenile viewers (*Olivia v. NBC*, 1978). However, because of the ethical constraints against researchers' creating conditions that might increase serious aggression (e.g., exposing individuals to large doses of violent pornography and then seeing if some commit rapes), experimentation to study direct effects can only be used to a very limited extent.

Beyond the dramatic popular notion of violent pornography spurring a minority of sexual deviants and "weirdos" to criminal acts lies the far grayer, more complex, but also potentially far more pervasive area of indirect effects. The evidence in this article suggests the prospect of a wide range of media affecting the general population in a variety of different ways. In particular, it looks at how an aggregate of media sexual violence could affect a person's thought patterns (e.g., attitudes, beliefs, perceptions, schemas), which are concurrently being shaped by family, peers, other media messages, and a host of other influences. If other factors exist in the person and the environment, such thought patterns might contribute to stranger and date rape. In the absence of other factors that contribute to aggression or due to the existence of forces that inhibit (e.g., fear of punishment) or are incompatible with (e.g., empathy) violence, there is still some likelihood that these thought patterns will be expressed in other ways, such as a not-acted-upon desire to be sexually aggressive, sanctioning the sexual aggression of others, or sexist,

[2]Of course, sexual explicitness in and of itself should not be ignored as a conveyance of messages. Based on cultural and personal background and experience, sexual explicitness may be interpreted in many different ways, and media may convey messages about social roles and power relations even if there is no actual violence shown. For example, the uncovering of a woman's body may be perceived by some as debasing her. Similarly, the public display of sex may break taboos that could be interpreted as sanctioning other restricted behaviors (Malamuth, Feshbach, & Jaffe, 1977). However, such interpretations are not inherent to sexually explicit media, whereas a positive depiction of rape or child molestation is not equally a matter of interpretation.

discriminatory, and/or harassing behavior. Even when not translated into violent behavior, such effects have wide social implications.

II. THEORIZED EFFECTS

A. An Indirect-Effects Model

Malamuth & Briere (1986) described an indirect-effects model of hypothesized environmental influences on the development of antisocial behavior against women (see Fig. 1). To summarize this model briefly, individual conditions and the broader social climate are postulated as the originating environmental influences on the individual. The mass media are considered one of the *many* social forces that may, in interaction with a variety of other cultural and individual factors, affect the development of intermediate attributes, such as thought patterns, sexual arousal patterns, motivations, emotions, and personality characteristics. These intermediate variables, in complex interactions with each other and with situational circumstances, such as alcohol consumption or acute arousal, may precipitate behaviors ranging from passive support to actual aggression.[3] In addition to having relatively

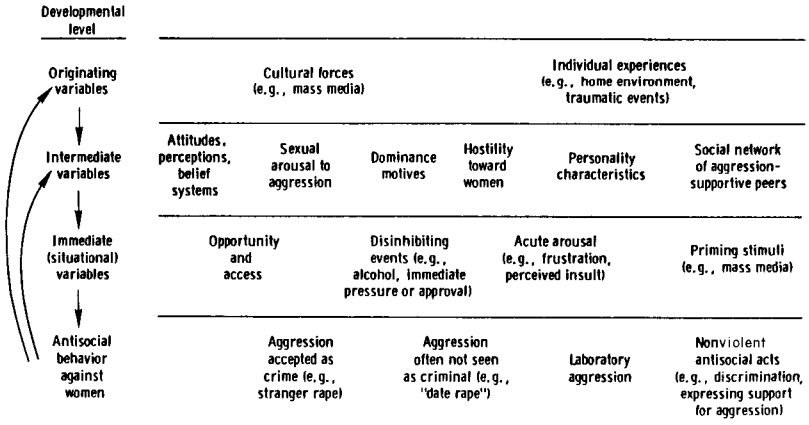

Fig. 1. Hypothesized environmental influences on antisocial behavior against women.

[3]The focus of this model is on the factors that may contribute to the development of antisocial behavior. Obviously, there may be varied factors, including some media portrayals, leading to the development of attributes stimulating prosocial behavior and reducing antisocial responses. Also, this model does not necessarily exclude other possible effects of sexually violent media, some of which may not necessarily be judged harmful by many observers.

long-term influences, the mass media may temporarily increase the recall of (or may "prime") antisocial thoughts, feelings, or behavioral urges that were previously formed (Berkowitz, 1984).

For some individuals, antisocial acts may take the form of violence that comes to the attention of the law, such as "stranger" rape or wife-battering. For others, these same underlying factors may contribute to responses that are not typically prosecuted, but instead are manifested as aggression in dating situations or in laboratory settings, a reported desire to commit acts of sexual violence, sexual harassment, discrimination against women, and/or expressed support for the sexual aggression of others. We are not lumping illegal violence together with all other antisocial behaviors, but we are suggesting, in keeping with feminists' writings (see, e.g., Russell, 1984), that all these behaviors may share some underlying causes, including media influences.

This model indicates possible avenues by which cultural forces such as the media may change a person's intermediate responses and how such changes may ultimately affect his own aggressive behavior under some circumstances. This model also suggests that changes in the thought patterns of some people may affect the aggressive behavior of others. For example, if a person becomes more tolerant of violence against women as a result of media exposure or other factors, he may change his reactions to the sexual aggression of others even if his own aggressive behavior is not altered. His reactions to others' aggression might significantly influence their actions.

This general model does not suppose a linear sequence of events, but a reciprocating system of mutually influencing factors—as indicated by the upward arrows in Fig. 1. For example, mass media portrayals of sexual violence may contribute to attitudes and perceptions, which, in combination with personality characteristics derived from aversive childhood experiences, may result in sexual aggression on a "date." This aggression, especially if unpunished, might produce a further alteration in attitudes and perceptions (including those of self), which could attract the individual to a peer network supportive of sexual aggression. These peers, themselves a product of "originating" and "intermediate" variables, might then provide greater support and approval for further sexual aggression.

I suggest two possible routes culminating in sexual aggression. First, an individual may "progress" through the stages hypothesized to produce sexual violence. Second, mass media stimuli and other cultural influences may impact on individuals not sexually violent themselves, but who nevertheless, because of their thought patterns, support and reinforce sexual violence in others. Such support may manifest itself by blaming a rape victim, supporting another man's aggression in a "locker room" conversation, or even deciding about guilt as a jury member in a rape trial. The idea of such thought patterns encouraging sexual violence is reminiscent of the "cultural climate" concept

suggested by Brownmiller (1975). It argues that the media influences that increase cultural supports for sexual aggression need not produce immediate violence to have seriously harmful effects. Of course, the indirect model need not be restricted to sexual aggression but may apply to nonsexual aggression as well. For example, media depictions of violent vigilantes as heroes (e.g., the *Death Wish* series of movies) may contribute to a cultural climate condoning similar behavior in real-world settings.

The indirect effects model provides the basis for this article's twin hypotheses that may be empirically verified or falsified: (1) exposure to some sexually violent media may contribute in some individuals to the development of thought patterns that support aggression against women, and (2) such thought patterns, in combination with other influences and circumstances, may contribute to sexually violent acts in some cases and to other antisocial, but not necessarily violent, responses in others.

B. Hypothesized Processes Affecting Thought Patterns

Obviously, most viewers of media sexual violence distinguish between fantasy and reality and do not necessarily perceive the media as an absolute model for behavior. However, there is considerable research indicating that even when people recognize an event as fictional, for some it can nonetheless affect their perceptions of reality (see, e.g., Carroll, 1978). Such media influences may be more likely when the sexual violence is presented in a positive light or when the audience is sexually aroused by it.

Figure 2 summarizes several possible processes by which media sexual violence might affect thought patterns that facilitate violence against women. These have been adapted from Bandura's (1977, 1986, 1988) description of ways by which normally censured acts become more intellectually and emotionally acceptable. They include the following:

1. Labeling sexual violence more as a sexual rather than a violent act
2. Adding to perceptions that sexual aggression is normative and culturally acceptable
3. Altering perceptions of the consequences of sexual aggression—in particular, minimizing the seriousness of the consequences to the victim and reinforcing the myth that victims derive pleasure from sexual assaults
4. Changing attributions of responsibility to place more blame on the victim
5. Elevating the positive value of sexual aggression by associating it with sexual pleasure and a sense of conquest
6. Reducing negative emotional reactions to sexually aggressive acts.

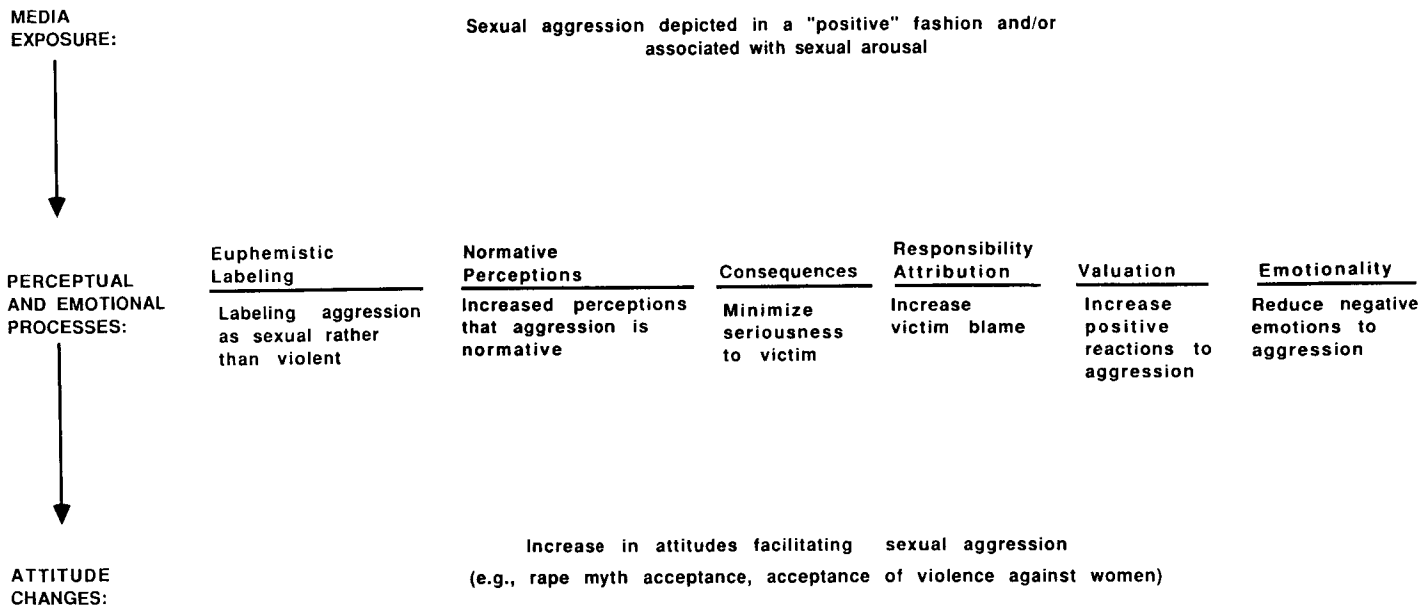

Fig. 2. Hypothesized processes mediating impact of media sexual violence on attitudes.

Some of the studies discussed later investigate these cognitive and emotional processes.

III. MEDIA CHARACTERISTICS AND DIFFUSION

A. The Anatomy of Media Sexual Violence

A comparison of sexual versus nonsexual media violence helps to isolate the characteristics of sexually violent depictions. Of course, males act against females in the vast majority of sexually aggressive depictions (see, e.g., Smith, 1976a,b; Yang, 1987), whereas the victim is usually male in nonsexual portrayals of violence (Gerbner, 1972). Two other important differences distinguish sexual and nonsexual violence. First, victims of nonsexual aggression are usually shown as outraged by their experience and intent on avoiding victimization. They, and at times the perpetrators of the aggression, suffer from the violence. However, when sexual violence is portrayed, there is frequently the suggestion that, despite initial resistance, the victim secretly desired the abusive treatment and eventually derived pleasure from it. This provides a built-in justification for aggression that would otherwise be considered unjustifiable. Sexual violence is often presented without negative consequences for either the victim or the perpetrator. For example, less than 3% of the rapists in "adult" books surveyed by Smith (1976a,b) suffered negative consequences, and their victims were seldom shown to have regrets about having been raped. Similarly, in a recent content analysis of videos, Palys (1986) found that the majority of sexual aggressors were portrayed in a positive fashion and only seldom did their violence result in negative consequences (see also Yang, 1987).

The second distinction between sexual and nonsexual violence involves the element of sexual arousal. Such arousal in response to sexually violent depictions might result in subliminal conditioning and cognitive changes in the consumer by associating physical pleasure with violence. Therefore, even sexual aggression depicted negatively may have harmful effects because of the sexual arousal induced by the explicitness of the depiction. For example, a person who views a sexually violent scene might feel that the violence is immoral but may nonetheless be sexually aroused by it. Such arousal might motivate him to rationalize the aggression or to minimize its seriousness or its consequences.

Given these issues, particular concern about sexual aggression in the media is not only based on the frequency of sexual as compared to nonsexual violent portrayals. Instead, the positive manner in which sexual violence is portrayed and its potential to positively link or reinforce sex and violence justifies special concern. Nevertheless, it is important to consider the frequency of sexually violent media and the level of exposure to such images.

