

Repeated Exposure to Violent and Nonviolent Pornography: Likelihood of Raping Ratings and Laboratory Aggression Against Women

Neil M. Malamuth and Joseph Centi

University of California, Los Angeles (N.M.M.) and University of Manitoba, Winnipeg, Canada (J.C.)

.....

This study examined the relatively long-term effects of repeated exposure to violent and nonviolent pornography on males' laboratory aggression against women. Self-reported likelihood of raping was also assessed as an individual differences variable that might mediate susceptibility to the effects of pornography and to ascertain whether it predicted actual aggressive behavior. Subjects were randomly assigned to the sexually violent, sexually nonviolent, or control exposure conditions. Those assigned to the sexually violent or sexually nonviolent conditions were exposed over a four-week period to ten stimuli including feature-length films and written and pictorial depictions, whereas control subjects were not exposed to any stimuli. About a week following the end of the exposure phase, subjects participated in what they believed to be a totally unrelated experiment in which aggression was assessed within a Buss paradigm. Exposure to the violent or nonviolent pornographic stimuli was not found to affect laboratory aggression. These data are discussed in terms of a recent analysis of media effects emphasizing the temporary activation of ideas in audiences' minds. Likelihood of raping ratings was found to predict laboratory aggression.

.....

Key words: pornography, aggression, rape, media, women

INTRODUCTION

An increasing number of writers have voiced concern over the potentially harmful effects of aggressively toned (or violent) pornography¹ on men's attitudes and behaviors toward women. For example, feminist writers [Brownmiller, 1975; Clark and Lewis, 1977; Burt, 1980; Steinem, 1980] consistently and adamantly have argued that

Received November 28, 1984; accepted April 17, 1985.

Address reprint requests to Neil M. Malamuth, Communication Studies, 232 Royce Hall, UCLA, Los Angeles, CA 90024.

¹The term pornography is used herein to refer to sexually explicit stimuli without any pejorative meaning necessarily intended.

aggressive pornography portrays women in a dehumanizing and degrading fashion and that it "promotes a (cultural) climate in which acts of sexual hostility directed against women are not only tolerated but ideologically encouraged" [Brownmiller, p 444].

There has recently been considerable research examining the above assertions [for reviews see Malamuth and Donnerstein, 1982, 1984]. This research has focused primarily on three types of dependent measures: attitude, sexual arousal, and aggressive behavior. We will briefly summarize the findings for each of these three measures. Growing evidence indicates that exposure to violent pornography and similar images in mainstream films may change males' attitudes and perceptions [eg, Malamuth and Check, 1980, 1981, and in press; Malamuth et al, 1980; Linz et al, 1984] so that some males become more accepting of violence against women and more likely to believe in "rape myths." As well, recent research [Zillmann and Bryant, 1984] suggests that some types of nonviolent pornography may have similar negative effects on attitudes. On the other hand, there has not been much support for the assertion that exposure to aggressive pornography increases a person's sexual responsiveness to such stimuli. A nonsignificant trend in one study [Malamuth et al, 1980] suggested that if subjects first read a sadomasochistic portrayal, their subsequent reported sexual arousal to a rape scene presented shortly afterwards tended to be heightened. Later research, however, did not confirm this finding. Failure to find a sexual-arousal-enhancement effect of exposure to aggressive pornography occurred with single presentations [Malamuth, 1981a; Malamuth and Check, 1980] as well as with repeated presentations over a period of several weeks with four aggressive-pornographic feature-length movies [Ceniti and Malamuth, 1984].

An important line of research has examined the potential impact of exposure to pornography on aggressive behavior. A number of studies employed the "Buss paradigm" [Buss, 1961] immediately following exposure to sexually violent or non-violent stimuli [Donnerstein, 1980a,b; 1984; Donnerstein and Berkowitz, 1981; Malamuth, 1978]. The consistent finding has been that exposure to violent pornography increases aggressive behaviors toward female confederates in comparison to exposure to nonaggressive pornography or to neutral stimuli. These studies were single-session experiments analyzing immediate effects on aggression (ie, within minutes following exposure) rather than more long-lasting changes.

