

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/279972212>

The Effects of Aggressive–Pornographic Mass Media Stimuli

Chapter in *Advances in Experimental Social Psychology* · December 1982

DOI: 10.1016/S0065-2601(08)60296-8

CITATIONS

55

READS

320

2 authors, including:



[Neil M Malamuth](#)

University of California, Los Angeles

125 PUBLICATIONS 11,213 CITATIONS

[SEE PROFILE](#)

Some of the authors of this publication are also working on these related projects:



Sexual Aggression [View project](#)

THE EFFECTS OF AGGRESSIVE-PORNOGRAPHIC MASS MEDIA STIMULI¹

Neil M. Malamuth*

PSYCHOLOGY DEPARTMENT
UNIVERSITY OF MANITOBA
MANITOBA, CANADA

Ed Donnerstein

DEPARTMENT OF COMMUNICATION ARTS
UNIVERSITY OF WISCONSIN—MADISON
MADISON, WISCONSIN

I. Introduction	104
A. Purpose	104
B. Aggressive versus Nonaggressive Pornography	104
C. The Frequency of Aggressive Pornography	105
D. Bases for Concern	106
II. Aggressive Pornography and Sexual Arousal	107
A. Initial Findings	107
B. Victim's Responses	108
C. Individual Differences	109
D. Context of Assessment	111
E. Conclusions	111
III. The Effects of Aggressive Pornography on Responses Other than Aggression	112
A. Changes in Sexual Responsiveness	112
B. Fantasies	112
C. Perceptions and Attitudes	113
IV. The Effects of Aggressive Pornography on Aggression	115
A. Research Findings	115
B. Summary of Effects on Aggression	121

*Present address: Department of Communication, 232 Royce Hall, University of California, Los Angeles, Los Angeles, California 90024.

¹Research by the present authors and the writing of this chapter were facilitated in part by grants from the Social Sciences and Humanities Research Council of Canada to Malamuth and NIMH to Donnerstein.

C. Theoretical Analyses	122
D. The Construct Validity of Assessing Aggression	126
V. Ethical Concerns	129
VI. Conclusions and Future Research	129
A. Stimuli Characteristics	130
B. Subject Characteristics	131
C. Setting Characteristics	131
References	132

I. Introduction

A. PURPOSE

Over the past 20 years there has been a great deal of debate concerning the effects of sexually explicit materials. In 1967 the U.S. Congress decided traffic in pornography was a "matter of national concern" and consequently established the Commission on Obscenity and Pornography to conduct a thorough investigation of this issue. However, on reviewing the available research, the Commission concluded that there was no evidence that pornography had antisocial effects (see *Commission on Obscenity and Pornography*, 1970). For many social scientists and members of the general community, the findings of the Commission largely settled the issue. It became widely accepted that pornography, in general, does not have any demonstrable adverse effect.

Nevertheless, a number of investigators and scientific and political groups have criticized the Commission's conclusions (e.g., Berkowitz, 1971; Liebert & Schwartzberg, 1977; Bart & Jozsa, 1980; Diamond, 1980). Several women's groups and various feminist writers have been particularly outspoken (e.g., Lederer, 1980). The purpose of this chapter is not to present a comprehensive discussion of the merits or shortcomings of the Commission's findings, but to address one aspect of the issue that was not adequately addressed in the Commission's research: the effects of stimuli that combine sexuality and aggression.

B. AGGRESSIVE VERSUS NONAGGRESSIVE PORNOGRAPHY

The distinction between aggressive and nonaggressive pornography is often difficult to establish both operationally and conceptually. For example, Gloria Steinem (1980), in differentiating between what she considers acceptable erotica from objectionable pornography, writes:

Look at any photo or film of people making love; really making love. The images may be diverse, but there is usually a sensuality and touch and warmth, an acceptance of bodies

and nerve endings. There is always a spontaneous sense of people who are there because they want to be, out of shared pleasure.

Now look at any depiction of sex in which there is clear force, or an unequal power that spells coercion. It may be very blatant, with weapons of torture or bondage, wounds and bruises, some clear humiliation, or an adult's sexual power being used over a child. It may be much more subtle: a physical attitude of conqueror and victim, the use of race or class difference to imply the same thing, perhaps a very unequal nudity, with one person exposed and vulnerable while the other is clothed. In either case, there is no sense of equal choice or equal power. (p. 37)

In the series of studies reported below, *aggressive pornography* refers to portrayals of sex that would be considered "blatantly" coercive by Steinem. By and large, these are depictions in which physical force is used or threatened to coerce a woman to engage in sexual acts (e.g., rape). The conclusions and implications of the research findings concerning aggressive pornography therefore apply to such materials only, although the effects of materials that more subtly portray coercion have not been adequately researched as yet. The term *pornography* will be used throughout this chapter to refer to sexually explicit stimuli without any pejorative meaning necessarily intended.

C. THE FREQUENCY OF AGGRESSIVE PORNOGRAPHY

When the Commission conducted its research studies, aggressive-pornographic materials were relatively infrequent (*Commission on Obscenity and Pornography*, 1970). This may partially explain why the Commission's studies almost without exception did not include any stimuli that involved rape or other forms of coercive sexuality. The only Commission studies that paid more than passing attention to such materials were retrospective surveys comparing the reports of sexual offenders, sexual deviants, and comparison groups from the general population regarding their previous exposure to pornography. These studies unfortunately yielded highly conflicting conclusions (Goldstein, Kant, Judd, Rice, & Green, 1971; Davis & Braucht, 1971).

Although aggressive pornography was relatively rare in earlier years, a number of recent articles in the general media (e.g., *Time*, 1976; *Village Voice*, 1977) have observed that aggression has become increasingly prevalent in sexually explicit books, magazines, and films during the 1970s. More systematic content analyses of both "hard-core" materials (Smith, 1976a,b) and "soft-core" stimuli such as *Playboy* and *Penthouse* magazines (Malamuth & Spinner, 1980) generally corroborate these observations. Smith (1976a,b), for example, analyzed the content of hard-core paperback books published between 1968 and 1974. He found that in about one-third of the episodes, force is used, almost always by a male, to coerce a female to engage in an unwanted act of sex.

Furthermore, he found that the average number of acts depicting rape doubled from 1968 to 1974.

D. BASES FOR CONCERN

There would appear to be ample reasons for concern about the effects of aggressively toned pornographic stimuli. To begin with, the antisocial effects shown to result from nonsexual depictions of aggression in the mass media (e.g., Eron, 1980; Parke, Berkowitz, Leyens, West, & Sebastien, 1977; Thomas, Horton, Lippincott, & Drabman, 1977) would seem likely to occur also when the aggression is presented within a sexual context. However, there are theoretical reasons for being particularly concerned about the fusion of sexuality and aggression in the media (Malamuth & Spinner, 1980). First, the coupling of sex and aggression in these portrayals may result in conditioning processes whereby aggressive acts become associated with sexual arousal, a powerful unconditioned stimulus and reinforcer. In fact, current treatments for sexual offenders (e.g., Abel, Blanchard, & Becker, 1978; Brownell, Hayes, & Barlow, 1977; Hayes, Brownell, & Barlow, 1978) are based on the premise that conditioning may occur by associating fantasies of socially sanctioned arousal and behavior. It is also possible that the juxtaposition of media portrayals of aggression and sexuality could lead to conditioning and thereby increase sexual arousal to aggressive stimuli, possibly leading to concomitant changes in fantasies and behavior. Second, in many pornographic depictions the victim is frequently portrayed as secretly desiring the assault and as eventually deriving sexual pleasure from it (Malamuth, Heim, & Feshbach, 1980; Smith, 1976a,b). In other words, the victim supposedly likes being assaulted sexually. From a cognitive perspective, such information may suggest that even if a woman seems repulsed by a pursuer, she will eventually respond favorably to forceful advances, aggression, and overpowering by a male assailant (Brownmiller, 1975; Johnson & Goodchilds, 1973). While many subjects may recognize the fictional nature of this type of information, research on the availability heuristic (Tversky & Kahneman, 1973) suggests that such depictions may nonetheless have a significant impact (Hans, 1980). According to the availability heuristic concept, events that come relatively easily to mind are apt to be regarded as likely to occur. Carroll (1978) demonstrated that subjects who were asked to imagine an event that they knew was totally fictional were more likely to believe that incident would actually occur than subjects who were not instructed to imagine its occurrence. To the extent that the mass media frequently presents images of women as responding favorably to male aggression, such images may easily come to people's minds and affect their beliefs, attitudes, and behavior.

In this article, we shall describe research on the effects of aggressive-pornographic stimuli. We shall first examine the degree to which such materials stimulate sexual arousal. Next, we shall consider the effects on responses other

than aggression (e.g., attitudes, perceptions). Finally, the findings of studies on the effects of aggressive pornography on behavioral aggression will be presented.

II. Aggressive Pornography and Sexual Arousal

A. INITIAL FINDINGS

Are aggressive-pornographic portrayals sexually arousing to "normals"? This question is of considerable importance because people may be more likely to seek out stimuli that are sexually arousing as contrasted with those that elicit little or no arousal.

Until recently, the limited data available seemed to suggest that aggressive sexual depictions resulted in less sexual arousal than did nonaggressive sexual stimuli (e.g., see Baron & Byrne, 1977). This conclusion was largely based on studies using sadomasochistic portrayals and relying exclusively on self-reported sexual arousal. More recently, such a conclusion appeared to have been given additional support by research comparing the sexual responsiveness of rapists and nonrapists to rape scenes, as contrasted with consenting sexual depictions. Abel, Barlow, Blanchard, and Guild (1977) reported that while rapists in their sample evidenced high and about equal levels of penile tumescence to audio-taped portrayals of both rape and consenting sexual acts, the nonrapist comparison group showed significantly higher levels of sexual responsiveness to the consenting depictions. On the basis of such data, these investigators developed the rape index, which is a comparison of sexual arousal to rape versus arousal to consenting portrayals.

Abel and his associates argued that this index serves as an objective measure of a proclivity to rape. Using this index, an individual whose sexual arousal to rape themes was found to be similar to or greater than his arousal to consenting depictions would be considered as having an inclination to rape (see also Abel, Blanchard, & Becker, 1976, 1978). These investigators and others have been using this measure in the diagnosis and treatment of rapists and recently extended it to the identification and treatment of child molesters (Abel, Becker, Murphy, & Flanagan, 1979; Quinsey, Chaplin, & Carrigan, 1980) by comparing sexual arousal to pedophilic, as contrasted with consenting adult, sexual depictions. Quinsey *et al.* (1980) provided some support for the predictive validity of this assessment technique by showing that it predicted recidivism following discharge from a psychiatric hospital.