B. Availability and Frequency of Exposure

1. Availability in Media

Most of the research pertaining to the availability issue has been conducted with media stimuli that are sexually explicit, although there has also been some research on the frequency of sexually aggressive portrayals in the non-sexually explicit media. Content analyses indicate considerable variability of sexual aggression in differing types of sexually explicit media, with "adult" books having about 30% (Smith, 1976a,b), "adult" movies about 10–15% (Palys, 1986; Slade, 1984; Yang, 1987), and "soft core" magazines about 5% (Malamuth & Spinner, 1980; Winick, 1985). In contrast, the levels of sexual aggression have been found to be very high in detective magazines (Dietz & Evans, 1982), but these are typically not sexually explicit (e.g., featuring nudity) portrayals.

Content analyses of daytime "soap operas" have yielded quite different patterns. On the one hand, Lowry, Love, and Kirby (1981) reported that sexual aggression was the second most frequent type of sexual activity, although it was typically implied rather than actually portrayed. On the other hand, Greenberg and D'Alessio (1985) reported that the results of a content analysis of soap operas found that references to rape were not common, occurring about once in every 11 hours of broadcasting. In contrast, the sexual activity most frequently referred to—verbal mention of intercourse—occurred 1.5 times in an hour of soap opera broadcasting. There are many differences between these studies in the time periods, shows analyzed, and the sampling and analysis techniques that could account for the differing conclusions.

Baxter, De Riemer, Landini, Leslie, and Singletary (1985) conducted a content analysis of a random sample of music videos aired on MTV during a week in 1984. They found that the separate portrayals of either violence or depiction of sexual feelings or impulses were very frequent. However, the actual fusion of sex and violence was relatively rare. For example, sadomasochism occurred in 5% of the videos and sexual bondage in 2%.

2. Frequency of Exposure

Demare, Briere, and Lips (1988) surveyed 222 Canadian undergraduate males regarding their exposure to various types of sexually explicit media. Thirty-six percent reported that within the past year they were exposed at least once to sexually violent pornography (which consisted of materials showing a man forcing a woman to perform a sexual act against her will or a rape of a woman). Thirteen percent reported having viewed such materials more than twice within the past year. These data suggest that exposure to some sexually aggressive images is not limited to a very small segment of the population.

Another important question concerns the age of exposure to such materials. Although there is little research specifically on sexually violent media, potentially relevant research suggests that exposure probably occurs quite early. Research focusing on exposure to sexually explicit media per se found that about 20% of males had their first exposure by age 12 (Abelson, Cohen, Heaton, & Suder, 1970). More recently, on the basis of a small national probability sample of Canadians, Check (1985) reported that more than a third of youths between the ages of 12 and 17 years reported viewing sexually explicit films at least once a month. There is no reason to assume that these youths are not exposed to the violent portions contained within the sexually explicit media, as well as within nonexplicit media.

A recent survey of Great Britain assessed, in a representative sample of children and adolescents, the frequency of exposure to video films that are legally classified as obscene in that country (many of these would not receive such a classification in the United States). Because these films are banned in Great Britain, they were not viewed in theaters but in private homes by the use of videos. The investigators report that

> It is a matter of grave concern that in the formative years, 45% of children. . . have seen one or more video films which would legally be classified as obscene in this country on account of the morbid, sadistic and repugnant nature of the violence they portray. The first knowledge of sexual life acquired by these children may come from viewing films in which sexual conduct is inextricably entwined with violence, hatred, coercion and the humiliation of women in particular. (Roth, 1985, p. 3)

It is important to consider both the actual media frequency of sexually violent materials and their availability to the public, including children. Although there may or may not have been very large increases in the frequency of such media stimuli over the past three decades, new media technologies, such as cable or video recorders, may have led to much wider dissemination in recent years. Unfortunately, there are not any scientific studies (that I am aware of) that examine this possibility.

IV. SEXUALLY VIOLENT MEDIA AND AROUSAL

A. Does Sexual Violence Stimulate Arousal in the Audience?

An issue with important implications for the attraction to and effects of sexually violent media concerns whether such stimuli are likely to be sexually arousing to the consumer. If such materials are particularly arousing sexually to substantial segments of the population, there may be an economic incentive for their continued production. However, if these materials are sexually arousing to only a small fringe element of society, then such an incentive is

far less likely. The research described in this section is relevant to this arousal issue, beginning with work that seemed to show that only a small segment of men are aroused by sexual violence.

1. Rape Index

Abel and associates (Abel, Barlow, Blanchard, & Guild, 1977; Abel, Blanchard, & Becker, 1976, 1978; Abel, Blanchard, Becker, & Djenderedjian, 1978) reported that rapists showed relatively high and about equal levels of penile tumescence to audiotapes portraying rape and consenting sexual acts. Although there was some indication that the more violent rapists were more aroused sexually by rape than by consenting scenes (Abel *et al.*, 1977), the conclusion about rapists in general was that they were equally as aroused by rape as by mutually consenting depictions. In contrast to rapists, these studies found that nonrapists showed relatively little sexual arousal to rape depictions.

On the basis of their data, Abel and colleagues (1977) developed the rape index, which is a ratio of sexual arousal to rape portrayals compared with arousal to consenting sex portrayals. With this index, a man whose sexual arousal toward rape is similar to or greater than his arousal to consenting depictions would be considered to have an inclination toward rape. Various investigators have used this measure in the diagnosis and treatment of rapists and have recently extended it to child molesters by contrasting sexual arousal to depictions of child molestation with arousal to consenting-adult depictions (see, e.g., Abel, Becker, Murphy, & Flanagan, 1981; Avery-Clark & Laws, 1984; Quinsey, Chaplin, & Carrigan, 1980). Quinsey and colleagues (1980) provided some support for the predictive validity of this assessment technique by showing that it successfully predicted recidivism of child molesters following discharge from a psychiatric institution.

2. Mass Media and Sexual Violence

As was noted, the development of the rape index was based on findings that nonrapists showed relatively little sexual arousal to rape depictions. However, the information presented earlier in this chapter indicates that some sexually explicit mass media have incorporated, to a certain degree, rape portrayals and other sexually violent images. This suggests that such themes may be sexually arousing to some media consumers, many of whom are not likely to be actual rapists. There would therefore appear to be a conflict between the impressions created by studies of media content versus research using the rape index regarding whether nonrapists are sexually aroused by rape portrayals.

In explanation of these differing impressions, Malamuth and colleagues suggested that the type of sexual violence found in the mass media may differ in content from that used in the research with rapists and that only certain

types of rape depictions may be highly arousing to some nonrapists (Malamuth, Heim, & Feshbach, 1980). To assess this possibility empirically, we systematically manipulated the content of rape and consenting depictions presented to college students. These findings and those of subsequent experiments (see, e.g., Malamuth & Check, 1980, 1983) implicated the victim's reactions within rape scenes to be of critical importance: Rape depictions were found to stimulate relatively little sexual arousal when the victim was portrayed as continuously abhorring the assault; when the victim was perceived as becoming involuntarily aroused sexually, on the other hand, sexual arousal to rape was as high, and even tended to be nonsignificantly higher than arousal to consenting depictions (Malamuth & Check, 1983). These data appear to help reconcile the aforementioned conflicting conclusions because both content analytical studies (see, e.g., Smith, 1976b) and somewhat less systematic observations (see, e.g., Brownmiller, 1975) have noted that sexually violent pornography portrayals frequently depict the victim as becoming aroused sexually when assaulted. Of course, the victim's reactions would not be the only content dimension likely to affect the degree of sexual arousal elicited. An example of another dimension likely to have a significant impact is the degree to which extreme, vicious violence (with descriptions of "blood and gore") is included in the content (see also Quinsey & Chaplin, 1984; Quinsey, Chaplin, & Upfold, 1984).

3. *Individual Differences*

Although manipulations in the content of stimuli yielded information about the type of rape depictions that inhibit the sexual arousal of nonrapists, it is also important to consider the potential mediating role of individual differences among subjects. The classification of subjects into either a rapist or nonrapist grouping may obscure important information. Consideration of individual differences among the nonrapist group seems particularly necessary (although similar analyses examining individual differences among rapists also are needed) in light of the theorizing (see, e.g., Clark & Lewis, 1977; Russell, 1975, 1984) and research (see, e.g., Malamuth, 1981) that suggest that within the unincarcerated male population, there are men with varying degrees of inclinations to aggress against women.

Findings in this area are well illustrated by the data of Malamuth and Check (1983). In a preliminary session, males were administered questionnaires concerning their sexual attitudes and behaviors. One item inquired about the likelihood that the subject himself would rape if he could be assured of not being caught and punished (i.e., the likelihood of raping or LR item). On the basis of this item, 62 subjects were classified as low LR (a rating of 1 = "not at all likely" on the 5-point scale). Forty-two subjects were classified as high LR (a rating of 2 or higher). This distribution is similar to that of

earlier studies (Malamuth, 1981; Malamuth, Haber, & Feshbach, 1980; Malamuth & Check, 1980; Tieger, 1981).

Several days later, these subjects listened to one of eight audiotapes of an interaction involving sexual intercourse between a man and a woman. The content of these depictions was systematically manipulated along the dimensions of consent (woman's consent vs nonconsent), pain (woman's pain vs no pain), and outcome (woman's arousal vs disgust).

As is indicated in Fig. 3, the data highlighted the importance of the interaction between individual differences among subjects and variations in the depiction content. The pattern of the data on both self-report and tumescence measures indicated that when the woman was portrayed as experiencing disgust, both low and high LR subjects were less aroused sexually by the nonconsenting as compared with consenting depictions. However, when the woman was perceived as becoming aroused sexually, a very different pattern emerged: Low LR subjects were equally aroused to the consenting and the nonconsenting depictions, whereas high LR subjects showed *greater* arousal to the nonconsenting scenes.

These data suggest that the presence of sexual violence within the mass media may indeed reflect interest among some segments of consumers (see Murphy, Coleman, & Haynes, 1986, for a replication of some of these data with a nonstudent community sample). The findings show that a sizable minority of the population (e.g., high LR subjects) are more aroused by a certain type of rape depiction (i.e., that portraying victim arousal) than by consenting portrayals. It is important to examine the cultural and individual reasons why some men are highly aroused sexually to certain types of rape depictions.

B. The Etiology of Sexual Arousal to Aggression

The etiology of such arousal to aggression might be understood within the framework of theoretical approaches to the causes of rape. There are two general types of theories relevant to this issue. The first emphasizes cultural attitudes, roles, and beliefs that justify sexual coercion (see, e.g., Brownmiller, 1975; Burt, 1978, 1980; Clark & Lewis, 1977; Russell, 1975, 1984). According to this view, our culture's socialization often defined some degree of coercive sexuality as the normal standard, reflecting a "macho" dominant role for men and a submissive role for women. Rape is therefore seen as an extreme point of a continuum of forced sexuality rather than a discrete, deviant act committed by only a few mentally ill men. Sexual arousal in response to aggression, therefore, might be similarly seen as falling along a continuum whereby nonrapists evidence differing levels of similarity to rapists.

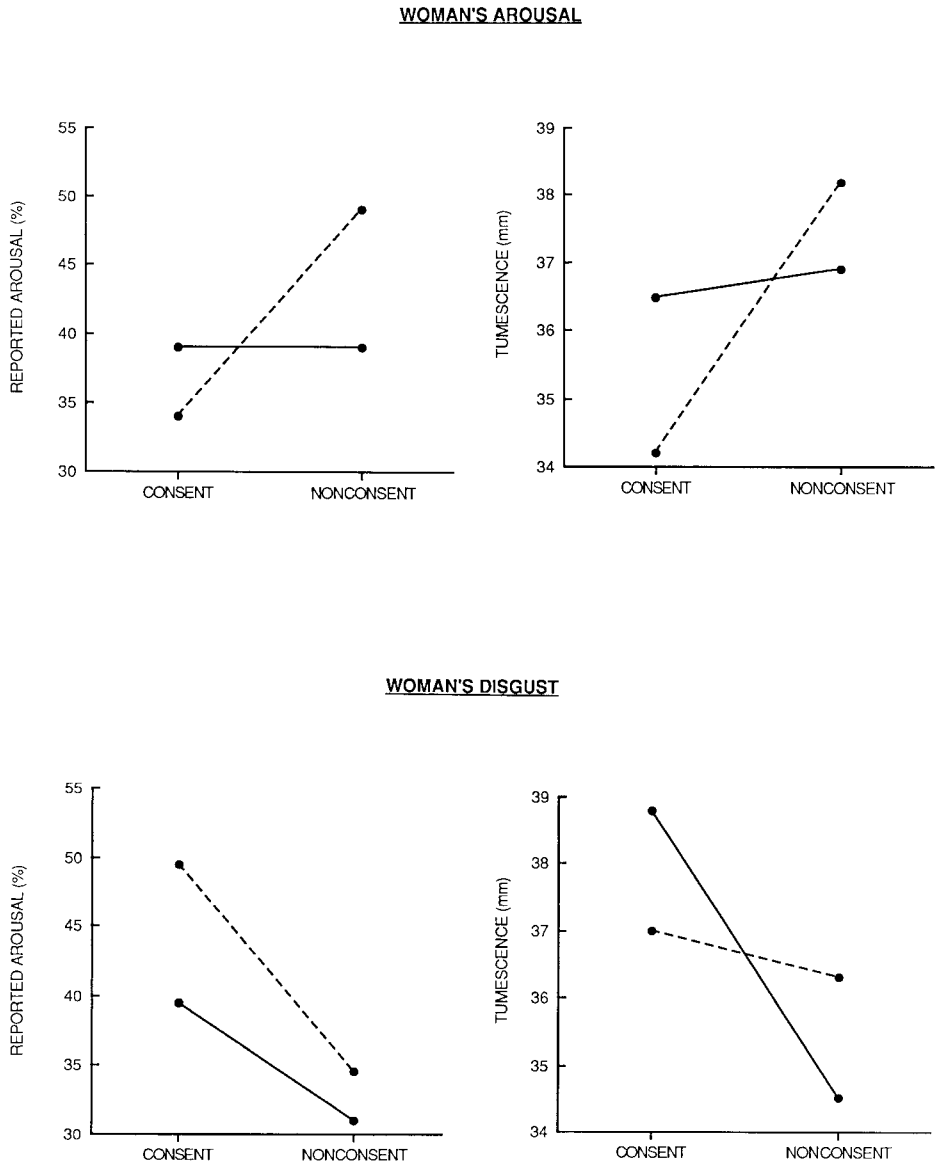

Fig. 3. Penile tumescence and self-reported sexual arousal as a function of depiction of content and subjects' likelihood of raping (LR) classification. Broken line, high LR; solid line, low LR. From Malamuth & Check (1983). Reprinted by permission.

On the basis of such cultural theories, sexual arousal from aggression would be expected to be associated with a general set of beliefs or ideology in which male dominance and female submissiveness are perceived as natural and justified, which adheres to a perception of male–female relationships as fundamentally adversarial and includes attitudes described as "rape supportive" (Burt, 1980). Furthermore, according to this approach, to the extent that arousal from aggression reflects a "macho" orientation, it would be associated with a general acceptance of aggression in nonsexual situations (see, e.g., Sanday, 1981). Lastly, on the basis of the cultural approach, one would expect that sexual arousal from aggression is not an isolated response but is related to other measures of inclinations toward violence against women.

According to the second approach, in contrast, rape is viewed primarily as being sexually motivated. There are several variants to such an approach. According to one, rape is a form of sexual pathology, as presented in some psychoanalytic analyses (see, e.g., Hammer, 1957). Another variant is the contention that rape is motivated by overwhelming sexual impulses (Cohen, Garofalo, Boucher, & Seghorn, 1971). Sociobiological approaches (Shields & Shields, 1983; Thornhill & Thornhill, 1983; Thornhill, Thornhill, & Dizinno, 1986) suggest an additional variant theorizing that men who are unsuccessful in obtaining sexual access to women by other strategies are more likely to use force. What these variants have in common is the prediction that differences in men's inclinations to rape, such as those that may be reflected in sexual arousal from aggression, would be related to differences in sexual factors, such as sexual deprivation, sexual inhibitions, and so on.

In an analysis of a representative sample of tribal societies, Sanday (1981) found evidence consistent with a cultural approach to the etiology of rape. In cultures with higher rates of rape, there was greater acceptance of a social ideology of male dominance over women and of intergroup and interpersonal aggression. In contrast to the predictions of a sexual approach, however, she did not find a relation between indices of sexual repression and cross-cultural differences in rape rates. In our research, similar predictor variables were used within the same culture.

To identify individual differences, Malamuth and colleagues asked subjects to indicate how sexually aroused they thought they would be by forcing a woman to do something against her will (Malamuth, Check, & Briere, 1986). We used the phrase *force* rather than terms such as *violence* or *aggression* because these might provide information only about the more extreme end of the continuum predicted by cultural theories of rape. We later examined whether reported arousal from force was indeed predictive of sexual arousal from rape and from nonsexual aggression. In addition, we analyzed whether differences in sexual arousal to force were associated with four general areas: (1) *ideological attitudes* concerning areas such as adversarial male–female

relations, rape, and male dominance; (2) *aggressive attitudes* about interpersonal and international aggression; (3) *sexual responses* such as attitudes, inhibitions, experiences, and knowledge; and (4) *self-ratings* regarding whether the subject himself might engage in sexually aggressive acts, and how attractive he found such acts, as well as his reactions to mutually consenting intercourse.

The results extended the earlier findings showing that aggression may be a sexual stimulant for some individuals from the general population. The data confirmed that men's reported sexual arousal from forcing a woman (assessed in a preliminary session) is predictive of their actual sexual arousal that was assessed in a later session by both self-reports and penile tumescence. More specifically, three subgroups were identified (see Fig. 4): For those who reported no arousal or moderate arousal from force (approximately 70% of the male subjects), the presence of aggression inhibited sexual arousal. In contrast, for those who reported a relatively high level of arousal from force (about 30% of the subjects), aggression was indeed found to enhance sexual arousal, particularly when assessed via penile tumescence.

In examining the correlates of sexual arousal from force, we found that those indicating higher levels of such arousal were more accepting of an ideology that justifies male aggression against and dominance over women, assessed on a variety of scales (see Table I). As further indicated in this table, arousal from force was also found to be associated with greater acceptance of aggression in nonsexual situations. In addition, we found that arousal from

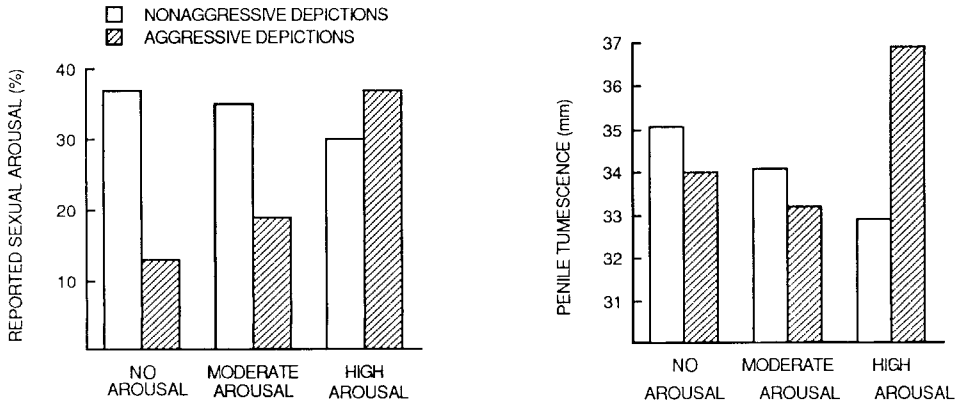

Fig. 4. Reported sexual arousal and penile tumescence as a function of relative arousal from force grouping (no, moderate, and high) and the depictions' aggressiveness (aggressive vs nonaggressive). From Malamuth, Check, & Briere (1986). Reprinted by permission.

TABLE I

Means and Statistical Significance of Ideological, Aggressive, and Sexual Scales and Self-Ratings for Three Levels of Reported Arousal from Force[a]

Scale	Arousal from force (means)			F^b	p	DFA[c]	Trend[d]
	No	Moderate	High				
Ideological attitudes							
Disbelief of rape claims	12.91_a	14.15_a	14.10_a	3.41	.05	**.37**	linear
Victim responsible for rape	24.15_a	25.58_a	29.37_b	8.65	.0002	**.64**	linear
Rape reports as manipulation	4.32_a	5.08_b	5.26_b	5.84	.003	**.54**	linear
Rape only happens to certain women	2.22	2.46	2.19	1.00	ns	−.01	—
Male dominance is justified	12.75_a	14.53_b	15.55_b	9.62	.0001	**.72**	linear
Adversarial sexual beliefs	8.84_a	$9.55_{a,b}$	10.28_b	3.74	.03	**.49**	linear
Women enjoy sexual violence	8.01_a	9.16_b	10.58_c	12.58	.0001	**.82**	linear
Acceptance of domestic violence	6.18_a	7.00_b	7.20_b	3.45	.03	**.42**	linear
Acceptance of vengeance	2.89	3.20	2.97	1.07	ns	.06	—
Sex for procreation	9.21	8.46	9.00	1.33	**ns**	−.08	—
Sexual conservatism for women	14.65	14.64	15.91	2.49	—	.28	—
Stronger male sex drives	6.29	6.22	6.61	0.78	—	.14	—
Sex and menstruation	4.68	4.46	4.59	0.55	ns	.07	—
Stereotyped roles for women in relationships	15.97_a	16.68_a	19.13_b	7.34	.001	**.57**	linear
Rules regarding traditional male and female behavior	11.73_a	12.86_a	13.27_a	3.05	.05	**.40**	linear

Aggressive attitudes							
Support for personal and institutional aggression	23.04_{a}	24.55_{b}	26.22_{b}	9.02	.0002	**.83**	linear
Opposition to hunting and use of guns by public	11.13	10.20	10.17	1.74	ns	.34	—
Physical punishment for children	3.71	4.03	3.91	1.19	ns	.22	—
Support for use of nuclear weapons	1.79_{a}	$2.27_{a,b}$	2.62_{b}	5.72	.004	**.66**	linear
Sexual responses							
Sexual permissiveness	0.00	−0.47	0.40	0.56	ns	—	
Acceptance of masturbation	0.11	0.02	−0.01	0.05	ns	—	
Sex inhibited by contraception problems	−0.34	0.10	0.30	2.54	.08	—	
Acceptance of explicit sexual materials	−0.04	−0.32	0.47	1.42	ns	—	
Sexual experience and knowledge	−0.14	0.08	0.13	0.33	ns	—	
Importance of sex	−0.04	−0.22	0.11	1.01	ns	—	
Sex inhibited by disapproval	−0.16	0.03	0.12	0.48	ns	—	
Sex inhibited by fear	−0.14	−0.01	0.19	1.49	ns	—	
Adequacy of sexual knowledge	0.08	0.01	−0.12	0.86	ns	—	
Self-ratings							
Idea of rape is attractive	1.05_{a}	$1.36_{b,c}$	1.52_{c}	12.72	.0001	.28	linear
Idea of forcing a woman is attractive	1.08_{a}	1.67_{b}	2.24_{c}	75.55	.0001	**.71**	linear
Likelihood of raping	1.06_{a}	1.51_{b}	2.07_{c}	30.58	.0001	**.45**	linear
Likelihood of forcing	1.14_{a}	2.13_{b}	3.19_{c}	115.14	.0001	**.87**	linear
Idea of intercourse is attractive	3.29	3.14	3.00	1.41	ns	−.10	—
Own arousal to sexual intercourse	75.25	77.17	72.68	0.043	ns	−.03	—

[a] Means not sharing a common subscript are different at $p < .05$ by Scheffé test. From Malamuth, Check, & Briere (1986).
[b] Degrees of freedom for the F tests ranged from 2300 to 2356. Differences were due to some subjects' not answering individual questions.
[c] Discriminant function analysis structure coefficients, considered meaningful (italicized) at $|c| \geq .35$.
[d] Trends significant at $p < .05$.

force related to attraction to sexually coercive acts and the belief that subjects themselves might actually engage in such acts in the future. In contrast, arousal from force did not relate to noncoercive sexual responses, including attitudes, inhibitions, or sexual experience and knowledge; it was also not related to subjects' self-ratings regarding attractions, intentions, and reactions to mutually consenting intercourse. However, it should be noted that the assessment of sexual responses was based on subjects' self-perceptions that may not adequately enable assessing variables such as unconscious sexual conflicts. [The reader is referred to Malamuth *et al.* (1986) for a more detailed description of the instruments and procedures used.]

These data are consistent with those of Briere and Malamuth (1983), who found that self-reported likelihood of sexual aggression was related to rape-supportive attitudes but not to variables reflecting sexual drive or sexual inhibitions. The findings are also consistent with Sanday's (1981) analysis of tribal societies in implicating ideological and aggressive variables but not sexual variables as linked to aggression against women (although she examined rape rates, whereas we focused on sexual arousal in response to coercion).

On the whole, the data are supportive of theoretical approaches, such as a feminist one (see, e.g., Brownmiller, 1975), that implicate cultural attitudes and roles as causes of aggression against women, but they are not supportive of theoretical approaches that implicate sexual causes. On the basis of the correlation between ideological beliefs and sexual arousal from force, we may speculate about one possible etiology of such arousal. In adolescence, when many youth experience their first sexual fantasies and activities, individuals who are more accepting of an adversarial ideology, especially in male–female relationships, may be more likely to experience sexual arousal in the context of aggressive and adversarial relations. For example, a man who believes that women must be coerced into sexual acts and/or who perceives social relations generally as adversarial, may experience sexual arousal and pleasure while engaging in an act of real or imagined aggression or dominance. Through the frequent pairing of sexual arousal with aggressive acts and feelings, the person may experience conditioning of arousal in response to sexual aggression and, by extension, to aggressive behavior.