Both the rapist and nonrapist samples studied by Abel and his colleagues were male patients referred for evaluation of their deviant sexual arousal (e.g., pedophiles, transsexuals). The generalizability of data based on such samples is certainly suspect. However, recent studies using male graduate students and

nonpatient volunteers as the nonrapist comparison groups (e.g., Barbaree, Marshall, & Lanthier, 1979; Quinsey, Chaplin, & Varney, 1981) yielded results similar to those of Abel *et al.* In contrast, there is ample recent evidence that under certain conditions rape stimuli are highly sexually arousing to individuals from the general population (Briddell, Rimm, Caddy, Krawitz, Sholis, & Wunderlin, 1978; Farkas, 1979; Malamuth, in press; Malamuth & Check, 1980a,b, in press; Schmidt, 1975). The discussion that follows presents the findings of research designed to identify the conditions that are responsible for the differing levels of nonrapists' sexual arousal to rape stimuli.

B. VICTIM'S RESPONSES

A substantial body of data indicates that the reactions of the victim in rape scenes significantly affects the sexual arousal exhibited by both male and female members of the audience. If the victim is portrayed as becoming involuntarily sexually aroused by the assault (which might be termed "positive" outcome),² the subjects show levels of sexual arousal (both on self-reports and on penile tumescence measures) that are at least as high and often tend to be higher than those stimulated by mutually consenting depictions (Malamuth *et al.*, 1980b; Malamuth & Check, 1980a,b, in press; Quinsey & Chaplin, 1981). Rape portrayals that depict the victim as continuously abhorring the experience (i.e., negative outcome depictions), on the other hand, typically result in significantly less sexual arousal than mutually consenting themes (Malamuth *et al.*, 1980b; Malamuth & Check, 1980a,b), although as noted below, there is a sizeable minority of the population for whom rape portrayals in general appear to be just as sexually stimulating as consenting depictions.

These findings point to a variable (i.e., the outcome dimension) which seems to be of central importance in explaining the contradictory findings concerning sexual responsivity to aggressive pornography. Studies reporting that nonrapists showed high levels of sexual arousal to rape (e.g., Farkas, 1979) used depictions indicating victim arousal, whereas those reporting low subject arousal used rape portrayals in which the experience was abhorrent to the victim (e.g., Abel *et al.*, 1977).

These data may also account for an apparent inconsistency between the findings of Abel *et al.* (1977) and the results of content analytical studies of pornography. As noted earlier, these studies (Smith, 1976a; Malamuth & Spinner, 1980) indicate that much of hard-core pornography and an increasing percentage of soft-core pornography incorporate aggressive themes. The publishers' decision to include aggressive pornography is probably, to some degree, a reflec-

²As discussed in greater detail later in this article, research that includes depictions of victim arousal also presents, as part of the research debriefing, very explicit statements concerning the falsity of such rape myths. Recent data show that such debriefings are effective in dispelling beliefs in rape myths.

tion of buyers' interests. If very few nondeviants were sexually stimulated by any types of aggressive-pornographic portrayals, we might expect very few rape and other aggressive depictions in popular pornography. But since there is a growing number of such depictions, the type of sexual aggression found in commercially available pornography probably differs from that used in the research by Abel *et al.* (1977) and Barbaree *et al.* (1979). (Remember, their material tended to stress the rape victim's abhorrence.) Indeed, as was mentioned earlier, a good deal of pornography portrays rape victims as becoming involuntarily sexually aroused (Brownmiller, 1975; Gager & Schurr, 1976; Smith, 1976a). As we shall see later in this article, mass media portrayals that suggest victim's arousal have important effects on perceptions, attitudes, and aggressive responses.

C. INDIVIDUAL DIFFERENCES

A series of experiments reveal that there are important individual differences in the sexual responsivity of male subjects to rape scenes as contrasted with consenting depictions. These investigations clearly show that there is a substantial percentage of subjects who tend to be equally or even more sexually stimulated by rape than by portrayals of consenting sex, whereas the majority of subjects evidence the reverse preference (see Malamuth, 1981b, for a review of these data).

The findings in this area are well illustrated in the recent data of Malamuth and Check (in press). In an initial session, male subjects were given questionnaires concerning their sexual attitudes and behavior. One of the questionnaire items inquired about the likelihood that the subject himself would rape if he could be assured of not being caught and punished (i.e., the 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, 1981a,b; Malamuth, Haber, & Feshbach, 1980; Malamuth & Check, 1980a; Tieger, 1981).

Several days later, these subjects listened to one of several tapes that included: (1) a rape depiction, wherein the victim continuously abhors the assault (i.e., negative outcome); (2) a rape portrayal, in which the rapist perceives that the victim becomes involuntarily sexually aroused (i.e., positive outcome); and (3) a mutually consenting depiction with a willing, sexually aroused partner (i.e., consenting). These depictions were otherwise equated in terms of sexual content, length, etc.

Penile tumescence and self-reported sexual arousal to each of these portrayals as a function of subjects' LR classification are presented in Fig. 1. As can be seen, low-LR subjects were more sexually stimulated by the mutually consenting than the negative-outcome depictions, whereas high-LR subjects showed the opposite tendency on the penile tumescence measure but reported the same

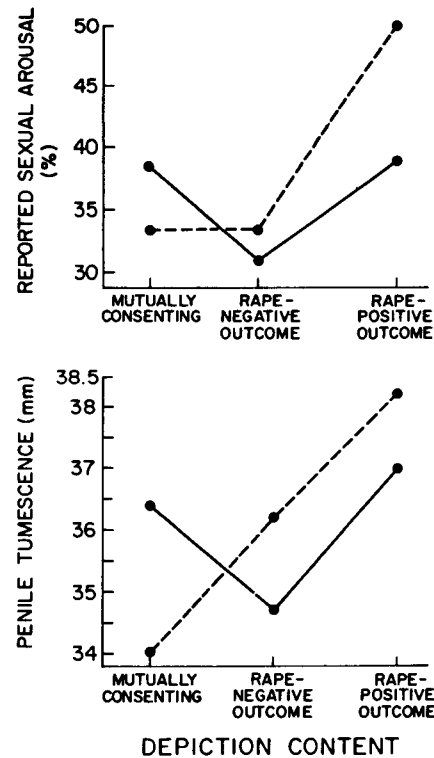


Fig. 1. Sexual arousal as a function of depiction content and subjects' Likelihood of Raping (LR) classification. (●---●), High LR; (●—●), low LR. (Data from Malamuth & Check, in press.)

levels of arousal to the negative-outcome and consenting depictions. The reactions of the high-LR subjects to the negative-outcome and consenting depictions parallel very closely the responses of the rapists studied by Abel *et al.* (1977), who had used only these two types of depictions. With respect to the positive-outcome portrayal (a type of depiction not used by Abel *et al.*), low-LR subjects showed about the same levels of arousal as to the consenting depictions, whereas high-LR subjects showed the highest levels of arousal to this rape portrayal.

Arousal to aggressive pornography has consistently been found to be associated with other individual difference variables in addition to LR ratings. For example, Malamuth and Check (in press) determined that arousal to rape portrayals (but not arousal to consenting-sex depictions) was positively correlated for males with power as a motive for engaging in sex (Nelson, 1979) and psychoticism as measured by the Eysenck Personality Questionnaire (Eysenck, 1978). (Note that both of these dimensions stretch through the normal non-psychiatric population.) Furthermore, Check and Malamuth (1982) showed that arousal to aggressive pornography (but not to consenting-sex depictions) was, for men, associated with higher beliefs in stereotyped sex roles. Taken as a whole,

these data suggest that sexual arousal to aggressive-pornographic portrayals is not an isolated response but may reflect more general personality and belief structures. The data are consistent with the proposition that increases in aggressive themes within pornography may be partially due to the attraction of certain segments of consumers (e.g., high-LR individuals) to such portrayals (Malamuth & Spinner, 1980).

D. CONTEXT OF ASSESSMENT

Although no study to date has systematically examined the effect of the physical location of the research, this may be an important variable. It is now recognized that physiological measures of sexual arousal, as well as, of course, self-reports, may be voluntarily altered by subjects sufficiently motivated to do so (Abel & Blanchard, 1976; Amorso & Brown, 1973; Cerny, 1978; Henson & Rubin, 1971; Laws & Holmen, 1978; Quinsey & Carrigan, 1978). The research studies of Abel *et al.* (1977) and Quinsey *et al.* (1981) were conducted within settings designed to treat rapists. Although Barbaree *et al.* (1979) do not specifically report where their research was conducted, it appears that it was also done in a psychiatric treatment center for rapists. Awareness on the part of nonrapists of the nature of these settings may have been an important source of inhibition with respect to their arousal to rape depictions.

In keeping with this possibility are the findings of Briddell *et al.* (1977). In this experiment, undergraduate males who were led to believe that they were under the influence of alcohol (irrespective of whether they actually were) showed high sexual arousal to rape themes, comparable to their arousal to consenting depictions. Subjects who did not believe they were under the influence of alcohol, in contrast, showed differences in arousal to consenting versus rape themes similar to the differences obtained by Abel *et al.* (1977). These data clearly highlight the importance of nonrapists' cognitions as powerful influences on their sexual arousal to rape depictions. Just as the belief that one is under the influence of alcohol may serve to lessen concern about showing sexual arousal to rape depictions, the knowledge that arousal to rape is being assessed in a treatment center for rapists (which may suggest that such arousal will be interpreted as indicating aggressive tendencies) may well inhibit nonrapists' arousal to such stimuli.

E. CONCLUSIONS

The data from presentations that combine aggressive and sexual content reveal complex but reliable effects on sexual arousal. If the conditions of assessment resemble those employed by Abel *et al.* (1977) (e.g., a rape-aborrence depiction, a clinical situation), then it is very likely that nonrapists in general will

not be as highly aroused by rape scenes as they would by consenting depictions. Changes in the content of the rape stimuli (e.g., depicting the victim as sexually aroused) or in the nature of the assessment situation (e.g., jail vs university setting, believing one is or is not under the influence of alcohol), as well as finer distinctions among different subgroups of "normals" (e.g., low LR vs high LR), are likely to change the nature of the findings dramatically. This does not mean that the assessment of sexual reactions to rape depictions will not yield a useful measure of aggressive tendencies. As discussed below, there is some evidence that such a sexual arousal measure is predictive of aggressive behavior even among normals. However, the sexual arousal patterns of nondeviants are not clearly distinguishable from those of rapists across a wide range of conditions. Practitioners using the Abel *et al.* (1977) "rape index" should, therefore, be very careful in selecting their assessment conditions in light of a serious risk of making "false positives."