C. Does Media Exposure Change Sexual Responsiveness?

Is there actual empirical evidence that exposure to the fusion of sexual and aggressive images in media materials produce conditioning of sexual arousal? I am not aware of any scientific evidence showing that exposure to violent pornography or similar materials produces sustained changes in people's sexual responsiveness to such stimuli. Only one study I know of directly addressed whether repeated exposure to sexually violent media changes people's arousal

by such stimuli (Ceniti & Malamuth, 1984). Because of ethical barriers against exposing minors to pornography, the research was conducted solely with adults even though they are probably not the optimal subjects. Because first experiences with pornography usually take place in adolescence (see earlier discussion), and because sexual arousal patterns are probably established prior to adulthood, media exposures that may have profound effects in childhood may not have comparable effects during adulthood.

Ceniti and Malamuth (1984) classified 69 adult males into force-oriented, non-force-oriented, and unclassifiable categories, based on their penile tumescence when presented with portrayals of rape and consensual sex during a preexposure session. Those classified as force oriented had shown relatively high levels of sexual arousal to rape depictions. Those classified as non-force-oriented had shown relatively little arousal to rape depictions, but they had become aroused to consensual sex portrayals. Subjects labeled as unclassifiable had shown little arousal to either type of depiction. Following this classification, subjects were randomly assigned to one of three exposure groups: sexually violent, sexually nonviolent, or control. Those assigned to the sexually violent condition were exposed to 10 sexually violent stimuli (including feature-length films, and written and pictorial depictions) over a period of 4 weeks. Subjects in the sexually nonviolent condition were exposed to 10 presentations of sexually nonviolent activities only. Subjects in the control condition were not exposed to any stimuli. Soon after their exposure, subjects returned to the laboratory and were presented with depictions similar in theme to the preexposure session. Penile tumescence and self-reported sexual arousal were measured again.

Force-oriented subjects, whether exposed to sexually violent or nonviolent media, became *less* aroused to the rape depictions in the postexposure session than those in the control condition. They also tended to be less aroused by the postexposure nonviolent depictions, although this effect was considerably less pronounced. Both non-force-oriented and unclassifiable subjects, however, showed no significant effects of exposure. The reduced arousal of force-oriented subjects appears similar to the temporary habituation effects frequently found in studies using nonviolent sexual material (see, e.g., Mann, Berkowitz, Sidman, Starr, & West, 1974; Zillmann & Bryant, 1984).

Although the research data have not shown evidence of increased sexual arousal to aggression as a result of repeated exposure to sexually aggressive media depictions, the research described in the next section provides some support for the indirect-effects model's two interrelated hypotheses that exposure to media depictions can help form thought patterns supportive of real-life sexual aggression, and that such patterns may in turn contribute to actual antisocial behavior, including aggression against women.

V. MEDIA EXPOSURE, THOUGHT PATTERNS, AND ANTISOCIAL BEHAVIOR

A. From Media Exposure to Thought Patterns

1. Survey Data

Several studies assessed the correlation between degree of men's exposure to sexually explicit media and their reactions to violence against women. Such correlational studies can only reveal associations between the amount of media people reported consuming and their cognitions. They cannot indicate whether these media were responsible for their thoughts. Unfortunately, these studies did not distinguish between sexually violent and sexually nonviolent media. Had they focused specifically on sexually violent media rather than sexually explicit media in general, it is likely that the links to thought patterns condoning aggression would have emerged as strongly, if not more strongly.

In most studies, higher levels of reported exposure to sexually explicit media correlated with reactions more supportive of violence against women. For example, in a sample of college men, Malamuth and Check (1985a) found that higher readership of sexually explicit magazines was correlated with more beliefs that women enjoyed forced sex. Similar associations were found by Koss and Dinero (1988) with a national sample of university students. Further, among a diverse sample of Canadian men, Check (1984) found that more exposure to sexually explicit media was correlated with higher acceptance of rape myths, of violence against women, and of general sexual callousness. Briere, Corne, Runtz, and Malamuth (1984) reported similar correlations in a sample of college males. However, Demare *et al.* (1988) did not find significant associations between attitudes supporting violence against women and amount of exposure either to nonviolent or to violent sexually explicit media. These investigators did find that the latter, but not the former, was significantly associated with men's reports that there was a likelihood they would commit sexual aggression if they could be assured that they would not be punished for such acts (for a description of this measure, see Malamuth, 1981, 1984).

On the other hand, Malamuth (1988c) did not find a statistically significant correlation between levels of exposure to sexually explicit media and attitudes concerning violence against women. However, additional analyses yielded interesting findings. That study asked subjects to indicate how much information about sexuality they obtained in their childhood from various sources, such as peers, parents, church, educational media, educational courses, sexually explicit media, and doctors. Sexually explicit media emerged as the second most important source of information, second only to peers. Subjects who reported obtaining more information from explicit media also

held attitudes more supportive of violence against women. Such a correlation was not found with the other sources of information about sexuality. Information from some, such as educational courses, actually correlated with lower levels of attitudes supportive of violence against women. In fact, sexually explicit media's link to antisocial attitudes tended to be stronger when compared to other sources of sexual information than when measured alone; in other words, such media's "predictive" power was unaffected or actually increased when other variables were controlled for.

Focusing only on quantity of exposure, therefore, may be an oversimplified approach. Sexually explicit media's degree of influence on a person may largely depend on how that exposure interacts with other influences. People raised with little education about sexuality, or in families where sex was treated as "taboo," may be more susceptible to the influences of explicit media than those reared with considerable education about sex (Malamuth, 1978; Malamuth & Billings, 1985). It makes sense that those with other sources of sex information can more accurately assess the myths about women and sexuality portrayed in some pornography. However, those without much sex education might be more apt to use explicit media as a primary source of information.

2. *Experimental Research*

A growing body of experimental research complements the survey data. The following studies have shown connections between sexually violent media and thought patterns supportive of sexual aggression, but they have not revealed similar relations with equally explicit, nonviolent stimuli that portrayed both sexes in equal power roles. Here, it is possible to consider a causal link because other factors have been controlled. Still, caution must be exercised in generalizing findings from controlled situations to naturally occurring settings.

Research has examined the impact of positive versus negative rape portrayals in two ways. One series of studies assessed how either victim arousal or abhorrence at the end of a rape depiction changed the way in which the assault was perceived when the rape itself remained identical in the two versions. When the rape victim became aroused, male subjects labeled the assault more as a sexual act. They also perceived greater justification for it, reported a greater likelihood that they and other men would commit such an act, and saw the victim as more responsible for what had occurred (Donnerstein, 1984; Rapaport, 1984). These effects have been particularly pronounced for more sexually aggressive men.

These experiments show that changing the outcome of a rape affects the way it is perceived. They do not show that these perceptions carry over to perceptions of rape in general. In another series of studies, the carryover effects

of perceptions of and attitudes toward rape were directly examined. These studies assessed whether rapes depicting victim arousal changed subjects' perceptions of other rapes, altered their beliefs about women's reactions to sexual assaults, and increased their acceptance of violence against women.

In two experiments, male subjects were either exposed to depictions of mutually consenting sex, rape in which the female victim eventually became aroused, or rape abhorred by the victim. Afterward, the subjects were shown a rape depiction and asked about their perceptions of the act and the victim. In one of these studies, those subjects exposed to the "positive" rape portrayal perceived the second rape as less negative than those first exposed to the other depiction (Malamuth & Check, 1980). It also found some indication that exposure to rape depicting victim arousal may have led men to perceive rape as a more normative act (Malamuth & Check, 1980). Subjects in the second experiment were asked how women in general would react to being victimized by sexual violence (Malamuth & Check, 1985a). Those exposed to a positive rape portrayal believed that a higher percentage of women would derive pleasure from being sexually assaulted. This effect of the portrayal was particularly apparent in men with higher inclinations to aggress against women.

A third experiment conducted outside the laboratory yielded similar results (Malamuth & Check, 1981). Male and female undergraduates were randomly assigned to one of two exposure conditions. Participants in the experimental condition were given free tickets to view feature-length films on two different evenings that included portrayals of women as victims of aggression in sexual and nonsexual scenes. These films suggested that the aggression was justified and/or had positive consequences. On the same evenings, subjects in the control condition were given tickets to other films that did not contain any sexual violence. The movies shown in both exposure conditions have been aired with some editing on national television. Subjects viewed these films with moviegoers who purchased tickets and were not part of the research. Classmates of the recruited subjects who did not see the films were also studied as an "untreated" control group. Several days after the films were viewed, a "Sexual Attitude Survey" was administered to the entire class. (Subjects were not aware of the relationship between this survey—purportedly administered by a polling agency—and the earlier movies some students had seen as part of an ostensibly unrelated study.)

Subject responses were assessed by scales developed by Burt (1980). They included Acceptance of Interpersonal Violence (AIV) against women (e.g., acceptance of sexual aggression and wife battering), Rape Myth Acceptance (RMA) (e.g., the belief that women secretly desire to be raped), and Adversarial Sexual Beliefs (ASB) (e.g., the notion that women are sly and manipulating when out to attract a man). These measures were embedded within many irrelevant items intended to disguise the purpose of the survey.

As is shown in Fig. 5, exposure to the films portraying positive effects significantly increased the scores of male but not female subjects on the AIV scale.[4] A similar pattern was observed on the RMA scale, although the effect only approached acceptable levels of statistical significance. The ASB scores were not at all affected. Taken together, the data demonstrated effects of sexually violent movies on men's acceptance of violence against women that were sustained for at least a few days. Moreover, the results were obtained in a nonlaboratory setting seemingly devoid of "demand characteristics" (i.e., researchers' subtly conveying their hypotheses to subjects). Demare (1985) replicated these results using very similar procedures. Unfortunately, however, there are no longitudinal data available that might enable the study of potential effects of sexually violent media on attitudes over relatively long periods of time.

An earlier experiment by Malamuth, Reisen, and Spinner (1979) found no changes in thought patterns following exposure to media sexual violence that did not depict victim arousal. In the experiments showing significant media effects, the stimuli were specifically selected because they clearly depicted violence against women as having positive consequences. These findings suggest that certain antisocial effects may be limited to media stimuli depicting positive consequences of sexual aggression.

Still, sexually violent films that do not portray positive consequences may nonetheless affect consumers in undesirable ways. For example, Linz (1985) studied the effects of repeated exposure to X- and R-rated feature-length films

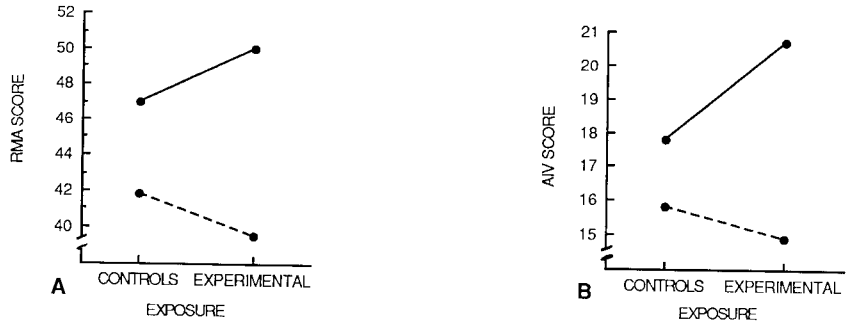

Fig. 5. Rape Myth Acceptance scores (A) and Acceptance of Interpersonal Violence scores (B) as a function of exposure and gender. Solid line, males; broken line, females. From Malamuth & Check (1981). Reprinted by permission.

[4]Some might argue that the use of college students in these and similar studies limits the ability to generalize from the findings. That implies that college students are more susceptible to media influences than noncollege students or younger people. In fact, less educated and younger groups might be more susceptible to such influences.

portraying sexual violence with primarily negative consequences to victims. He found that these movies had desensitizing effects on viewers. In one experiment, male college students who viewed five such movies had fewer negative emotional reactions to such films. There was even a tendency for the subjects' "desensitization" to carry over to their judgments of a rape victim in a simulated trial presented following their exposure to the films. In a second experiment, Linz again found that males exposed to several R-rated, sexually violent films became less sympathetic to a rape victim in a simulated trial and were less able to empathize with rape victims in general.

It is important to keep in perspective the nature of the effects that have been found for sexually violent media. These effects have not been the wide, sweeping changes that some seem to assume. It would be unparalleled in media research if they were. Given the type and duration of exposures involved and the fact that subjects are adults with relatively established thought patterns, the most that can be expected (if effects exist) is that they would be detected only with very careful and precise assessment that is specifically geared to the manipulations used. The effects found following brief laboratory exposure (Malamuth & Check, 1985a) were based on the concept of temporarily priming (Wyer & Srull, 1981) previously formed cognitions and attitudes.

The study that has shown changes that persisted over a period of days (Malamuth & Check, 1981) used two unedited feature-length films that suggested that violence against women was justified or led to positive consequences. As noted, significant effects were found on one of three scales and a marginal effect was found on another scale. Also, a relatively large sample was used (over 50 subjects in each condition), creating considerable power to detect any effects.

The foregoing is particularly relevant to a recent study ostensibly attempting to replicate the effects reported here. Fisher and Grenier (1987; reported in Fisher & Barack, 1988) edited 5 minutes of videotapes to create four types: neutral, erotic nonviolent, a rape in which the victim seemed to enjoy her plight, and a rape abhorrence condition. Male subjects were exposed to one of these versions. Then the subjects were given several multidimensional scales, including the Attitudes Toward Women Scale (ATWS; Spence & Helmreich, 1972), the Acceptance of Women as Managers Scale (AWMS; Peters, Terborg, & Taynor, 1974), and the AIV and RMA scales (Burt, 1980). The authors report that no significant effects were found as a function of the exposure manipulation.

In my opinion, this research hardly constitutes an "attempted replication."

Let us imagine that an effect had been found as a result of this brief exposure, as measured by the multidimensional ATWS or AWMS. How credible would it be that a 5-minute exposure (with the manipulation in the rape victim's reactions probably lasting less than a minute) produced funda-

mental changes in the way men view women or their beliefs about the role of women as business managers? It is difficult to conceive of any brief exposure that would have such effects. The only scale (as distinguished from key individual items) that has been found significantly to show effects in our previous research is the brief AIV scale (Malamuth & Check, 1981) that measures relatively few dimensions (Briere, Malamuth, & Check, 1985). This scale's content is closely linked to the content of the two feature-length films used by Malamuth and Check (1981). Although Fisher and Grenier (1988) also used the AIV scale, it appears to have been presented after the other two lengthy multidimensional scales inquiring about women's roles. Even if their brief exposure might have had some effect on the AIV scale, it is difficult to know what impact there may have been due to presenting it following the other scales.

There is no question that it is essential for other investigators to attempt to replicate the types of effects reported here. It is necessary, however, that they create comparable conditions that maximize the opportunity of detecting any effects that might exist. The research of Fisher and Grenier (1988) has, quite to the contrary, created a set of conditions that made it extremely unlikely that any significant effects would be found.

B. From Thought Patterns to Antisocial Behavior

1. Hypothesized Connections

Although psychologists have demonstrated that there is seldom a strong, direct link between thought patterns, such as attitudes, and behavior (Ajzen & Fishbein, 1977), several researchers have contended that beliefs and attitudes accepting or justifying sexual aggression are an important cause of aggression against women (see, e.g., Brownmiller, 1975; Russell, 1984). Burt has presented the most influential theoretical perspective in this area (1978, 1980, 1983). She contends that a cultural matrix that encourages rigid sex roles and supports male dominance over females generates attitudes supportive of rape. These attitudes act as "psychological releasers or neutralizers, allowing potential rapists to turn off social prohibitions against injuring or using others" (1978, p. 282). To assess such attitudes and beliefs, Burt (1980) developed the scales used in the experiments described earlier, including the AIV, RMA, and ASB.

It is ethically impossible to test in a completely satisfactory way the proposition that certain thought patterns contribute causally to the occurrence of rape and other forms of serious sexual aggression. To do so would require some experimental manipulation that would intentionally increase such thought patterns, particularly in those most likely to commit sexual aggression.

By observing whether those exposed to such a manipulation were more sexually aggressive than a comparable control group, the researcher would be able to establish with confidence whether a cause and effect relationship existed. Particularly useful for the focus of the present article would be a manipulation whereby exposure to sexually violent media was used to determine whether it resulted in changed thought patterns, and then to observe whether these led to aggression. It would be unconscionable to conduct such research if the experimenter believed that there was a reasonable likelihood that the manipulation might increase aggression outside the laboratory. In fact, the studies described earlier, which examined the effects of exposure to sexually aggressive media on thought patterns, employed countereducation debriefings soon after exposure. Typically, such debriefings are now required by ethics committees that grant permission to conduct this type of research. In some research, there was also exclusion of a substantial percentage of subjects judged most likely to be adversely affected by the exposure (see, e.g., Linz, 1985). Assessments of the effectiveness of these debriefings in reducing acceptance of violence against women and similar thought patterns has been indicated in several studies (Check & Malamuth, 1984; Donnerstein & Berkowitz, 1981; Linz, 1985; Malamuth & Check, 1984).

Because it is neither feasible nor conscionable to conduct the ideal design, research relevant to the connection between thought patterns and sexual aggression can only provide suggestive data. Before turning to such research, it is instructive to consider the conclusions of a wide range of studies in other areas that have examined the connection between thought patterns, such as attitudes, and behavior. In reviewing this general area, Zanna and Fazio (1982) characterized the historical development of research on attitudes and behavior as consisting of three generations of research. In the first, researchers were concerned with demonstrating whether attitudes affected behavior. Zanna and Fazio feel that this question has been settled and that research has moved to the second and third generations by asking "when" and "how" do such effects take place. Another investigator (Ajzen, 1982) has pointed out that research that failed to show connections between attitudes and behavior typically studied global rather than specific attitudes. "Global attitudes toward an object . . . are of little value if we are interested in predicting a particular action with respect to the object. To predict a single behavior we have to assess the person's attitude toward the behavior in question" (Ajzen, 1982, p. 13).

Although the general literature on the relationship between attitudes and behavior strongly implicates a causal connection, it is obviously important to qualify that by the nature of the behavior in question. Behavior that is condemned in the culture is probably less likely to be strongly connected with thought patterns than a behavior that is supported by the culture. This is because the expression of antisocial behavior is likely to be inhibited by

potential social sanctions. As Hearold (1986) suggests, this may partly explain the findings of her meta-analysis on the effects of television on social behavior, in which she found significant effects on both antisocial and prosocial behaviors, but with the latter averaging about twice as high as the former.

In connection with this distinction, I would like to stress an aspect of the model described earlier. Although it may indeed be the case that the expression of serious aggressive behavior will be inhibited in most individuals with thought patterns that facilitate such behavior, some other less socially prohibited behaviors may nonetheless be affected. I disagree, therefore, with the statements by reviewers such as Sears, Freedman, and Peplau (1985), who appear to accept the validity of the findings that thought patterns are affected, but who write that "The key, though, is whether or not violent pornography increases behavioral aggression" (p. 294). Although the possibility that in some individuals aggressive behavior may be affected by changed thought patterns is indeed an important aspect of the issue, it is not the "key." After examining research relevant to the aggressive behavior question, I discuss more fully the potential for effects on nonviolent behaviors.

Studies by my colleagues and I provide some support for the perspective that thought patterns relate to inclinations to aggress against women. They show a significant relationship between Burt's rape-condoning attitude and belief scales and men's self-reported likelihood of engaging in a wide range of violence against women as long as the men suffered no negative consequences (see, e.g., Briere & Malamuth, 1983; Malamuth, 1981, 1984). However, some commentators have contended that the linkage between thought patterns and actual aggressive behavior is assumed too facilely in such studies (see, e.g., Vance, 1985).[5] Fortunately, several studies have recently examined this connection and have found consistently that the attitude and belief scales can predict actual aggressive behavior. This, of course, does not mean that everyone with attitudes condoning aggression will act on them, nor do these studies establish a causal connection.

2. *Laboratory Aggression*

Malamuth (1983) tested whether men's thought patterns could predict their aggressive behavior in a laboratory setting. He also examined whether men's arousal to rape depictions, as compared to their arousal to consensual sex depictions, predicted laboratory aggression.

About a week after both thought patterns (on the AIV and RMA scales) and sexual arousal to rape were measured, subjects participated in what they

[5] It has been recently demonstrated that using information from both men's reported likelihood of forcing sex (if they could avoid negative consequences) and their actual sexually aggressive behavior is a more comprehensive approach than using either dimension alone (Malamuth, 1988a).

believed was a totally unrelated "extrasensory perception" experiment. In that session, they were angered by a female aide of the experimenter, who pretended to be another subject. Later in the session, subjects could vent their aggression against her by administering unpleasant noise as punishment for her incorrect responses. They were told that punishment was thought to impede rather than aid extrasensory transmission, but they were given the option of trying it out. Subjects were also asked how much they wanted to hurt their cosubject with the noise. Men with beliefs and attitudes more supportive of aggression and with higher levels of sexual arousal to rape were more aggressive against the woman and wanted to hurt her to a greater extent.

Malamuth and Check (1982) successfully replicated these results in a similar experiment that did not consider the subjects' arousal to rape but did assess thought patterns. Later, Malamuth (1988b) examined the extent to which several measures related to real-world violence against women (including thought patterns) predicted laboratory aggression against both female and male targets. As expected, significant relationships were found for female targets only. Taken together, these three experiments consistently showed that thought patterns supportive of aggression against women related to objectively observable behavior—laboratory aggression against women.

Although such laboratory assessments of aggression have the advantage of being an objective measurement not relying on subjects' self-reports, they have the disadvantage of using a setting that some researchers argue is artificial and lacking in ecological validity (see, e.g., Kaplan, 1983). The case for linking thought patterns with actual aggressive behavior is strengthened by studies that have measured naturally occurring behavior.

3. *Aggression in Naturalistic Settings*

These studies have used samples of men from the general population as well as convicted rapists. The importance of thought patterns such as attitudes toward violence is confirmed by the data showing that men's aggressiveness against women is linked with their own attitudes as well as those of their peers.

Ageton (1983) gauged the extent to which a variety of measures predicted levels of sexual aggression. Subjects, 11–17 years old, drawn from a representative national sample, were interviewed in several consecutive years in the late 1970s. The sexual aggression focus was added to a study primarily designed to focus on other issues (see, e.g., Elliott, Huizinga, & Ageton, 1985), creating some limitations in the extent to which longitudinal predictions concerning sexual aggression could be properly assessed. However, the study's design allowed the predictor measures (e.g., attitudes, involvement with peers, etc.) to be obtained before the occurrence of sexual aggression, which was assessed by self-reports.

Analyses were conducted by identifying "offenders" and comparing them to a matched control group on a variety of measures. The results showed that a variety of variables discriminated between the two groups, but in a discriminant analysis (conducted in a manner similar to stepwise regression), it was found that involvement with delinquent peers at a young age was the best single predictor of sexual aggression later in life. Personal attitudes toward sexual assault was another of the factors found to differentiate significantly between those who became sexually aggressive and those who did not. However, the contribution of the attitude factor was small after the role of involvement with delinquent peers was considered. These data were interpreted by Ageton to show that the same factors predicting general delinquency (i.e., peer influences) also predict sexual aggression.

Although Ageton's research has made an important contribution by virtue of being the first (and to date the only) longitudinal study of sexual aggression, at least a couple of limitations should be noted. First, Ageton did not specifically assess acceptance of sexual aggression or attitudes regarding violence against women. According to our research and that of others (Demare *et al.*, 1988), these attitudes are most likely to be associated with sexually aggressive behavior rather than the type of attitudes assigned by Ageton (i.e., sex-role stereotyping, beliefs in rape myths, and attitudes about aggression in general).

Second, the definition of sexual aggression used by Ageton to classify offenders versus nonoffenders was very encompassing. It included "all forced sexual behavior involving contact with the sexual parts of the body" including rape, incest, sodomy, forced fondling, and attempted sexual coercion where the force component was as mild as verbal pressure or as severe as a physical beating or injury from a weapon. Although we believe that it was appropriate to consider the range of behaviors Ageton studied within the general rubric of sexual aggression, it seems inappropriate to group together such diverse acts. Considerable research has indicated some important distinctions between differing gradations of sexual aggression (see, e.g., Koss, Leonard, Beezley, & Oros, 1985; Malamuth, 1988a). Indeed, the majority of the offenders in Ageton's sample indicated that the highest level of sexual aggression in which they had engaged consisted of pressuring someone to do more sexually than they wanted to do. The author refers to this as "date rape," a term that she uses to include behaviors that are clearly not legally defined as rape (because there may not have been any sexual intercourse and because in a high proportion of the cases, the pressure did not have the intended results).

Ageton's findings regarding the role of peers are certainly consistent with other research indicating that there are some general factors that affect a

variety of antisocial behaviors. However, it would seem inappropriate to conclude on the basis of that research that peer influences are the only important factors here. It may have been particularly difficult in that study to disentangle highly interrelated factors. For example, one's attitudes are likely to form part of a constellation of factors, including a person's choice of friends. Research by Hepburn (1977) suggests that having attitudes supportive of delinquent acts may contribute to the selection of delinquent associates, although a bidirectional process is obviously likely.

In a cross-sectional study, Alder (1985) used a subsample from a larger representative sample of men from a particular county in Oregon to assess variables potentially predictive of sexual aggression. These included family background, social class, educational attainment, war experience, peer behavior, and personal attitudes toward sexual aggression. The findings suggested that the most important factor relating to sexual aggression was having sexually aggressive friends. The other two factors found likely to contribute to sexual aggression were attitudes legitimizing such aggression and military service in the Vietnam war.

Several studies using samples of college men also reported significant links between attitudes and actual sexual aggressiveness (Briere *et al.*, 1984; Koss *et al.*, 1985; Mosher & Anderson, 1986; Rapaport & Burkhart, 1984). These studies measured self-reported sexual aggression on a continuum of behaviors ranging from psychological pressure on women to rape. Similar results were reported by Kanin (1985), who compared the attitudes of 71 university students who admitted committing rape with a control group of nonaggressive college males. He found that a much higher percentage of rapists justified rape in general than did control subjects. Moreover, he found that rapists were far more likely to believe their reputations would be enhanced among their peers by sexually aggressive behavior toward women, particularly those perceived as "pick-ups," "loose," "teasers," or "economic exploiters."