III. The Effects of Aggressive Pornography on Responses Other than Aggression

A. CHANGES IN SEXUAL RESPONSIVENESS

There is little evidence at this time to indicate that exposure to aggressive pornography increases a person's sexual responsiveness to such stimuli. A non-significant trend in one study (Malamuth *et al.*, 1980a) suggested that if subjects first read a sadomasochistic portrayal, their subsequent sexual arousal to a rape scene presented shortly afterward was heightened. Later research, however, has not confirmed this finding. The failure to find a sexual arousal enhancement effect of exposure to aggressive pornography has occurred both with single presentations (Malamuth, 1981a; Malamuth & Check, 1980a, in press) as well as with repeated presentations over a period of several weeks of five aggressive-pornographic feature-length movies (Ceniti & Malamuth, 1981).

B. FANTASIES

Only one experiment to date has examined the effects of aggressive pornography on sexual fantasies (Malamuth, 1981a). Subjects were presented with either rape or mutually consenting-sex versions of a slide-audio show. All subjects were then exposed to the same audio description of a rape incident taken from Abel *et al.* (1977). Later in the same session, they were asked to create their own sexual fantasies and then to record them. Content analyses of subjects' self-reported fantasies indicated that those exposed to the rape version of the

slide–audio show created more aggressive sexual fantasies than those exposed to the mutually consenting-sex version.

C. PERCEPTIONS AND ATTITUDES

There are considerable data indicating that exposure to aggressive pornography may alter observers' perceptions of rape and of rape victims. In three experiments, subjects were first presented with pornographic scenes in which aggression supposedly had positive consequences for the female victims, or with other depictions (e.g., a rape negative outcome or a mutually consenting scene). Afterward, all of these subjects were given a different depiction of rape and asked to indicate their perceptions of the experiences of the rape victim. In two of these experiments (Malamuth *et al.*, 1980a; Malamuth & Check, 1980b), those exposed to the positive-outcome version of the aggressive scene, in comparison to other subjects, thought the rape victim in the second portrayal had suffered less. The third experiment revealed effects on general perceptions of women. Malamuth and Check (1981b) found that subjects who listened to a rape depiction suggesting that the victim became sexually aroused believed that a larger percentage of women in general would derive some pleasure from being raped or from being forced to engage in various sexual acts (as compared to subjects who listened to rape scenes highlighting the victim's disgust and abhorrence or to portrayals of consenting sex showing either the woman's arousal or disgust) (see Fig. 2). These data suggest that certain types of pornography may help foster a cultural climate that is relatively tolerant of acts of aggression against women (Brownmiller, 1975; Burt, 1980).

However, in another study (Malamuth, Reisin, & Spinner, 1979) no evidence was found of changes in perceptions or in attitudes following exposure to aggressive pornography. One group of male and female subjects looked at issues of *Penthouse* and *Playboy* magazines that showed incidents of sadomasochism and rape. A second group examined issues of these magazines that contained only nonaggressive pornography and a third group was given only neutral materials. Shortly afterward, subjects watched an actual videotaped interview with a rape victim and responded to a questionnaire assessing their perceptions of the rape victim and her experience. Weeks later, in what was purported to be a general survey of public attitudes, subjects indicated their views on rape in response to a newspaper article. Exposure to the aggressive pornography did not affect perceptions of rape either in response to the videotaped interview with the rape victim or to the newspaper article.

One of the differences between this study and the three experiments that did observe significant effects on perceptions of rape concerns the content of the materials used. In the three experiments in which antisocial effects were found, the aggressive-pornographic stimuli were specifically selected because they ex-

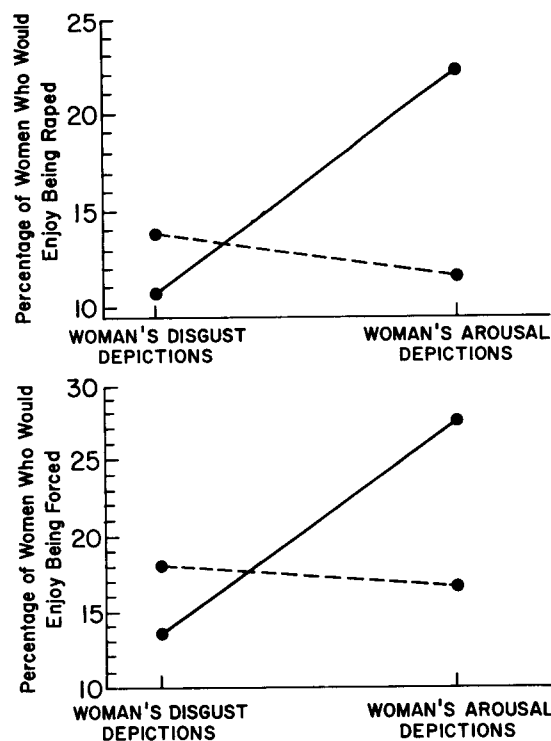


Fig. 2. Beliefs about the percentage of women who would enjoy being raped or forced sexually as a function of exposure to depictions varying along the Consent (rape vs consenting sex) and Outcome (negative vs positive) dimensions. (●—●), Nonconsenting depictions; (●---●), consenting depictions.

plicitly depicted violence against women as having positive consequences. Malamuth *et al.* (1979), on the other hand, used materials that generally did not show such supposedly positive outcomes. At least insofar as cognitive changes, therefore, the antisocial effects of aggressive pornography may be limited to stimuli depicting positive consequences of sexual aggression.

In a recent field experiment, Malamuth and Check (1981c) obtained perhaps the strongest evidence to date to indicate that depictions of sexual aggression with positive consequences can adversely affect socially important perceptions and attitudes. Two hundred and seventy-one male and female students served as subjects in this investigation. Some had agreed to participate in a study ostensibly focusing on movie ratings. They watched on two different evenings either (1) the movies *Swept Away* and *The Getaway*, films that show women as victims of aggression within erotic as well as nonerotic incidents or (2) neutral feature-length movies. These movies were viewed in theatres on campus and two of the films (i.e., one experimental and one control movie) were being shown by the

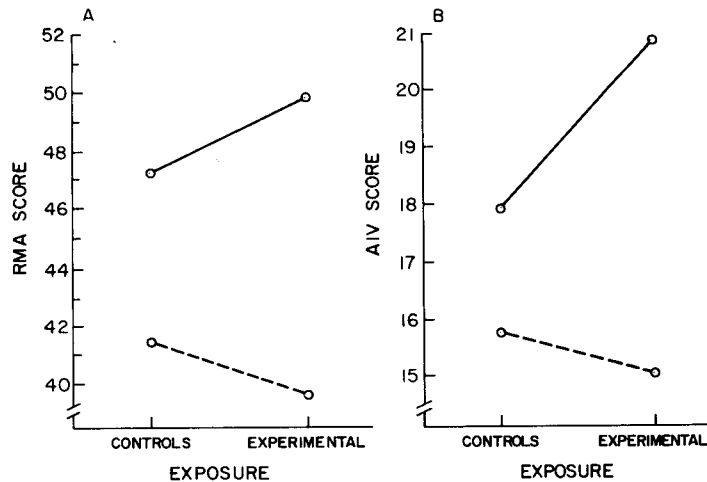


Fig. 3. (A) Rape myth acceptance (RMA) and (B) acceptance of interpersonal violence (AIV) as a function of exposure and gender. (○—○), males; (○—○), females. (From N. Malamuth & J. V. P. Check, The effects of mass media exposure on acceptance of violence against women: A field experiment, *Journal of Research in Personality*, 1981, 15, p. 441.)

university as part of the campus film program. Members of the classes from which subjects had been recruited, but who had not signed-up for the experiment, were also used as a comparison group. The dependent measures were scales assessing acceptance of interpersonal violence (AIV) against women, rape myth acceptance (RMA), and beliefs in adversarial sexual relations (ASB). These measures were embedded within many other items in a Sexual Attitude Survey administered to all students in classes several days after some of them (i.e., those who had signed-up for the experiment) had been exposed to the movies. Subjects were not aware that there was any relationship between this survey and the movies.

Results indicated that exposure to films portraying aggressive sexuality as having positive consequences significantly increased male, but not female, subjects' acceptance of interpersonal violence against women and tended to increase males' acceptance of rape myths (see Fig. 3). These data demonstrated in a nonlaboratory setting, not vulnerable to criticisms of laboratory artificiality and "demand characteristics," that there can be relatively long-term antisocial effects of movies that portray sexual violence as having positive consequences.

IV. The Effects of Aggressive Pornography on Aggression

A. RESEARCH FINDINGS

We turn now to describe several experiments concerned with the effects of aggressive pornography on aggression. Rather than considering in detail the

implications of each of these experiments, we shall first describe the studies, summarize their findings, and then consider their overall implications.

1. *Nonaggressive- versus Aggressive-Pornographic Depictions*

In a study by Malamuth (1978), male subjects were assigned to one of three exposure conditions. Subjects read pictorial stories that contained aggressive pornography, nonaggressive pornography, or neutral stimuli. Both the aggressive- and nonaggressive-pornographic stimuli were taken from issues of *Penthouse* magazine and were reported by subjects to be equally sexually arousing. The aggressive-pornographic stimuli depicted a rape of woman by a male pirate with some suggestion of a positive outcome. The nonaggressive pornography portrayed a loving interaction between a man and a woman. The neutral stimuli were taken from *National Geographic* magazine. Following exposure to these stimuli, all subjects were insulted by a female confederate and then placed in a situation where they could aggress against her via the ostensible delivery of electric shocks under one of two differing assessment conditions. Half of the subjects were assigned to read a communication that suggested that it was "okay" to behave as aggressively as they wished (disinhibitory communication); the other half were given a communication designed to make them somewhat self-conscious about aggressing (inhibitory). The experimental design thus consisted of a 3 (Exposure) \times 2 (Communication) factorial design.

The results revealed no significant differences in aggression following the inhibitory communication. Following the disinhibitory communication, the highest level of aggression was found in the aggressive-pornography exposure ($M = 4.20$), which was significantly greater than that following nonaggressive-pornography exposure ($M = 2.75$). However, the neutral exposure ($M = 3.44$) was not found to differ significantly from either of the other two exposure conditions. The findings, therefore, although somewhat equivocal, pointed to the possibility that aggressive-pornographic stimuli may, under certain conditions, increase aggression against women.

In research by Donnerstein (1980a,b), male subjects were angered or treated in a neutral manner by a male or female confederate and were then given the opportunity to view one of three films. Two of the films were highly pornographic but differed in aggressive content. Whereas one film was entirely nonaggressive, the other depicted the rape of a woman by a man who breaks into her house and forces her into sexual activity at the point of a gun. Both of these films generated equal levels of physiological arousal as measured by blood pressure. The third film was a neutral film which did not contain any aggressive or pornographic content.