Using a sample of 155 men, Malamuth (1986) divided the variables that might contribute to sexual aggression into three classes: (1) Motivation for sexual aggression included sexual arousal to aggression (measured by penile tumescence), hostility toward women, and dominance as a motive for sex; (2) disinhibition to commit sexual aggression included attitudes supporting aggression and antisocial personality characteristics, measured by Eysenck's psychoticism scale; and (3) opportunity to aggress sexually was assessed by sexual experience. These predictors were then correlated with self-reports of sexual aggression. Data were available for 95 subjects on all of the six predictors, and for 155 on all of the measures except penile tumescence (60 subjects did not wish to participate in that type of assessment).

Three interrelated questions were addressed by Malamuth:

1. Would the predictor factors relate significantly to reported sexual aggression?

All the predictors except psychoticism were significantly related to naturalistic aggression, with psychoticism showing a marginally significant relationship.

2. Would the factors provide "redundant prediction" or would a combination of factors predict better than each alone?

The predictors did not, on the whole, provide "redundant information," in that a combination of them was superior to any individual ones for predicting levels of sexual aggressiveness. With all of the six predictors "force" entered into the equation, four made significant unique contributions (tumescence rape index, HTW, AIV, and sexual experience).

3. If a combination of factors were superior, would an additive or an interactive combination yield the best prediction?

Regression equations containing interactive effects accounted for a significantly greater percentage of the variance (45% of all 155 subjects and 75% for the 95 subjects) than equations containing additive effects only (30% and 45%, respectively) (see Table II).

To illustrate and further examine the data, the following analysis was performed: For each predictor, a relatively high score was defined as above the median of its distribution. Subjects were then divided according to the number of predictors for which they scored either *high* or *low*. This approach is analogous to classifying a characteristic as present or not by defining presence as a relatively high score. A person scoring above the median on all the variables would be considered as possessing all the characteristics. In keeping with the regression results, for the 155 subjects, the dominance, HTW, AIV, psychoticism, and the sexual experience predictors were used for this classification, whereas for the 95 subjects, these variables, as well as the tumescence rape index, were used.

Figure 6 shows the average level of sexual aggression according to this classification scheme, with the top graph showing the results for the entire sample of 155 subjects and the bottom graph for the 95 participants for whom data were also available on penile tumescence. In both instances, analyses of variance on these data yielded highly significant effects ($p < .0001$).

The data pattern appeared to show a synergistic process whereby the combined action of several variables yielded considerably higher levels of sexual aggression than would be expected by the additive combination of them.

Malamuth and Check (1985b) attempted a partial replication of these findings. They administered to 297 males the same measures used by Malamuth

TABLE II

Multiple Regression Analyses on Sexual Aggression with Tumescence Index (n = 95)[a]

Predictor	Data from analysis accounting for additive combinations of factors only		Data from analysis including factor interactions	
	Beta[b]	sr^{2c}	Beta[b]	sr^{2c}
TUMRAPE	.329	.100***	.206	.026**
DOM	.085	.006	.170	.017*
HTW	.209	.032*	.037	.001
AIV	.207	.035*	.168	.022*
PSYCH	.027	.001	.016	.000
SEXEXP	.026	.066**	.111	.010
AIV × SEXEXP	—	—	.166	.025**
TUMRAPE × DOM × AIV × PSYCH	—	—	.200	.029
TUMRAPE × DOM × HTW × AIV	—	—	.493	.151****
TUMRAPE × DOM × HTW × AIV × SEXEXP	—	—	.445	.158****
Multiple				
R		.619****		.865****
R^2		.383		.748

[a]TUMRAPE = Tumescence Arousal to Rape Index; DOM = dominance motive; HTW = Hostility Toward Women scale; AIV = Acceptance of Interpersonal Violence (against women) scale; PSYCH = psychoticism scale; SEXEXP = sexual experience measure. From Malamuth (1986).

[b]Standardized regression coefficient.

[c]Squared semipartial correlation coefficient indicating unique contribution of variable.

*$p < .05$. **$p < .005$. ***$p < .001$. ****$p < .0001$.

(1986), except for the sexual arousal indices and for psychoticism. The results replicated successfully Malamuth's (1986) conclusions: The predictors related significantly to sexual aggression, a combination of predictors was superior to individual ones, and an equation including interactions was preferable to an additive one only. Taken together, the findings of these two studies suggest that a person's thought patterns supporting violence against women may be one of several important contributors to sexually aggressive acts, but that each contributor alone is unlikely to produce serious sexual aggression.

The data on unincarcerated subjects point clearly to a relationship between sexual aggression and thought patterns supportive of violence against women, although they also highlight the importance of other contributing factors. One of these other factors, peer support, might also be influenced by the impact of media exposure on the audience's attitudes. The findings on unincarcerated men are reinforced by research on incarcerated rapists.

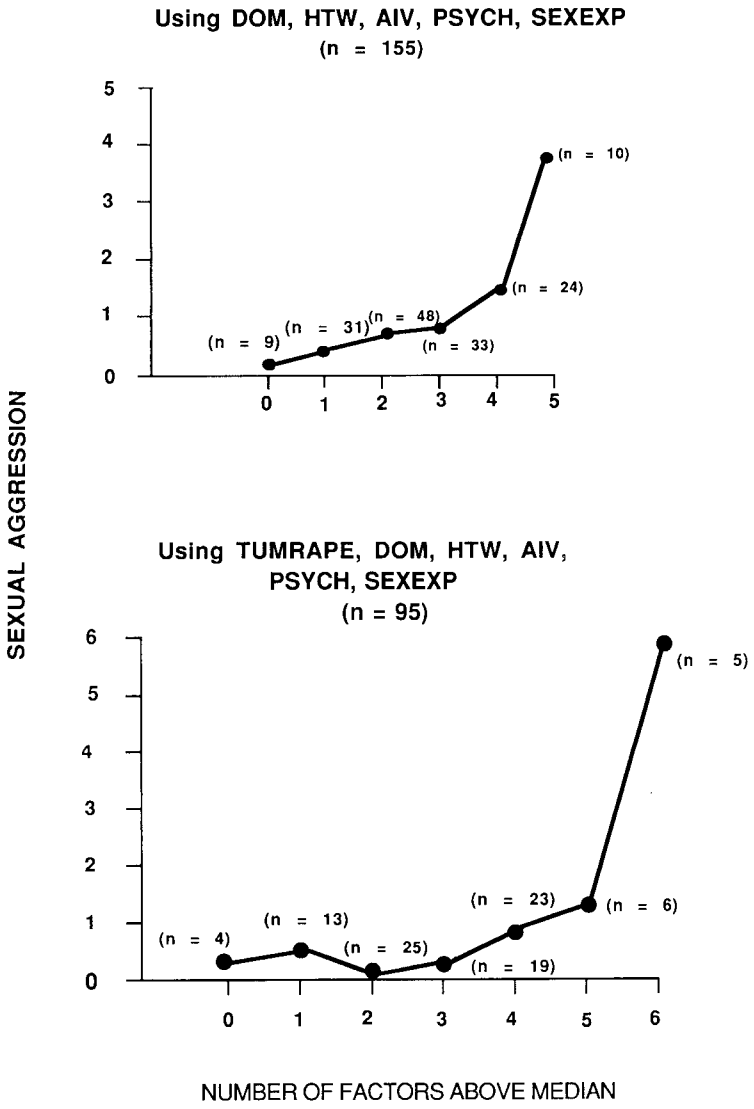

Fig. 6. Mean levels of sexual aggression as a function of factors on which subjects scored above median. *Note:* TUMRAPE = Tumescence Arousal to Rape Index; DOM = dominance motive; HTW = Hostility toward Women scale; AIV = Acceptance of Interpersonal Violence (against women) scale; PSYCH = psychoticism scale; SEXEXP = sexual experience measure. From Malamuth (1986). Reprinted by permission.

4. Convicted Rapists

Many clinical studies report that convicted rapists frequently hold callous attitudes about rape and believe in rape myths to a relatively high degree (see, e.g., Gager & Schurr, 1976). Data from more systematic studies of rapists' thought patterns tend to collaborate the clinical reports. For example, Wolfe and Baker (1980) studied the beliefs and attitudes of 86 convicted rapists and reported that virtually all believed that their actions did not constitute rape or were justified by the circumstances. Unfortunately, these investigators did not distinguish between general endorsement of rape myths and rationalizations of the rapists' personal crimes. Burt (1983) found that although rapists perceived the same degree of violence as the general public in vignettes describing aggression against women, they were less likely to perceive the violence as "bad" and more likely to justify it. Scully and Marolla (1984, 1985) found that rapists tended to believe in rape myths, particularly those justifying violence against women, more than control groups composed of other felons. Finally, Hall, Howard, and Boezio (1986) compared the rape attitudes of three groups: rapists, men convicted of other violent crimes, and a control group from the general population. Although the rapists' scores on degree of tolerance of rape appeared on the average to be the highest of the three groups, statistical analyses revealed that the two offender groups did not significantly differ from each other, but both were more tolerant than the general population group.

VI. OTHER RELEVANT DATA

A. Nonsexual Media Violence

Although research on nonsexual media violence has not devoted much attention to the formation and importance of thought patterns (Rule & Ferguson, 1986), some relevant findings exist. The research of Huesmann, Eron, Klein, Brice, and Fischer (1983) attempts the most direct assessment of cause and effect relations in this area. After involving elementary schoolchildren in a program designed to change their attitudes about television violence, the researchers studied whether changed attitudes translated into less aggressive behavior. The students were randomly divided into experimental and control groups. Over a 2-year span, the experimental group was educated about harmful aspects of television violence, while the control group received neutral treatments. Although the frequency of the children's free-time viewing of violence did not change, their attitudes about the violence did. In addition, their peers reported reduced aggression in the experimental group but no change in the behavior of the control group. These data suggest that changed

attitudes about TV violence led to a reduction in personal aggression by children, as reported by their peers.

Another relevant study published by Van der Voort (1986) assessed whether individual differences in children's perceptual, emotional, and attitudinal reactions to TV violence predicted peer-reported aggression. Significant relationships were found between the predictors (measured 1 year earlier) and actual aggression. The more children approved of the violence of "good guys" on TV, the higher their aggression, even after factors such as socioeconomic levels and school achievement were controlled. Van der Voort also found that parents who were less concerned that their children viewed violence had more aggressive children. Although these findings suggest a relationship between attitudes and behavior, they do not justify cause-and-effect conclusions. In addition, it should be noted that some studies have not found significant effects of viewing television violence on attitudes (see, e.g., Belson, 1978), although reviews of the literature in this area have concluded that, on the whole, research on media violence generally indicates significant relationships (see, e.g., Rule & Ferguson, 1986).

B. The Media and Social Attitudes

Christenson and Roberts (1983) reviewed the research focusing on the impact of television on the formation of children's social attitudes in areas other than violence, including political, gender-role, and racial attitudes. They concluded that overall, impressive effects have been clearly demonstrated. On the other hand, McGuire's (1986) review of media effects generally concludes that there are few, if any, areas where consistent media effects have been empirically demonstrated.

C. Longitudinal Research in Other Areas

A major shortcoming of the current literature on the relationship between thought patterns and antisocial behavior against women is the absence, with the single exception noted earlier (Ageton, 1983), of longitudinal research.[6] Fortunately, longitudinal studies in other areas provide data about the role of thought patterns that seem relevant to the present focus. For example, Jessor and Jessor (1977) conducted a large-scale longitudinal project in which several hundred high school and college youths, both males and females, were followed for 4 consecutive years. They assessed the role of various factors in affecting problem behaviors, including excessive use of alcohol, drug use,

[6] As discussed earlier, this is also a shortcoming of the research regarding the relation between sexually violent media and the formation of thought patterns.

and general deviance (e.g., aggression, stealing, and lying).[7] Among the predictor variables studied were general attitudes toward deviance, as well as the extent to which positive attitudes toward particular behaviors prevail over negative attitudes toward them. The findings were strongly suggestive of a causal effect of both types of attitudes, in interaction with other factors, on the timing of initial onset and on the actual occurrence of problem behavior. This study provides a model for research on sexual aggression that might be ethically acceptable and yet may yield considerable information regarding causal influences.

In another longitudinal study, Newcomb and Bentler (1988) assessed the relative importance of three types of factors—family context, emotional distress, and socially deviant attitudes—on adolescent drug use. They concluded that socially deviant attitudes were the most powerful influence on teenage substance use. Although the other two types of variables also exerted some influences, these were largely mediated by socially deviant attitudes.

D. Jury Studies

One aspect of the model presented in Fig. 1 is the idea that changes in thought patterns may be important even if these do not increase the likelihood that the person himself will commit aggressive acts. Jury decisions, for example, involve reactions to aggression and not aggressive behavior.

Feild and Bienen (1980) examined the impact of personal juror characteristics on reactions to a simulated rape case. The "jurors" in the simulated trials were groups of citizens, police officers, rape counselors, and rapists. Jurors' attitudes and beliefs about rape were found to be highly predictive of their decisions in the rape trial. For example, people who believed that rape victims often precipitate rape were more lenient toward the rapist. If such beliefs result in milder punishment of rapists, the deterrence against rape may be reduced by social attitudes.

E. Sexual Harassment and Wife Beating

Attitudes and beliefs about rape have also been shown to relate to other forms of inclinations to engage in antisocial behavior against women. For example, Pryor (1986) extended Malamuth's earlier work on men's self-

[7] Some of the acts included by Jessor and Jessor (1977) in the general heading of "problem behaviors" might be labeled very differently by other observers, particularly by today's standards. For example, included in this category were protest behaviors or activism, as well as premarital sexual intercourse. Fortunately, the investigators presented separate analyses on the various categories of "problem behaviors," enabling specific focus on those for which more consensus might be reached regarding the appropriate labeling. The conclusions discussed here apply to behaviors such as aggression when assessed separately.

reported likelihood of raping (Malamuth, 1981, 1984) to studying the likelihood of sexually harassing. He developed 10 hypothetical scenarios portraying a male who could sexually exploit a woman by virtue of his social role (e.g., professor–student, executive–secretary). Male undergraduates were asked to imagine themselves in each of these roles and to consider what they would do if they could avoid any negative consequences to themselves from sexually harassing the woman. Respondents indicated the likelihood that they would choose such behavior on a scale ranging from 1 (not at all likely) to 5 (very likely). Pryor found that men's reported likelihood of exploitative behavior was similar in the 10 situations, enabling the computation of an overall likelihood of sexual harassment (LSH) score for each subject.

Pryor obtained data supporting the validity of the LSH reports in an ostensibly unrelated laboratory task where subjects were asked to teach a woman how to putt in a golf game. It was found that those with higher LSH scores more frequently used the golf task to sexually touch the woman.

Of particular relevance to the present chapter were Pryor's findings that men's LSH ratings correlated strongly with their reported likelihood of raping as well as with measures of their beliefs and attitudes regarding violence against women (e.g., the AIV and RMA scales). These data are consistent with the view that diverse violence and nonviolent antisocial acts against women (e.g., rape and sexual harassment) relate to, and are possibly caused by, similar factors (see Fig. 1).

Briere (1987) also extended the self-reported likelihood approach to the area of wife battering. He found that a large percentage of a sample of university males indicated at least some likelihood of hitting a hypothetical wife in one or more of five situations. He also found that scales labeled Attitudes Toward Wife Abuse, Attitudes Toward Women, and Acceptance of Interpersonal Violence Against Women were correlated with self-reported likelihood of wife battering.

Importantly, there are also supportive data in research assessing actual behavior rather than reported likelihood. Kantor and Straus (1987) used interview data from a national representative sample of 5159 families to examine the relationship between three factors and the occurrence of wife abuse. The three factors were alcohol drinking, socioeconomic status, and attitudes approving of wife abuse. They found that the attitude factor had the strongest association with the occurrence of wife abuse, although all three factors had some association. Moreover, they found that a combination of the three factors (i.e., interaction effects) enabled the best "prediction" of wife abuse.

VII. SUMMARY AND CONCLUSIONS

The research presented has provided some support for the model hypothesizing indirect causal influences of media sexual violence on antisocial behavior

against women. Data were described that indicate (1) linkages between exposure to media portrayals of sexual violence and resultant changes in thought patterns supportive of sexual aggression, and (2) a relationship between such thought patterns and a variety of antisocial behaviors against women. The data suggest that such thought patterns may contribute to high levels of sexual aggression if combined with other factors such as peer support for aggression, sexual arousal to aggression, antisocial personality characteristics, and hostility toward women. Clearly, much additional research is needed to further develop and test this model.[8]

As with many behaviors, it is apparent that antisocial behavior against women is a function of many interacting causal factors. It is very difficult to gauge the relative influence, if any, of media exposure alone. However, by itself, it is likely to exert only a small influence, if any. But, this may be true, to some degree, for all potentially contributing causes. Only in interaction with other factors might they have substantial influences. Research concerned with the reduction of antisocial behavior against women, therefore, requires attention to all potentially contributing factors, including the mass media.

ACKNOWLEDGMENTS

I thank Albert Bandura, Timna Horowitz, and Susan Holley for valuable comments on earlier drafts of this article and Rebecca Lipa and Nancy Rhan for excellent typing.

REFERENCES

Abel, G. G., Barlow, D. J., Blanchard, E., & Guild, D. (1977). The components of rapists' sexual arousal. *Archives of General Psychiatry*, **34**, 895-903.

Abel, G. G., Becker, J., Murphy, W., & Flanagan, B. (1981). Identifying dangerous child molesters. In R. B. Stuart (Ed.), *Violent behavior: Social learning approaches to prediction, management and treatment* (pp. 116-137). New York: Brunner-Mazel.

Abel, G. G., Blanchard, E. B., & Becker, J. V. (1976). Psychological treatment of rapists. In M. Walker & S. Brodsky (Eds.), *Sexual assault: The victim and the rapist* (pp. 99-115). Lexington, MA: Lexington Books.

Abel, G. G., Blanchard, E. B., & Becker, J. V. (1978). An integrated treatment program for rapists. In R. Rada (Ed.), *Clinical aspects of the rapist* (pp. 161-214). New York: Grune & Stratton.

Abel, G. G., Blanchard, E. B., Becker, J. V., & Djenderedjian, A. (1978). Differentiating sexual aggressiveness with penile measures. *Criminal Justice and Behavior*, **5**, 315-332.

Abelson, H., Cohen, R., Heaton, E., & Suder, C. (1970). National survey of public attitudes toward and experience with erotic materials. In *Technical report of the Commission on Obscenity and Pornography* (Vol. 6, pp. 1-25). Washington, DC: U.S. Government Printing Office.

Ageton, S. S. (1983). On behaving in accordance with one's attitudes. In M. Zanna, E. T. Higgins, & C. P. Herman (Eds.), *Consistency in social behavior: The Ontario Symposium* (Vol. 2, pp. 3-16). Hillsdale, NJ: Erlbaum.

[8] Some suggestions for future research are made by Malamuth and Briere (1986).

Ajzen, I. (1982). On behaving in accordance with one's attitudes. In M. P. Zanna, E. T. Higgins, & C. P. Herman (Eds.), *Consistency in social behavior: The Ontario symposium* (Vol. 2, pp. 3-16). Hillside, NJ: Erlbaum.

Ajzen, I., & Fishbein, M. (1977). Attitude-behavior relations: A theoretical analysis and review of empirical research. *Psychological Bulletin*, **84**, 888-819.

Alder, C. (1985). An exploration of self-reported sexually aggressive behavior. *Crime and Delinquency*, **31**, 306-331.

Attorney General's Commission on Pornography. (1986). *Report of the Attorney General's Commission on Pornography: Final report*. Washington, DC: U.S. Government Printing Office.

Avery-Clark, C. A., & Laws, D. R. (1984). Differential erection response patterns of sexual child abusers to stimuli describing activities with children. *Behavior Therapy*, **15**, 71-83.

Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, NJ: Prentice-Hall.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.

Bandura, A. (1988). Social cognitive theory of moral thought and action. In W. M. Kurtines & J. L. Gewirtz (Eds.), *Moral behavior and development: Advances in theory, research and applications* (Vol. 1). Hillsdale, NJ: Erlbaum, in press.

Baron, R. A. (1977). *Human aggression*. New York: Plenum Press.

Baxter, R. L., De Riemer, C. D., Landini, A., Leslie, L., & Singletary, M. W. (1985). A content analysis of music videos. *Journal of Broadcasting and Electronic Media*, **29**, 333-340.

Belson, W. A. (1978). *Television violence and the adolescent boy*. London: Saxon House, Teakfield Ltd.

Berkowitz, L. (1984). Some effects of thoughts on anti- and prosocial influence of media events: A cognitive neoassociation approach. *Psychological Bulletin*, **95**, 410-427.

Briere, J. (1987). Predicting self-reported likelihood of battering: Attitudes and childhood experiences. *Journal of Research in Personality*, **21**, 61-69.

Briere, J., Corne, S., Runtz, M., & Malamuth, N. M. (1984, August). *The Rape Arousal Inventory: Predicting actual and potential sexual aggression in a university population*. Paper presented at the annual meeting of the American Psychological Association, Toronto.

Briere, J., & Malamuth, N. M. (1983). Self-reported likelihood of sexually aggressive behavior: Attitudinal versus sexual explanations. *Journal of Research in Personality*, **17**, 315-323.

Briere, J., Malamuth, N. M., & Check, J. V. P. (1985). Sexuality and rape—supportive beliefs. *International Journal of Women's Studies*, **8**, 414-423.

Brownmiller, S. (1975). *Against our will: Men, women and rape*. New York: Simon & Schuster.

Burt, M. R. (1978). Attitudes supportive of rape in American culture. *House Committee on Science and Technology, Subcommittee on Domestic and International Scientific Planning, Analysis and Cooperation, Research into violent behavior: Sexual assaults* (Hearing, 95th Congress, 2nd session, January 10-12, 1978) (pp. 277-322). Washington, DC: U.S. Government Printing Office.

Burt, M. R. (1980). Cultural myths and support for rape. *Journal of Personality and Social Psychology*, **38**, 217-230.

Burt, M. R. (1983). Justifying personal violence: A comparison of rapists and the general public. *Victimology: An International Journal*, **8**, 131-150.

Carroll, J. D. (1978). The effect of imagining an event on expectations for the event: An interpretation in terms of the availability heuristic. *Journal of Experimental Social Psychology*, **14**, 88-96.

Ceniti, J., & Malamuth, N. M. (1984). Effects of repeated exposure to sexually violent or nonviolent stimuli on sexual arousal to rape and nonrape depictions. *Behaviour Research and Therapy*, **22**, 535-548.

Check, J. V. P. (1984). *The effects of violent and nonviolent pornography* (Contract No. 95SV 19200-3-0899). Ottawa, Ontario: Canadian Department of Justice.

Check, J. V. P. (1985). *A survey of Canadians' attitudes regarding sexual content in media*. Report

to the Lamarsh Research Programme on Violence and Conflict Resolution and the Canadian Broadcasting Corporation, Toronto.

Check, J. V. P., & Malamuth, N. M. (1984). Can participation in pornography experiments have positive effects? *Journal of Sex Research*, **20**, 14–31.

Christenson, P. G., & Roberts, D. F. (1983). The role of television in the formation of children's social attitudes. In M. J. Howe (Ed.), *Learning from television: Psychological and educational research* (pp. 79–99). New York: Academic Press.

Clark, L., & Lewis, D. (1977). *Rape: The price of coercive sexuality.* Toronto: The Women's Press.

Cohen, M. L., Garofalo, R., Boucher, R. B., & Seghorn, T. (1971). The psychology of rapists. *Seminars in Psychiatry*, **3**, 307–327.

Commission on Obscenity and Pornography. (1970). *Report of the Commission on Obscenity and Pornography.* New York: Random House.

Demare, D. (1985). *The effects of erotic and sexually violent mass media on attitudes toward women and rape.* Unpublished manuscript. University of Winnipeg, Winnipeg, Manitoba.

Demare, D., Briere, J., & Lips, H. (1988). Violent pornography and self-reported likelihood of sexual aggression. *Journal of Research in Personality*, **22**, 140–153.

Dietz, P. E., & Evans, B. (1982). Pornographic imagery and prevalence of paraphilia. *American Journal of Psychiatry*, **139**, 1493–1495.

Donnerstein, E. (1984). Pornography: Its effects on violence against women. In N. M. Malamuth & E. Donnerstein (Eds.), *Pornography and sexual aggression* (pp. 53–81). New York: Academic Press.

Donnerstein, E., & Berkowitz, L. (1981). Victim reactions in aggressive-erotic films as a factor in violence against women. *Journal of Personality and Social Psychology*, **41**, 710–724.

Elliott, D. S., Huizinga, D., & Ageton, S. (1985). *Explaining delinquency and drug use.* Newbury Park, CA: Sage.

Feild, H., & Bienen, L. (1980). *Jurors and rape: A study in psychology and the law.* Lexington, MA: D. C. Heath.

Fisher, W. A., & Barak, A. (1988). Sex education as a corrective: Immunizing against possible effects of pornography. In D. Zillmann & J. Bryant (Eds.), *Pornography: Recent research, interpretations, and policy considerations.* Hillsdale, NJ: Erlbaum.

Fisher, W. A., & Grenier, G. (1988). *Failures to replicate effects of pornography on attitudes and behavior: The emperor has no clothes.* Manuscript in preparation, University of Western Ontario, London, Ontario.

Gager, N., & Schurr, C. (1976). *Sexual assault: Confronting rape in America.* New York: Grosset & Dunlap.

Gerbner, G. (1972). Violence in television drama: Trends and symbolic functions. In G. Comstock & E. A. Rubinstein (Eds.), *Television and social behavior: Vol. 1. Media content and control* (pp. 28–187). Washington, DC: U.S. Government Printing Office.

Goldstein, J. H. (1986). *Aggression and crimes of violence.* Oxford: Oxford University Press.

Greenberg, B. S., & D'Alessio, D. (1985). Quantity and quality of sex in the soaps. *Journal of Broadcasting and Electronic Media*, **29**, 309–321.

Hall, E. R., Howard, J. A., & Boezio, S. L. (1986). Tolerance of rape: A sexist or antisocial attitude? *Psychology of Women Quarterly*, **10**, 101–118.