The results of this study, presented in Fig. 4, showed that when angered subjects were paired with a male confederate, the aggressive-pornographic film produced no more aggression than the nonaggressive-pornographic film. Both of

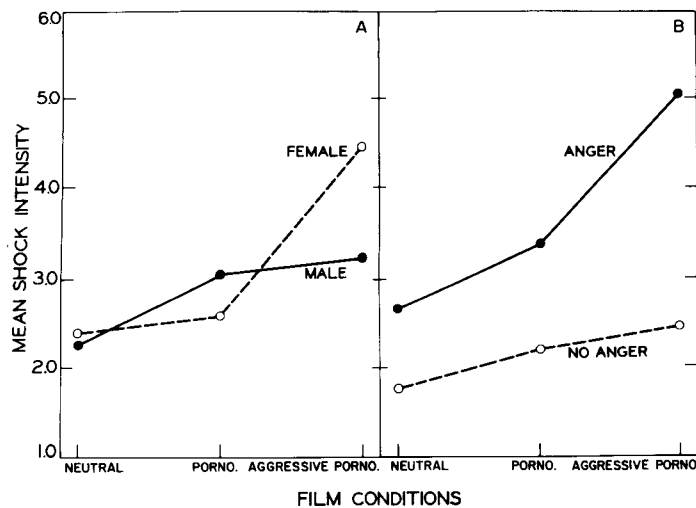


Fig. 4. Mean shock intensity as a function of (A) Sex \times Film and (B) Anger \times Film interactions. (From E. Donnerstein, Aggressive-Erotica and violence against women, *Journal of Personality and Social Psychology*, 1980, **39**, p. 274. Copyright 1980 by the American Psychological Association. Reprinted with permission of the publisher and author.)

these films increased aggression against the male victim in comparison with the neutral exposure. Those subjects paired with a female, however, displayed an increase in aggression *only* after viewing the aggressive-pornographic film. In fact, this increase occurred even if subjects were not angered, although the combination of anger and film exposure produced the highest level of aggressive behavior.

2. The Effects of Nonpornographic-Aggressive Films

Donnerstein (1983, in press) sought to examine the independent roles of pornography and aggression. Male subjects were first angered by a male or female confederate. They were then exposed to one of four films. The first was a nonaggressive highly arousing pornographic film. The second was an aggressive-pornographic film, the same as that used by Donnerstein (1980a,b). The third film was a nonpornographic, aggressive presentation in which a woman at gunpoint is "taunted" by a man. She is tied up, slapped around, and generally aggressed against. There was no nudity or even simulated sexual activity. It was chosen to be as close in content, except for aggression, as the rape film but without sexual behavior. The final film was a neutral presentation. Self-report data from subjects indicated that the aggressive film was seen as being less sexual than the two pornographic films which did not differ from each other. In addition, the aggressive film and the aggressive-pornographic films were also seen as equally aggressive. Physiological data also showed that the pornographic

and aggressive-pornographic films stimulated equal arousal levels but higher than the neutral and aggressive films.

The results are presented in Fig. 5. When subjects were angered by a male, only the pornographic film increased aggression. For those subjects who were angered by a female, however, the aggressive-pornographic film produced the highest level of aggression, higher in fact, than any male target condition. The nonpornographic-aggressive film, however, also increased the level of subsequent aggression, although to a lesser degree than the aggressive-pornographic presentation.

3. Victim's Reaction in Aggressive Pornography

Earlier in this article we discussed research that indicated that male subjects become sexually aroused to depictions of rape in which the victim becomes sexually aroused (i.e., positive outcome), and that such depictions increase acceptance of interpersonal violence against women and beliefs in rape myths. Two recent studies by Donnerstein and Berkowitz (1981) sought to examine the effects of the victim's reaction upon actual aggressive behavior against women.

In one of these studies, male subjects were first angered by a male or female confederate. Following this instigation, they watched one of four films. One was a neutral film which did not contain aggressive or pornographic content whereas another was a nonaggressive-pornographic film. The final two films were of an aggressive-pornographic nature. They depicted a young woman who comes to study with two men. Both men have been drinking and when she sits between

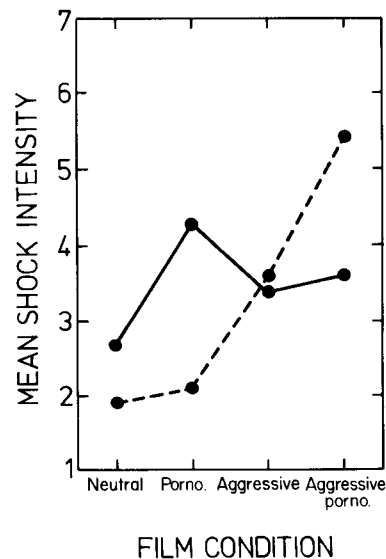


Fig. 5. Mean shock intensity as a function of sex of target and film condition. (●---●), Female; (●—●), male.

them she is shoved around and forced to drink. She is then tied up, stripped, slapped around, and raped. Each film contained a different ending (30 sec out of 5 min) as well as a different narrative. In the positive-outcome aggressive-pornographic film, the ending shows the woman smiling and in no way resisting the two men. The narrative also indicates that she became a willing participant in the events at the end. In the negative-outcome version, the woman's actions are difficult to judge, and the narrative indicates that at the end she finds the experience humiliating and disgusting. Pretesting confirmed that the latter film was perceived as representing more suffering and less enjoyment on the part of the victim. After viewing one of these films, all subjects were given an opportunity to administer electric shocks to the male or female confederate. Physiological reactions were also monitored during the study.

After having viewed the films, all subjects were asked to rate them on a number of scales. These ratings are presented in Table I. As can be seen, the negative-outcome aggressive-pornographic film was seen as more aggressive than the positive-outcome version. This is interesting in light of the fact that the actual aggressive content was the same in both films. In addition, the victim in the negative-outcome film was seen as suffering more and enjoying herself less

TABLE I
MEAN SELF-REPORT AND PHYSIOLOGICAL CHANGES TO VARIOUS FILM CONDITIONS
(EXPERIMENT 1)^a

Ratings ^b	Film condition ^c			
	Neutral	Pornographic	Positive ending	Negative ending
Film				
Interesting	1.6 _a	3.4 _b	3.3 _b	3.2 _b
Sexually arousing	1.1 _a	3.7 _b	3.7 _b	3.9 _b
Aggressive	1.4 _a	1.4 _a	3.5 _b	4.8 _c
Sexual content	1.4 _a	6.0 _b	5.9 _b	5.6 _b
Victim				
Suffering		1.7 _a	2.7 _b	4.8 _c
Enjoyment		6.3 _a	5.1 _b	2.6 _c
Responsible		5.6 _a	4.1 _b	2.9 _c
Mean blood pressure	-0.9 _a	+6.1 _b	+8.5 _b	+5.5 _b

^aFrom E. Donnerstein and L. Berkowitz, Victim reactions in aggressive-erotic films as a factor in violence against women. *Journal of Personality and Social Psychology*, 1981, **41**, p. 715. Copyright 1981 by the American Psychological Association. Reprinted by permission of the publisher and author.

^bFilm ratings are on a 7-point scale.

^cMeans with different subscripts differ from each other at the .05 level by Duncan's procedure.

than in the positive-outcome version. Furthermore, the woman in the positive-outcome version was seen as being more responsible for what had happened.

The physiological data indicated that all pornographic films, although not differing from each other, were more arousing than the neutral film. The aggression data are presented in Fig. 6. As can be seen, none of the films significantly affected aggression against a male target. However, both the positive- and negative-outcome aggressive-pornographic films increased aggression against the female. This level of aggression was significantly higher than the male target conditions except for the nonaggressive-pornographic film's male target condition.

These results show that in angered subjects, both positive- and negative-outcome rape depictions increase aggression against women. However, a critical question, for theoretical and applied purposes, concerns the effects of positive- and negative-outcome rape depictions on *nonangered* subjects. The second study by Donnerstein and Berkowitz (1981) examined this issue.

Male subjects in this experiment were first angered or treated in a neutral manner by a female confederate. Following this manipulation, subjects were exposed to one of the four films employed in the first study. After rating the films, they were given an opportunity to ostensibly administer shocks to the female confederate. Physiological reactions were monitored at various points in the experiment.

Table II presents the film ratings for subjects from this second study. As can be seen, they are identical to those in the first study, with the negative version

Fig. 6. Mean shock intensity as a function of sex of target and film condition. (●---●), Female; (●—●), male. (From E. Donnerstein & L. Berkowitz, Victim reactions in aggressive-erotic films as a factor in violence against women, *Journal of Personality and Social Psychology*, 1981, **41**, p. 716. Copyright 1981 by the American Psychological Association. Reprinted with permission of the publisher and author.)

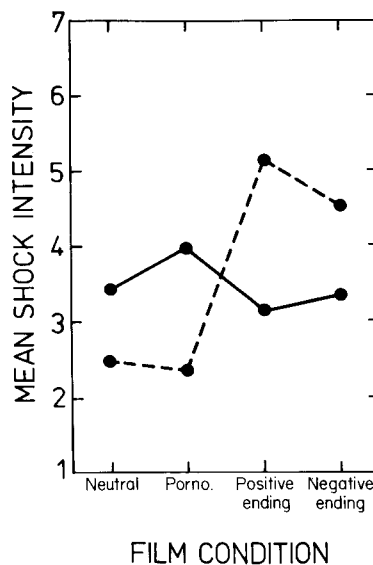


TABLE II
MEAN SELF-REPORT AND PHYSIOLOGICAL CHANGES TO VARIOUS FILM CONDITIONS
(EXPERIMENT 2)^a

Ratings ^b	Film condition ^c			
	Neutral	Pornographic	Positive ending	Negative ending
Film				
Interesting	1.6 _a	3.8 _b	3.8 _b	3.2 _b
Sexually arousing	1.6 _a	4.7 _b	3.7 _c	3.7 _c
Aggressive	1.2 _a	1.8 _a	4.3 _b	6.2 _c
Sexual content	1.3 _a	6.4 _b	5.9 _{bc}	5.5 _c
Victim				
Suffering		1.7 _a	3.0 _b	5.7 _c
Enjoyment	No anger	5.6 _{ac}	5.9 _{ac}	1.6 _b
	Anger	6.5 _a	4.9 _c	3.2 _d
Responsible		5.6 _a	4.3 _b	2.3 _c
Mean blood pressure	-0.5 _a	+8.3 _b	+10.7 _b	+8.9 _b

^aFrom E. Donnerstein and L. Berkowitz, Victim reactions in aggressive-erotic films as a factor in violence against women. *Journal of Personality and Social Psychology*, 1981, **41**, p. 719. Copyright 1981 by the American Psychological Association. Reprinted by permission of the publisher and author.