Hammer, E. F. (1957). A psychoanalytic hypothesis concerning sex offenders. *Journal of Clinical and Experimental Psychology*, **18**, 177–184.

Hearold, S. (1986). A synthesis of 1043 effects of television on social behavior. In G. Comstock (Ed.), *Public communication and behavior* (Vol. 1, pp. 65–133). New York: Academic Press.

Hepburn, J. B. (1977). Testing alternative models of delinquency causation. *Journal of Criminal Law and Criminology*, **67**, 450–460.

Huesmann, L. R., Eron, L. D., Klein, R., Brice, P., & Fischer, P. (1983). Mitigating the imitation of aggressive behaviors by changing children's attitudes about media violence. *Journal of Personality and Social Psychology*, **44**, 899–910.

Jessor, R., & Jessor, S. L. (1977). *Problem behavior and psychosocial development: A longitudinal study of youth*. New York: Academic Press.

Kanin, E. J. (1985). Date rapists: Differential sexual socialization and relative deprivation. *Archives of Sexual Behavior*, **14**, 219–231.

Kantor, G. K., & Straus, M. A. (1987). The "drunken bum" theory of wife beating. *Social Problems*, **34**, 213–231.

Kaplan, R. (1983). The measurement of human aggression. In R. Kaplan, V. Koencni, & R. Novaco (Eds.), *Aggression in children and youth*. Rijn, Netherlands: Sijthoff & Noordhoff.

Koss, M. P., & Dinero, T. E. (1988). Predictors of sexual aggression among a national sample of male college students. In R. A. Pentky & V. L. Quinsey (Eds.), *Sexual aggression: Current perspectives. Annals of the New York Academy of Sciences* (pp. 133–147). New York: New York Academy of Sciences, in press.

Koss, M. P., Leonard, K. E., Beezley, D. A., & Oros, C. J. (1985). Nonstranger sexual aggression: A discriminant analysis of psychological characteristics of nondetected offenders. *Sex Roles*, **12**, 981–992.

Linz, D. (1985). *Sexual violence in the media: Effects on male viewers and implications for society*. Unpublished doctoral dissertation, University of Wisconsin, Madison.

Linz, D., Donnerstein, E., & Penrod, S. (1987). The findings and recommendations of the Attorney General's Commission on Pornography: Do the psychological "facts" fit the political fury? *American Psychologist*, **10**, 946–953.

Lowry, D. T., Love, G., & Kirby, M. (1981). Sex on the soap operas: Patterns of intimacy. *Journal of Communication*, **31**, 90–96.

MacKinnon, C. A. (1987). *Feminism unmodified: Discourses on life and law*. Cambridge, MA: Harvard University Press.

Malamuth, N. M. (1978, September). *Erotica, aggression and perceived appropriateness*. Paper presented at the 86th annual convention of the American Psychological Association, Toronto.

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 women. *Journal of Personality and Social Psychology*, **45**, 432–442.

Malamuth, N. M. (1984). Aggression against women: Cultural and individual causes. In N. M. Malamuth & E. Donnerstein (Eds.), *Pornography and sexual aggression* (pp. 19–52). New York: Academic Press.

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. A. Prentky & V. L. Quinsey (Eds.), *Sexual aggression: Current perspectives. Annals of the New York Academy of Sciences* (pp. 123–132). New York: New York Academy of Sciences.

Malamuth, N. M. (1988b). Predicting laboratory aggression against female vs. male targets: Implications for research on sexual aggression. *Journal of Research in Personality*, **22**, 474–495.

Malamuth, N. M. (1988c). *Sources of information about sexuality and their correlates: With particular focus on pornography*. Unpublished manuscript, University of California, Los Angeles.

Malamuth, N. M., & Billings, V. (1985). The functions and effects of pornography: Sexual communication versus the feminist models in light of research findings. In J. Bryant & D. Zillmann (Eds.), *Perspectives on media effects*. Hillsdale, NJ: Erlbaum.

Malamuth, N. M., & Briere, J. (1986). Sexual violence in the media: Indirect effects on aggression against women. *Journal of Social Issues*, **42**, 75–92.

Malamuth, N. M., & Ceniti, J. (1986). Repeated exposure to violent and nonviolent pornography: Likelihood of raping ratings and laboratory aggression against women. *Aggressive Behavior*, **12**, 129–137.

Malamuth, N. M., & Check, J. V. P. (1980). Penile tumescence and perceptual responses to rape as a function of victim's perceived reactions. *Journal of Applied Social Psychology*, **10**, 528–547.

Malamuth, N. M., & Check, J. V. P. (1981). The effects of mass media exposure on acceptance of violence against women: A field experiment. *Journal of Research in Personality*, **15**, 436–446.

Malamuth, N. M., & Check, J. V. P. (1982, June). *Factors related to aggression against women.* Paper presented at the annual meeting of the Canadian Psychological Association, Toronto.

Malamuth, N. M., & Check, J. V. P. (1983). Sexual arousal to rape depictions: Individual differences. *Journal of Abnormal Psychology*, **92**, 35–67.

Malamuth, N. M., & Check, J. V. P. (1984). Debriefing effectiveness following rape depictions. *Journal of Sex Research*, **20**, 1–13.

Malamuth, N. M., & Check, J. V. P. (1985a). The effects of aggressive pornography on beliefs in rape myths: Individual differences. *Journal of Research in Personality*, **19**, 299–320.

Malamuth, N. M., & Check, J. V. P. (1985b). *Predicting naturalistic sexual aggression: A replication.* Unpublished manuscript, University of California, Los Angeles.

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., Feshbach, S., & Jaffe, Y. (1977). Sexual arousal and aggression: Recent experiments and theoretical issues. *Journal of Social Issues*, **33**, 110–133.

Malamuth, N. M., Haber, S., & Feshbach, S. (1980). Testing hypotheses regarding rape: Exposure to sexual violence, sex differences, and the "normality" of rapists. *Journal of Research in Personality*, **14**, 121–137.

Malamuth, N. M., Heim, M., & Feshbach, S. (1980). Sexual responsiveness of college students to rape depictions: Inhibitory and disinhibitory effects. *Journal of Personality and Social Psychology*, **38**, 399–408.

Malamuth, N. M., Reisin, E., & Spinner, B. (1979, August). *Exposure to pornography and reactions to rape.* Paper presented at the 86th annual convention of the American Psychological Association, New York.

Malamuth, N. M., & Spinner, B. (1980). A longitudinal content analysis of sexual violence in the best-selling erotic magazines. *Journal of Sex Research*, **16**(3), 226–237.

Mann, J., Berkowitz, L., Sidman, J., Starr, S., & West, S. (1974). Satiation of the transient stimulating effect of erotic films. *Journal of Personality and Social Psychology*, **30**, 729–735.

McGuire, W. J. (1986). The myth of massive media impact: Savagings and salvagings. In G. Comstock (Ed.), *Public communication and behavior* (Vol. 1, pp. 173–257). New York: Academic Press.

Mosher, D. L., & Anderson, R. D. (1986). Macho personality, sexual aggression, and reactions to guided imagery of realistic rape. *Journal of Research in Personality*, **20**, 77–94.

Murphy, W. D., Coleman, E. M., & Haynes, M. R. (1986). Factors related to coercive sexual behavior in a nonclinical sample of males. *Violence and Victims*, **4**, 255–278.

Newcomb, M. D., & Bentler, P. M. (1988). The impact of family context, deviant attitudes, and emotional distress on adolescent drug use: Longitudinal latent-variable analyses of mothers and their children. *Journal of Research in Personality*, **22**, 154–176.

Olivia, N. v. National Broadcasting Co., Inc. (1978). *California Reporter*, **141**, 511–515.

Palys, P. S. (1986). Testing the common wisdom: The social content of video pornography. *Canadian Psychology*, **27**, 22–35.

Peters, L. H., Terborg, J. R., & Taynor, J. (1974). Women As Managers Scale (WAMS): A measure of attitudes toward women in management positions. *JSAS Catalogue of Selected Documents in Psychology*, **4**, 27.

Pryor, J. B. (1986). Sexual harassment proclivities in men. *Sex Roles*, **17**, 269–289.

Quinsey, V. L., & Chaplin, T. C. (1984). Stimulus control of rapists' and non-sex offenders' sexual arousal. *Behavioral Assessment*, **6**, 169–176.

Quinsey, V. L., Chaplin, T. C., & Carrigan, W. F. (1980). Biofeedback and signaled punishment in the modification of inappropriate sexual age preferences. *Behavioral Therapy*, **11**, 567–576.

Quinsey, V. L., Chaplin, T. C., & Upfold, D. (1984). Sexual arousal to nonsexual violence and sadomasochistic themes among rapists and non-sex offenders. *Journal of Consulting and Clinical Psychology*, **52**, 651–657.

Rapaport, K. (1984). *Sexually aggressive males: Characterological features and sexual responsiveness to rape depictions*. Unpublished doctoral dissertation, Auburn University, Auburn, AL.

Rapaport, K., & Burkhart, B. R. (1984). Personality and attitudinal characteristics of sexually coercive college males. *Journal of Abnormal Psychology*, **93**, 216–221.

Roth, M. (1985). Introduction: The social-psychological phenomenon of violence. In G. Barlow & A. Hill (Eds.), *Video violence and children*. London: Hodder & Stoughton.

Rule, B., & Ferguson, T. (1986). The effects of media violence on attitudes, emotions and cognitions. *Journal of Social Issues*, **42**, 29–50.

Russell, D. E. H. (1975). *The politics of rape*. New York: Stein & Day.

Russell, D. E. H. (1984). *Sexual exploitation: Rape, child abuse and workplace harassment*. Newbury Park, CA: Sage.

Sanday, P. R. (1981). The socio-cultural context of rape. *Journal of Social Issues*, **37**, 1–27.

Scully, D., & Marolla, J. (1984). Convicted rapists' vocabulary of motive: Excuses and justifications. *Social Problems*, **31**, 530–544.

Scully, D., & Marolla, J. (1985). Riding the bull at Gilley's: Convicted rapists describe the rewards of rape. *Social Problems*, **32**, 251–263.

Sears, D. O., Freedman, J. L., & Peplau, L. A. (1985). *Social psychology* (5th ed.). Englewood Cliffs, NJ: Prentice-Hall.

Shields, W. M., & Shields, L. M. (1983). Forcible rape: An evolutionary perspective. *Ethnology and Sociobiology*, **4**, 115–136.

Slade, J. W. (1984). Violence in the hard-core pornographic film: A historical survey. *Journal of Communication*, **34**, 148–163.

Smith, D. G. (1976a, August). *Sexual aggression in American pornography: The stereotype of rape*. Paper presented at the annual meeting of the American Sociological Association, New York.

Smith, D. G. (1976b). The social content of pornography. *Journal of Communication*, **26**, 16–33.

Spence, J. F., & Helmreich, R. (1972). The Attitudes Toward Women scale: An objective instrument to measure attitudes toward the rights and roles of women in contemporary society. *JSAS Catalog of Selected Documents in Psychology*, **2**, 66.

Thornhill, R., & Thornhill, N. W. (1983). Human rape: An evolutionary analysis. *Ethology and Sociobiology*, **4**, 137–173.

Thornhill, R., Thornhill, N. W., & Dizinno, G. (1986). The biology of rape. In S. Tomaselli & R. Porter (Eds.), *Rape* (pp. 102–121). New York: Basil Blackwell.

Tieger, T. (1981). Self-rated likelihood of raping and the social perception of rape. *Journal of Research in Personality*, **15**, 147–158.

Vance, C. S. (1985, April). What does the research prove? *Ms. Magazine*, **XIII**(10), 40.

Van der Voort, T. H. A. (1986). *Television violence: A child's-eye view*. Amsterdam: Elsevier.

Winick, C. (1985). A content analysis of sexually explicit magazines sold in adult bookstores. *Journal of Sex Research*, **21**, 206–210.

Wolfe, J., & Baker, V. (1980). Characteristics of imprisoned rapists and circumstances of the rape. In C. G. Warner (Ed.), *Rape and sexual assault*. Germantown, MD: Aspen Systems.

Wyer, R. S., & Srull, T. K. (1981). Category accessibility: Some theoretical and empirical issues concerning the processing of social stimulus information. In E. T. Higgens, C. P. Herman, & M. P. Zanna (Eds.), *Social cognition: The Ontario Symposium* (Vol. 1, pp. 161–197). Hillsdale, NJ: Erlbaum.

Yang, N. (1987). *Sexual, violent, sexually violent, and prosocial behaviors in R-, X-, and XXX-rated films and videos*. Unpublished doctoral dissertation, S. I. Newhouse School of Public Communications, Syracuse University, Syracuse, NY.

Zanna, M. P., & Fazio, R. H. (1982). The attitude-behavior relation: Moving toward a third generation of research. In M. P. Zanna, E. T. Higgins, & C. P. Herman (Eds.), *Consistency in social behavior* (pp. 283–302). Hillsdale, NJ: Erlbaum.

Zillmann, D., & Bryant, J. (1984). Effects of massive exposure to pornography. In N. M. Malamuth & E. Donnerstein (Eds.), *Pornography and sexual aggression* (pp. 115–138). New York: Academic Press.