^bFilm ratings are on a 7-point scale.

^cMeans with a different subscript differ from each other at the .05 level by Duncan's procedure.

being seen as more aggressive, the woman suffering more, enjoying less, and being less responsible than her positive-aggression counterpart. Physiological data also indicated that the three pornographic films were more arousing than the neutral presentation, although not differing from each other. Figure 7 presents the results for the aggression data. For nonangered subjects, only the positive-outcome aggressive-pornographic film significantly increased aggression against the female victim. For angered subjects, however, both the negative- and positive-outcome versions increased aggression, similar to the findings in the first study.

B. SUMMARY OF EFFECTS ON AGGRESSION

The series of experiments described above on the effects of aggressive pornography on behavioral aggression indicate that the victim's gender is a critical mediating variable. When the male subjects were paired with a male victim, and angered, aggressive pornography was found consistently to result in levels of aggression which were not beyond that of other exposure conditions. In contrast, when the victim was female, aggressive pornography increased aggres-

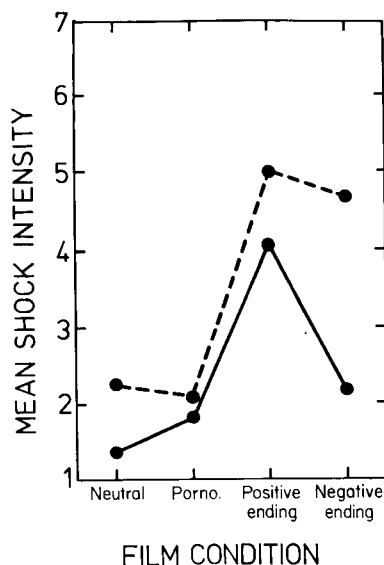


Fig. 7. Mean shock intensity as a function of anger and film condition. (●---●), Anger; (●—●), no anger. (From E. Donnerstein & L. Berkowitz, Victim reactions in aggressive-erotic films as a factor in violence against women. *Journal of Personality and Social Psychology*, 1981, 41, p. 716. Copyright 1981 by the American Psychological Association. Reprinted with permission of the publisher and author.)

sion well beyond that of any other exposure. In fact, nonaggressive pornography did not increase aggression against female victims in comparison with neutral exposures (see Donnerstein, 1980a,b, 1983; Donnerstein & Barrett, 1978; Donnerstein & Hallam, 1978, for a review and discussion of the effects of nonaggressive pornography on aggression against women). Aggressive-nonpornographic exposures increased aggressivity against female victims beyond the neutral or erotic exposures, but to a considerably lesser extent than the increase generated by the brigading of aggressive and sexual content.

Increased aggression against female victims following exposure to aggressive pornography was found with both nonangered and angered subjects, although the increase tended to be greater for angered subjects. Interesting differences between the effects of aggressive pornography on angered as compared with nonangered subjects emerged when the outcome of the aggression was systematically manipulated (i.e., "positive" versus negative outcome). It was found that a negative ending did not significantly increase aggression for non-angered subjects but resulted in a very clear increase in aggression for angered subjects. When the outcome of the aggressive-pornographic depictions was positive, a very clear increase in aggression was found for both angered and non-angered subjects.

C. THEORETICAL ANALYSES

There are four theoretical analyses that are relevant to the research assessing the effects of aggressive pornography on aggressive behavior. These will be

referred to as the Arousal, Hedonic Valence, Elicitation, and Disinhibition Analyses. We shall briefly describe each of these formulations and evaluate their ability to account for the empirical findings.

1. Arousal

Several psychological theories, such as Hull's (1943) construct of a "generalized drive" and Lindsley's (1951) "activation" concept suggest that any dominant response may be "energized" by a state of increased arousal. The concept of general arousal has been incorporated within theoretical analyses dealing with the effects of pornography both as the sole explanatory concept (Tannenbaum, 1971) and in combination with other components (e.g., Tannenbaum & Zillmann, 1975; Donnerstein, Donnerstein, & Evans, 1975). In such formulations, it is suggested that arousal stimulated by sexual materials may increase aggressive behavior in subjects predisposed to act aggressively (i.e., for whom aggression is a dominant response). Consequently, such analyses predict increased aggression only for subjects predisposed to aggress (e.g., angered subjects).

An explanation based solely on an arousal component would predict that the degree of aggression occurring following exposure to a communication would directly vary with the degree of arousal elicited by the communication. Variables such as the gender of the target of aggression or the victim's reactions within a rape portrayal would be expected to result in differing levels of aggression only if they stimulated different degrees of arousal. In the three studies on aggressive pornography by Donnerstein (1980a,b) and Donnerstein and Berkowitz (1981), all pornographic films were equal in arousal level. Yet, only the aggressive versions increased subsequent aggression against a female. Furthermore, the Donnerstein (1983) study on aggressive-nonpornographic films indicated that a film which does not increase physiological arousal can produce a level of aggression higher than a highly arousing but nonaggressive-pornographic film. These results would suggest that, at least with regard to aggressive pornography, film arousal may be a contributory factor under certain conditions, but it is not a necessary factor for the elicitation of subsequent aggression.

2. Hedonic Valence

Another theoretical explanation has been offered by Zillmann and his colleagues (e.g., Zillmann & Sapolsky, 1977; Zillmann, Bryant, Comisky, & Medoff, 1981). While these authors assume that arousal (excitatory potential) is an important factor in the facilitation of aggression by pornographic stimuli, the hedonic valence of the stimuli is also considered a strong contributor. Hedonic valence refers to how pleasing or displeasing are the stimuli. According to this formulation, the combined impact of the stimuli's arousal and affective potential determines its impact on aggression. Therefore, the lowest level of aggression would be predicted following exposure to nonarousing pornography that generates a positive affective state. Nonarousing negatively valenced and arousing

positively valenced stimuli are expected to result in small increments in aggression. Arousing pornography that induces a negative affect would be expected to lead to the highest levels of aggression.

It should be noted that this two-component formulation was developed to account for research on the effects of nonaggressive pornography on male aggression against male targets. While there is some evidence that this analysis may also be relevant to the impact of certain types of pornographic stimuli with aggressive elements (i.e., sadomasochistic portrayals) on *intermale* aggression (Zillmann, Bryant, & Carveth, 1981; Zillmann *et al.*, 1981b), the data obtained on the effects of aggressive-pornographic stimuli (e.g., rape) on *male aggression against females* do not appear consistent with this formulation. Since this explanation focuses exclusively on the reactions of the subject to the pornographic stimuli, in direct contrast to the data, no differential effects of exposure would be predicted for male versus female targets of aggression. Furthermore, if the manipulation of the victim's reactions in rape depictions (i.e., positive vs negative outcome) alters the affective reaction of the audience, the version eliciting a more pleasing affect would be expected to result in lower aggression. The data presented by Malamuth *et al.* (1980b) suggest that aggressive pornography with a positive ending results in more positive affect than a negative-outcome version. Yet, Donnerstein and Berkowitz (1981) found that when subjects were not angered, the positive-outcome depiction resulted in more aggression; for angered subjects there were no differences in aggression following exposure to the two types of films.

3. *Elicitation*

Berkowitz (1970, 1974) proposed an explanation of the effects of media depictions that emphasizes stimulus-response (S-R) associations. According to this formulation, media stimuli elicit reactions (e.g., feelings, ideas, behavior) that are semantically associated with that particular class of stimuli. Berkowitz (1970) thus suggests that the media observer "reacts impulsively to particular stimuli in his environment, not [only] because his inhibitions have been weakened or because he anticipates the pleasures arising from his actions, but because situational stimuli have evoked the responses he is predisposed or set to make in that setting" (p. 104). Aggressive pornography that depicts male aggression against a female would be, therefore, most likely to affect responses that are most closely associated with the actions depicted in the media. It would therefore be predicted on the basis of this formulation that depictions of aggression against women would be more likely to affect female than male targets since a person's stimulus characteristics are an important component affecting the semantic associations of media depictions (Berkowitz, 1974; Berkowitz & Frodi, 1979). The striking differential effects of aggressive pornography on female as contrasted with male targets reported above are clearly compatible with this formulation.

Furthermore, as indeed was found with the negative-outcome versions, the effect of aggressive pornography on aggression would be predicted to be greatest for those viewers who are disposed to attack someone (i.e., angered). However, the increased aggression following the positive but not the negative version of the aggressive pornography in the case of *nonangered* subjects is not easily accounted for by this formulation.

4. *Disinhibition*

Inhibitory and disinhibitory effects have been discussed extensively by Bandura (1973, 1977) as major aspects of modeling influences. These effects are conceptualized as largely determined by observing the rewarding and punishing consequences accompanying models' behavior. Such vicarious learning of consequences strengthen or weaken *restraints* of similar behaviors in the observer.

The disinhibition explanation would predict that exposure to a communication such as aggressive pornography would affect the viewer's aggression only if the subject possessed some inclination to aggress that may become less restrained or if the communication suggested that aggression is expected of the viewer (Bandura, 1973). While such an inclination would be likely to result following an angering procedure, disinhibitory (and inhibitory) effects on aggression may occur in nonangered subjects as well (Bandura, 1973) if these individuals are inclined to aggress due to some other predisposing factor. Aggressive pornography may disinhibit aggression by suggesting that aggressive acts do not result in negative and may even lead to positive consequences. It is apparent, then, that this explanation would predict, as indicated by the data, that exposure to aggressive-pornographic depictions with a positive outcome would result in increased aggression.

Predictions based on this explanation vis-à-vis aggressive-pornographic depictions with a negative outcome are not very clear. Conflicting views exist regarding the effects of media presentations that depict victim suffering on the audience (Bandura, 1973). For nonangered subjects, there is a general consensus that inhibition of aggression would be expected (Bandura, 1973; Baron, 1974, 1977; Geen, 1970). However, for angered subjects, some investigators have suggested that pain cues in media presentations may increase inhibitions by sensitizing individuals to the harm they might inflict (Goranson, 1970), whereas other investigators have argued that for individuals in such a state, victim pain cues may be reinforcing (e.g., Berkowitz, 1974; Feshbach, Stiles, & Bitter, 1967; Swart & Berkowitz, 1976). Relevant to this view are the data presented earlier showing that rape portrayals with a negative outcome may be quite sexually stimulating (and therefore reinforcing) for some subjects (e.g., Malamuth & Check, in press). In summary, it is not clear whether exposure to aggressive pornography with a negative outcome would be expected, according to a disinhibition explanation, to reduce or increase viewers' aggression. The finding that

such aggressive pornography increased aggression against females for angered subjects is not, therefore, readily explained by disinhibition processes.

5. *Multiplicity of Processes*

The above discussion of differing explanations of media effects in light of the current findings suggests that while the elicitation and disinhibition formulations are consistent with significant portions of the data, neither of these alone can fully account for the findings. The data point to the operation of multiple processes among which S-R associations and lowered inhibitions may play important roles (Donnerstein & Berkowitz, 1981). Clearly, elicitation and disinhibition processes (as well as others) are not incompatible but may operate simultaneously. Furthermore, different processes may be more relevant to differing experimental conditions.

D. THE CONSTRUCT VALIDITY OF ASSESSING AGGRESSION

In light of the research findings indicating that aggressive pornography affects aggression against women within the laboratory (as well as fantasies, attitudes, and perceptions), there would appear to be reasons for social concern about the prevalence of such mass media stimuli. In drawing implications from these data to social behavior outside of the experimental settings, however, it is important to examine the construct validity (Cronbach & Meehl, 1955) of the measures used. This is particularly relevant to the assessment of aggressive behavior, since it is not feasible to experimentally assess the type of nonlaboratory aggression against women (e.g., rape) that may be affected by exposure to aggressive pornography. While there is considerable support for the construct validity of the "Buss paradigm" as a measure of aggression in general (Baron, 1977; Berkowitz & Donnerstein, 1982), in drawing implications from the research presented herein, it is desirable to assess the validity of the measures used as they relate to real-world aggression against women that involves emotions and attitudes linked with sexuality.

The logic of construct validity as discussed by Cronbach and Meehl (1955) suggests that to assess the validity of a measure it is necessary to determine whether it relates to other responses or measures in a theoretically predicted pattern. Using this approach, Malamuth (in press) designed an experiment to determine whether measures developed to assess factors that cause rape and related acts of aggression against women would predict "normal" males' aggressive behavior against a woman within a laboratory setting. While it was not suggested that such laboratory aggression constitutes an actual analog to the crime of rape, there exists considerable theorizing to suggest that rape is an act of aggression against women (Brownmiller, 1975; Burt, 1980; Clark & Lewis, 1977). Moreover, recent data suggest that within the general population there are

many men who, although they may never actually commit acts of violence such as rape, have a relatively high proclivity to aggress against women (Malamuth, 1981b). If measures designed to assess factors contributing to rape and related acts of aggression against women were found to successfully predict aggression within a laboratory setting, this would provide support for the construct validity of the nomological network composed of: (1) the theory underlying the development of the predictive measures, (2) the measures designed to predict rape and other acts of aggression against women, and (3) the methodology of assessing such aggression within an experimental context as a basis for testing theory in the area, further refining the predictive measures and for drawing implications to nonexperimental settings.

The research by Malamuth (in press) was conducted in two phases. In the first phase, two factors theorized to cause rape and related acts of aggression against women were assessed. The subjects were 42 males from the general population, mostly college students. The first factor assessed was labeled Sexual Arousal to Rape, which was measured by the rape index developed by Abel *et al.* (1977) and described earlier in this chapter. Two separate measurements of this index (i.e., sexual arousal to rape relative to arousal to consenting depictions) were taken several weeks apart using different rape and consenting depictions. As noted earlier, Abel *et al.* contend that this measure assesses a "proclivity to rape."

The second factor assessed in the first phase of the research was labeled Attitudes Facilitating Violence. This was measured by the Rape Myth Acceptance (RMA) and Acceptance of Interpersonal Violence (AIV) scales developed by Burt (1980). These scales were embedded within many other items so that the subjects would not be aware of their specific focus. As discussed earlier, Burt (1978, 1980) theorizes that such attitudes about rape and violence contribute to rape acts.

The second phase of the research was held several days after each subject completed the first phase. In this phase, aggression was assessed. However, subjects were completely unaware of the relationship between the two phases of the research, but they believed that they were participating in two completely unrelated experiments. This procedure eliminated the possible role of "demand characteristics." In this second phase, subjects were angered by a woman (a confederate) and given the opportunity of ostensibly punishing her with aversive noise. Also, subjects were later asked about their desire to hurt the woman with the aversive noise (Baron & Eggleston, 1972).

The results showed that the measures assessed in the first phase successfully predicted aggressive behavior in the second phase of the research. This was apparent both in correlational data and in the results of an analysis using "causal" modeling with latent and manifest variables (Bentler, 1978, 1980; Bentler & Bonnett, 1980; Joreskog & Sorbom, 1977). Using the causal modeling

approach (See Fig. 8), a latent variable named Sexual Arousal to Rape was operationally defined by the two assessments of the rape index. A second latent factor, named Attitudes Facilitating Violence, was operationally defined by the RMA and AIV scales. A latent factor labeled Aggression Against Women was operationally defined by the levels of aversive noise and levels of the reported desire to hurt the woman. The model appearing in Fig. 8, which has causal paths from the Sexual Arousal to Rape and from the Attitudes Facilitating Violence factors to the Aggression Against Women factor was tested by the LISREL IV program (Joreskog & Sorbom, 1978). This model was found to successfully represent the data, and both of the causal paths to aggression were found to be significant. Together, the Arousal to Rape and the Attitudes Facilitating Violence factors accounted for 43% of the variance of the Aggression Against Women factor.

Malamuth and Check (1982) recently attempted to replicate and extend one aspect of the above findings—the prediction of aggression on the basis of scales measuring attitudes about aggression. In addition to the RMA and AIV scales, they administered to 76 male undergraduates a scale, specifically developed for this research, which assessed General Acceptance of Violence (GAV). The

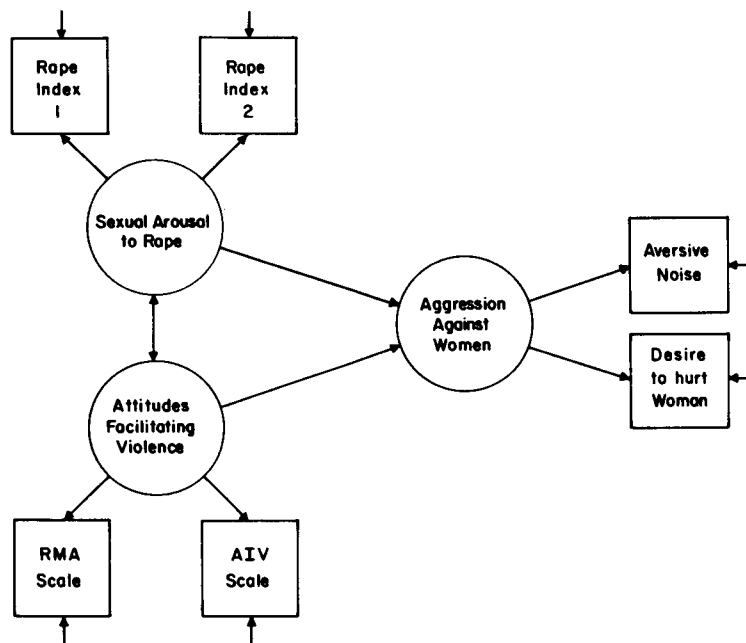


Fig. 8. Model of factors associated with real-world aggression against women as predictors of laboratory aggression. (From N. Malamuth, Factors associated with rape as predictors of laboratory aggression against women, *Journal of Personality and Social Psychology*, in press. Copyright by the American Psychological Association. Reprinted with permission of the publisher and author.)

results indicated that the RMA and AIV, but not the GAV scales successfully predicted aggression against women. These data are in keeping with the findings reported above regarding the effects of aggressive pornography in suggesting that male aggression against women may be affected by processes that differ from those that may affect male–male aggression.

V. Ethical Concerns

Some concerns have been recently raised regarding the ethics of research that exposes subjects to aggressive pornography, particularly those depictions that portray rape myths (e.g., positive outcome) (Sherif, 1980). These concerns have prompted investigators to attempt to assess the effectiveness of debriefing procedures presented following research participation (Check & Malamuth, 1981; Donnerstein & Berkowitz, 1981; Malamuth & Check, 1981a). Such debriefings have been designed to dispel rape myths by presenting more accurate information. Assessment of the effectiveness of such debriefings have been conducted as long as 4 months following research participation (Donnerstein & Berkowitz, 1981), as well as without subjects' awareness that the assessment is at all related to their earlier research participation (Check & Malamuth, 1981; Malamuth & Check, 1981a).

The findings of these studies consistently show that the overall impact of research participation (including the debriefings) is to *reduce* subjects' acceptance of rape myths. While the data indicate that the information contained within the debriefings may be sufficient for some attitude change, the combination of exposure to violent pornography that portrays rape myths and the presentation of a debriefing that specifically addresses these myths appears to be most effective in reducing rape myth acceptance (Check & Malamuth, 1981).

These data have important implications for researchers focusing on the possible detrimental effects of violence in pornography because the possibility of adversely affecting research participants could be a serious inhibitor to future research. Knowledge that a debriefing may result in the total research experience having a beneficial impact is likely to encourage future work in this area. These data, however, should not be taken as a *carte blanche* to justify any pornography exposure–debriefing procedures. It is important that researchers in this area design debriefing procedures that are appropriate for their specific materials and assess their effectiveness whenever possible (Sherif, 1980).

VI. Conclusions and Future Research

The data across the laboratory and field experiments discussed in this article support the proposition that exposure to mass media stimuli that have violent and sexual content increases the audience's aggressive-sexual fantasies, acceptance

of aggression, beliefs in rape myths, and aggressive behavior. These findings were obtained both with unedited, commercially available stimuli (e.g., feature-length films) and with edited stimuli in which systematic manipulations enabled the assessment of the impact of specific content dimensions. Effects were found directly following exposure as well as several days later. Moreover, the data indicate that individuals with relatively higher aggressive inclinations are more sexually aroused by aggressive pornography than those with lower aggressive tendencies. A bidirectional causal relationship is therefore suggested by the findings, with aggressive inclinations resulting in greater attraction to aggressive-sexual stimuli and exposure to such depictions increasing aggressive tendencies.

These data raise a variety of theoretical and empirical issues that should be addressed in future research. Particularly noteworthy are questions concerning stimuli, subject, and setting characteristics.

A. STIMULI CHARACTERISTICS

The aggressive-pornographic stimuli used in the research described in this article fall, as noted earlier, into the "blatantly" coercive category according to the distinctions suggested by Steinem (1980). Are the effects found limited to such materials or might similar effects be obtained with stimuli that more subtly or indirectly portray unequal power relations between males and females? In other words, is there a clear distinction to be made between aggressive and nonaggressive pornography or is it more accurate to distinguish sexually explicit stimuli that place emphasis on "shared pleasure" (Steinem, 1980) from aggressive pornography that varies on a continuum of blatancy? Future research should also assess the impact of sexual materials that portray unequal power relations between males and females without the explicit depiction of aggression.

A related question concerns the type of aggressive-sexual stimuli that are most likely to cause antisocial effects. The increased acceptance of aggression against women found by Malamuth and Check (1981c) occurred following exposure to movies that have been shown on national television and were clearly not X-rated pornographic films. Moreover, the primary theme of the films was not aggressive sexuality. It may be that a film that is explicitly pornographic is perceived as highly unrealistic and stimulates subjects' defenses against uncritically accepting the information conveyed. In contrast, the type of film used by these investigators may communicate more subtly false information about women's reactions to sexual aggression and thus may have more potent effects since the viewers are not "forewarned" (Freedman & Sears, 1965) by the label "X-rated" or "pornographic." Similarly, the portrayal of sexual aggression within such "legitimate" magazines as *Playboy* or *Penthouse* may have a greater impact than similar portrayals in hard-core pornography. Research is needed that

specifically examines the impact of the context within which aggressive pornography appears.

B. SUBJECT CHARACTERISTICS

While the data described herein mostly assessed the impact of aggressive pornography on subjects generally, it is important in future research to more systematically determine the relationship between subject characteristics and the impact of aggressive pornography. While, as described earlier, some work has been done on the relationship between individual differences and sexual arousal to aggressive pornography, little research has been directed at establishing the mediating effects of subject variables in relation to the impact of aggressive pornography on fantasies, attitudes, beliefs, and aggressive responses. Initial efforts in this area (Malamuth & Check, 1981b) suggest that those individuals who, from the outset, are more inclined to believe in rape myths show the greatest increase in acceptance of such myths following the presentation of aggressive pornography. Much more work is needed that systematically assesses the effects of aggressive pornography on individuals differing in such factors as aggressive tendencies, familial experiences with violence and male–female power relations, hostility toward women, previous pornographic exposure, sex-role stereotyping, and sexual experiences. The selection of particular variables should be guided by theoretical formulations such as the elicitation and disinhibition analyses discussed earlier.

C. SETTING CHARACTERISTICS

In concluding their discussion of research on the effects of mass media violence on children's aggression, Parke *et al.* (1977) stress the need to address the question, "How does this influence occur in naturalistic settings?" A similar emphasis is needed in research on aggressive pornography. While laboratory experiments provide a useful framework for determining whether aggressive pornography *can* affect aggressive tendencies (Berkowitz & Donnerstein, 1982), there is a need at this point to proceed to examine the extent to which such mass media stimuli actually exert an impact in naturalistic settings. To accomplish this goal it will be necessary to employ a multimethod approach including correlational analyses using statistical controls (e.g., causal modeling, Bentler, 1980), as well as laboratory and field experiments.

We need to obtain survey data regarding the use of aggressive and other types of pornography by differing subject populations. These data should be gathered in the context of developing theoretical models concerning the motivations for seeking such media stimuli (i.e., uses and gratifications), as well as concerning the effects of exposure. The development of models will require

information not only about pornography consumption, but about other aspects of the person. The testing of these models may require experimental research to move beyond single exposures in order to measure impact over long time periods of differing "dosages" of aggressive pornography in the context of other media stimuli. Causal modeling may prove particularly useful in testing aspects of theoretical models not amenable to experimental manipulations (e.g., the hypothesis that childhood experiences mediate the impact of pornography). Such a multiplicity of research strategies is clearly necessary if we are to fully assess the hypothesis that aggressive pornography and related mass media stimuli play a significant role in creating a cultural climate conducive to the commission of aggressive acts against women.

REFERENCES

- Abel, G. G., Barlow, D. H., Blanchard, E., & Guild D. The components of rapists' sexual arousal. *Archives of General Psychiatry*, 1977, **34**, 895-903.
- Abel, G. G., Becker, J., Murphy, W., & Flanagan, B. *Identifying dangerous child molesters*. Paper presented at the 11th Banff International Conference on Behaviour Modification, Banff, Canada, 1979.
- Abel, G. G., & Blanchard, E. B. The measurement and generation of sexual arousal in male deviates. In M. Hersen, R. M. Eisler, & P. M. Miller (Eds.), *Progress in behavior modification* (Vol. 2). New York: Academic Press, 1976.
- Abel, G. G., Blanchard, E. B., & Becker, J. V. Psychological treatment of rapists. In M. Walker & S. Brodsky (Eds.), *Sexual assault: The victim and the rapist*. Lexington, Massachusetts: Lexington Books, 1976.
- Abel, G. G., Blanchard, E. B., & Becker, J. V. An integrated program for rapists. In R. Rada (Ed.), *Clinical aspects of the rapist*. New York: Grune & Stratton, 1978.
- Amoroso, D. M., & Brown, M. Problems in studying the effects of erotic material. *The Journal of Sex Research*, 1973, **9**, 187-195.
- Bandura, A. *Aggression: A social learning analysis*. New York: Prentice-Hall, 1973.
- Bandura, A. *Social learning theory*. New York: Prentice-Hall, 1977.
- Barbaree, H. E., Marshall, W. L., & Lanthier, R. D. Deviant sexual arousal in rapists. *Behaviour Research and Therapy*, 1979, **17**, 215-222.
- Baron, R. A. The aggression-inhibiting influence of heightened sexual arousal. *Journal of Personality and Social Psychology*, 1974, **30**, 318-322.
- Baron, R. A. *Human aggression*. New York: Plenum, 1977.
- Baron, R. A., & Byrne, D. *Social psychology: Understanding human interaction*. Boston, Massachusetts: Allyn & Bacon, 1977.
- Baron, R. A., & Eggleston, R. J. Performance on the "Aggression Machine": Motivation to help or harm? *Psychonomic Science*, 1972, **26**, 321-322.
- Bart, P., & Jozsa, M. Dirty books, dirty films and dirty data. In L. Lederer (Ed.), *Take back the night: Women on pornography*. New York: Morrow, 1980.
- Bentler, P. M. The interdependence of theory, methodology and empirical data: Causal modeling as an approach to construct validation. In D. B. Kendel (Ed.), *Longitudinal research on drug use*. New York: Wiley, 1978.
- Bentler, P. M. Multivariate analysis with latent variables: Causal modeling. *Annual Review of Psychology*, 1980, **31**, 419-456.

- Bentler, P. M., & Bonnett, D. G. Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin*, 1980, **88**, 588–606.
- Berkowitz, L. The contagion of violence: An S-R mediational analysis of some effects of observed aggression. In W. J. Arnold & M. M. Page (Eds.), *Nebraska symposium on motivation* (Vol. 18). Lincoln, Nebraska: Univ. of Nebraska Press, 1970.
- Berkowitz, L. Sex and violence: We can't have it both ways. *Psychology Today*, May 1971, pp. 14–23.
- Berkowitz, L. Some determinants of impulsive aggression: Role of mediated associations with reinforcements for aggression. *Psychological Review*, 1974, **81**, 165–176.
- Berkowitz, L., & Donnerstein, E. External validity is more than skin deep: Some answers to criticisms of laboratory experiments (with special reference to research on aggression). *American Psychologist*, 1982, **37**, 245–257.
- Berkowitz, L., & Frodi, A. Reactions to a child's mistakes as affected by her/his look and speech. *Social Psychology Quarterly*, 1979, **42**, 420–425.
- Briddell, D., Rimm, D., Caddy, G., Krawitz, G., Sholis, D., & Wunderlin, R. Effects of alcohol and cognitive set on sexual arousal to deviant stimuli. *Journal of Abnormal Psychology*, 1978, **87**, 418–430.
- Brownell, K. D., Hayes, S. C., & Barlow, D. H. Patterns of appropriate and deviant sexual arousal: The behavioral treatment of multiple sexual deviations. *Journal of Consulting and Clinical Psychology*, 1977, **45**, 1144–1155.
- Brownmiller, S. *Against our will: Men, women and rape*. New York: Simon & Schuster, 1975.
- Burt, M. R. Attitudes supportive of rape in American culture. *House Committee on Science and Technology, Subcommittee Domestic and International Scientific Planning Analysis and Cooperation: Research into violent behavior: Sexual assaults*, Hearing, 95th Congress, 2nd session, January 10–12, 1978. Washington, D.C.: Government Printing Office, 1978. Pp. 277–322.
- Burt, M. R. Cultural myths and supports for rape. *Journal of Personality and Social Psychology*, 1980, **38**, 217–230.
- Carroll, J. S. The effect of imagining an event on expectations for the event: An interpretation in terms of the availability heuristic. *Journal of Experimental Social Psychology*, 1978, **14**, 88–96.
- Ceniti, J., & Malamuth, N. *Self-assessed rape proclivity: Attitudinal and sexual correlates*. In preparation, 1981.
- Cerny, J. A. Biofeedback and the voluntary control of sexual arousal in women. *Behavior Therapy*, 1978, **19**, 847–855.
- Check, J. V. P., & Malamuth, N. *Can participation in pornography experiments have positive effects?* Paper presented at the annual meeting of the American Psychological Association, Los Angeles, August, 1981.
- Check, J. V. P., & Malamuth, N. *Sex-role stereotyping attitudes and reactions to stranger and acquaintance rape*. Submitted for publication, 1982.
- Clark, L., & Lewis, D. *Rape: The price of coercive sexuality*. Toronto: Women's Press, 1977.
- Commission on Obscenity and Pornography. *The report of the commission on obscenity and pornography*. New York: Bantam, 1970.
- Cronbach, L. J., & Meehl, P. Construct validity in psychological tests. *Psychological Bulletin*, 1955, **52**, 281–302.
- Davis, K. E., & Braucht, G. N. Exposure to pornography, character and sexual deviance: A retrospective survey. *Technical reports of the Commission on Obscenity and Pornography* (Vol. 7). Washington, D.C.: U.S. Government Printing Office, 1971.
- Diamond, I. Pornography and repression: A reconsideration. *Signs: Journal of Women in Culture and Society*, 1980, **5**, 686–701.

- Donnerstein, E. Pornography and violence against women. *Annals of the New York Academy of Sciences*, 1980, 347, 277–288. (a)
- Donnerstein, E. Aggressive-Erotica and violence against women. *Journal of Personality and Social Psychology*, 1980, **39**, 269–277. (b)
- Donnerstein, E. Erotica and human aggression. In R. Geen & E. Donnerstein (Eds.), *Aggression: Theoretical and empirical reviews*. New York: Academic Press, 1983.
- Donnerstein, E. Aggressive pornography: Can it influence aggression against women. In G. Albee & J. Joffe (Eds.), *Primary prevention of psychopathology* (Vol. 7). Hanover, New Hampshire: University of New England Press, in press.
- Donnerstein, E., & Barrett, G. The effects of erotic stimuli on male aggression towards females. *Journal of Personality and Social Psychology*, 1978, **36**, 180–188.
- Donnerstein, E., & Berkowitz, L. Victim reactions in aggressive-erotic films as a factor in violence against women. *Journal of Personality and Social Psychology*, 1981, **41**, 710–724.
- Donnerstein, E., Donnerstein, M., & Evans, R. Erotic stimuli and aggression: Facilitation or inhibition. *Journal of Personality and Social Psychology*, 1975, **32**, 237–244.
- Donnerstein, E., & Hallam, J. The facilitating effects of erotica on aggression toward females. *Journal of Personality and Social Psychology*, 1978, **36**, 1270–1277.
- Eron, L. D. Prescription for reduction of aggression. *American Psychologist*, 1980, **35**, 244–261.
- Eysenck, H. J. *Sex and personality*. London: Sphere Books, 1978.
- Farkas, G. M. *Trait and state determinants of male sexual arousal to description of coercive sexuality*. Doctoral dissertation, University of Hawaii, 1979.
- Feshbach, S., Stiles, W. B., & Bitter, E. The reinforcing effect of witnessing aggression. *Journal of Experimental Research in Personality*, 1967, **2**, 133–139.
- Freedman, J., & Sears, D. Warning, distraction and resistance to influence. *Journal of Personality and Social Psychology*, 1965, **1**, 262–266.
- Gager, N., & Schurr, C. *Sexual assault: Confronting rape in America*. New York: Grosset & Dunlap, 1976.
- Geen, R. G. Perceived suffering of the victim as an inhibitor of attack induced aggression. *Journal of Social Psychology*, 1970, **81**, 209–215.
- Goldstein, M. J., Kant, H. S., Judd, L. L., Rice, C. J., & Geen, R. Exposure to pornography and sexual behavior in deviant and normal groups. *Technical reports of the Commission on Obscenity and Pornography* (Vol. 7). Washington, D.C.: U.S. Government Printing Office, 1971.
- Goranson, R. E. Media violence and aggressive behavior: A review of experimental research. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 5). New York: Academic Press, 1970.
- Hans, V. P. *Pornography and feminism: Empirical evidence and directions for research*. Paper presented at the meeting of the American Psychological Association, Montreal, September 1980.
- Hayes, S. C., Brownell, K. D., & Barlow, D. H. The use of self-administered covert sensitization in the treatment of exhibitionism and sadism. *Behavior Therapy*, 1978, **9**, 283–289.
- Henson, D., & Rubin, H. Voluntary control of eroticism. *Journal of Applied Behavior Analysis*, 1971, **4**, 37–44.
- Hull, C. L. *Principles of behavior*. New York: Appleton, 1943.
- Johnson, P., & Goodchilds, J. Pornography, sexuality, and social psychology. *Journal of Social Issues*, 1973, **29**, 231–238.
- Joreskog, K. G., & Sorbom, D. G. Structural equation models in the social sciences: Specification, estimation and testing. In P. R. Krishnaiah (Ed.), *Application of statistics*. Amsterdam: North Holland Publ., 1977.

- Joreskog, K. G., & Sorbom, D. G. *LISREL IV: Estimation of linear structural equation systems by maximum likelihoods methods*. Chicago, Illinois: National Educational Resources, 1978.
- Laws, D. R., & Holmen, M. L. Sexual response faking by pedophiles. *Criminal Justice and Behavior*, 1978, **5**, 343–356.
- Lederer, L. (Ed.). *Take back the night: Women on pornography*. New York: Morrow, 1980.
- Liebert, R. M., & Schwartzberg, N. S. Effects of mass media. *Annual Review of Psychology*, 1977, **28**, 141–173.
- Lindsley, D. B. Emotion. In S. S. Stevens (Ed.), *Handbook of experimental psychology*. New York: Wiley, 1951.
- Malamuth, N. *Erotica, aggression and perceived appropriateness*. Paper presented at the 86th annual convention of the American Psychological Association, Toronto, September 1978.
- Malamuth, N. Rape fantasies as a function of exposure to violent sexual stimuli. *Archives of Sexual Behavior*, 1981, **10**, 33–47. (a)
- Malamuth, N. Rape proclivity among males. *Journal of Social Issues*, 1981, **37**, 138–157. (b)
- Malamuth, N. Factors associated with rape as predictors of laboratory aggression against women. *Journal of Personality and Social Psychology*, in press.
- Malamuth, N., & Check, J. V. P. Penile tumescence and perceptual responses to rape as a function of victim's perceived reactions. *Journal of Applied Social Psychology*, 1980, **10**, 528–547. (a)
- Malamuth, N., & Check, J. V. P. Sexual arousal to rape and consenting depictions: The importance of the woman's arousal. *Journal of Abnormal Psychology*, 1980, **89**, 763–766. (b)
- Malamuth, N., & Check, J. V. P. *Debriefing effectiveness following exposure to pornographic rape depictions*. Paper presented at the annual convention of the Canadian Psychological Association, Toronto, June 1981. (a)
- Malamuth, N., & Check, J. V. P. *The effects of exposure to aggressive-pornography: Rape proclivity, sexual arousal and beliefs in rape myths*. Paper presented at the annual convention of the American Psychological Association, Los Angeles, August 1981. (b)
- Malamuth, N., & Check, J. V. P. The effects of mass media exposure on acceptance of violence against women: A field experiment. *Journal of Research in Personality*, 1981, **15**, 436–446. (c)
- Malamuth, N., & Check, J. V. P. *Factors related to aggression against women*. Paper presented at the annual convention of the Canadian Psychological Association, Montreal, June 1982.
- Malamuth, N., & Check, J. V. P. Sexual arousal to rape depictions: Individual differences. *Journal of Abnormal Psychology*, in press.
- Malamuth, N., Haber, S., & Feshbach, S. Testing hypotheses regarding rape: Exposure to sexual violence, sex differences, and the "normality" of rapists. *Journal of Research in Personality*, 1980, **14**, 121–137. (a)
- Malamuth, N., Heim, M., & Feshbach, S. Sexual responsiveness of college students to rape depictions: Inhibitory and disinhibitory effects. *Journal of Personality and Social Psychology*, 1980, **38**, 399–408. (b)
- Malamuth, N., Reisin, I., & Spinner, B. *Exposure to pornography and reactions to rape*. Paper presented at the 87th annual convention of the American Psychological Association, New York, August 1979.
- Malamuth, N., & Spinner, B. A longitudinal content analysis of sexual violence in the best-selling erotic magazines. *The Journal of Sex Research*, 1980, **16**, 226–237.
- Nelson, P. A. *A sexual functions inventory*. Doctoral dissertation, University of Florida, 1979.
- Parke, R. D., Berkowitz, L., Leyens, J. P., West, S. G., & Sebastian, R. J. Some effects of violent and non-violent movies on the behavior of juvenile delinquents. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 10). New York: Academic Press, 1977.
- Quinsey, V. L., & Carrigan, W. F. Penile responses to visual stimuli. *Criminal Justice and Behavior*, 1978, **5**, 333–341.

- Quinsey, V. L., & Chaplin, T. C. *Stimulus control of rapists' and non-sex offenders' sexual arousal*. Unpublished manuscript, 1981.
- Quinsey, V. L., Chaplin, T. C., & Carrigan, W. F. Biofeedback and signaled punishment in the modification of inappropriate sexual age preferences. *Behavior Therapy*, 1980, **11**, 567-576.
- Quinsey, V. L., Chaplin, T. C., & Varney, G. A comparison of rapists' and non-sex offenders' sexual preferences for mutually consenting sex, rape, and physical abuse of women. *Behavioral Assessment*, 1981, **3**, 127-135.
- Schmidt, G. Male-female differences in sexual arousal and behavior. *Archives of Sexual Behavior*, 1975, **4**, 353-364.
- Sherif, C. W. Comment on ethical issues in Malamuth, Heim, and Feshbach's "Sexual responsiveness of college students to rape depictions: Inhibitory and disinhibitory effects." *Journal of Personality and Social Psychology*, 1980, **38**, 409-412.
- Smith, D. G. The social content of pornography. *Journal of Communication*, 1976, **26**, 16-33. (a)
- Smith, D. G. *Sexual aggression in American pornography: The stereotype of rape*. Paper presented at the annual meeting of the American Sociological Association, New York City, 1976. (b)
- Steinem, G. Erotica and pornography: A clear and present difference. In L. Lederer (Ed.), *Take back the night: Women on pornography*. New York: Morrow, 1980.
- Swart, C., & Berkowitz, L. The effect of a stimulus associated with a victim's pain on later aggression. *Journal of Personality and Social Psychology*, 1976, **33**, 623-631.
- Tannenbaum, P. H. Emotional arousal as a mediator of erotic communication effects. *Technical Report of the Commission on Obscenity and Pornography* (Vol. 8). Washington, D.C.: U.S. Government Printing Office, 1971.
- Tannenbaum, P. H., & Zillmann, D. Emotional arousal in the facilitation of aggression through communication. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 8). New York: Academic Press, 1975.
- Thomas, M. H., Horton, R. W., Lippencott, E. C., & Drabman, R. S. Desensitization to portrayals of real-life aggression as a function of exposure to television violence. *Journal of Personality and Social Psychology*, 1977, **35**, 450-458.
- Tieger, T. Self-rated likelihood of raping and the social perception of rape. *Journal of Research in Personality*, 1981, **15**, 147-158.
- Time Magazine. *The porno plague*. April 5, 1976, 58-63.
- Tversky, A., & Kahneman, D. Availability: A heuristic for judging frequency and probability. *Cognitive Psychology*, 1973, **5**, 207-232.
- Village Voice. *Pretty poison: The selling of sexual warfare*. May 9, 1977, 18-23.
- Zillmann, D., Bryant, J., & Carveth, R. The effect of erotica featuring sadomasochism and bestiality on motivated intermale aggression. *Personality and Social Psychology Bulletin*, 1981, **7**, 153-159. (a)
- Zillmann, D., Bryant, J., Comisky, P. W., & Medoff, N. J. Excitation and hedonic valence in the effect of erotica on motivated intermale aggression. *European Journal of Social Psychology*, 1981, **11**, 233-252. (b)
- Zillmann, D., & Sapolsky, B. S. What mediates the effect of mild erotica on annoyance and hostile behavior in males? *Journal of Personality and Social Psychology*, 1977, **35**, 587-596.