While exposure to certain types of pornography may have effects on responses such as attitudes and aggression, it is likely that such effects occur only for some subjects. It is therefore important to examine individual differences in susceptibility to the influences of pornographic media. Indeed, Malamuth and Check [in press] found that males with higher self-reported likelihood of raping (a measure of aggressive inclination) were more likely to show changes in beliefs about rape victims following exposure to aggressive pornography than men with lower self-reported likelihood of raping. The present study also used subjects' self-reported likelihood to rape (LR) as a measure of individual differences. This measure has been employed in various studies [Briere and Malamuth, 1983; Check and Malamuth, 1983a, 1983b; Malamuth, 1981a,b; Malamuth and Check, 1980, 1983; Malamuth et al, 1980; Tieger, 1981] and has been reviewed by Malamuth [1981b; 1984]. The results consistently showed a relationship between one's reported likelihood to rape and responses associated with convicted rapists such as sexual arousal to rape stimuli, callous attitudes toward rape, beliefs in rape myths, and hostility toward women. Also, Malamuth [1982] and Smith

and Malamuth [in preparation] reported a significant association between LR ratings and subjects' reports that they have used force against females in date situations and may do so again. However, no published study to date has examined whether LR ratings are associated with an "objective" measure of aggression such as the delivery of aversive noise against a female confederate.

The present study was designed to investigate the relatively long-term effects of repeated exposure to violent and nonviolent pornography on males' laboratory aggression against women. To avoid "demand characteristics" [Orne, 1961], subjects participated in two supposedly separate experiments. The exposures occurred in the "first" study and behavioral effects were examined in the "second" study. It was expected that the delay between the independent variable (ie, exposures) and dependent variable (ie, behavioral effects) would minimize subjects' awareness of the true purpose of the research. LR was employed as a measure of individual differences that might mediate exposure effects. The potential relation between this measure and laboratory aggression was also investigated. We hypothesized that higher LR ratings would predict more aggressive responses against the woman in the laboratory interaction.

METHOD

Subjects

Forty-two men participated in the three phases of the study, which were conducted by male experimenters. The men were recruited from 69 subjects in an experiment on sexual responsiveness to sexually violent and nonviolent stimuli [Ceniti and Malamuth, 1984]. This original sample was recruited through classified advertisements in two university newspapers and from the university's subject pool to participate in sexual research (referred to below as the sexual response study). At the end of the sexual response study, subjects were informed of a putatively unrelated experiment that dealt with extrasensory perception (ESP). Of the 42 subjects who agreed to participate in the ESP study, one was a former student who was currently a practicing engineer while the others were college undergraduates. As indicated below, questionnaire data verified that subjects were not aware of any connection between these two supposedly unrelated experiments, which were separated in time by at least 3 days and in most cases by 1–2 weeks.

Phase I: Likelihood to Rape

Each subject's self-reported likelihood to rape was obtained on two separate occasions—ie, before and after the exposures in the sexual response study. In both instances every subject completed a questionnaire which assessed various sexual and other issues and which included an item asking the subject to indicate his likelihood to rape if he was assured that he would not be caught and punished—ie, Likelihood to Rape (LR) index. For purposes of the analysis of variance, if the subject indicated no likelihood to rape (score of 1 on a 5-point scale), he was classified as Low LR. If he indicated some likelihood to a rape (score of 2 or more), he was classified as High LR.

Phase II: Exposure Phase

This phase consisted of three stages conducted by the same experimenter that administered the questionnaire in the first phase of the research.

Preexposure. Each subject individually attended a laboratory session (ie, preexposure session). Here, three written and three pictorial stories of 2–3 minutes in duration were presented. The first story was a written portrayal of a woman masturbating. The second and third stories involved written portrayals of rape and nonrape, respectively. These are described in greater detail elsewhere [Ceniti and Malamuth, 1984].

Exposure. Subjects were assigned randomly to the sexually violent (SV), sexually nonviolent (SNV), or control (C) exposure conditions. Approximately 4 weeks after the preexposure session, those in the SV condition were exposed to six soft-core, feature-length films—two per week for 3 consecutive weeks. The films in the order presented were *Shivers*, *Portrait of Seduction*, *Harem Keeper*, *Chorus Call*, *Story of O*, and *Super Vixens*. With the exception of *Shivers* and *Chorus Call*, these films contained elements of sexual violence such as rape and sadomasochism. For the subsequent fourth week, subjects were given two chapters portraying nonviolent pornography [Holliday, 1978] and sadomasochism [Thorton, 1968] and narrative-pictorials of rape [*Adelina*, 1980] and lesbianism [*Adelina*, 1980] to read or view in the privacy of their homes.

During this same 4-week period, subjects in the SNV condition were also exposed to six soft-core, feature-length films—two per week for 3 consecutive weeks. These stimuli depicted sexually nonviolent activities only. The films in the order presented were *Blue Ecstasy*, *Sex World*, *Celestine*, *Chorus Call*, *Love Airlines*, and *Private Pleasures*. In the fourth week, these subjects were given two separate chapters depicting sexually nonviolent activities [Holliday, 1978; Sommers, 1978] and descriptive pictorials of a woman masturbating [*Adelina*, 1980] and of lesbianism [*Adelina*, 1980] to view at home.

Throughout the 4 weeks of exposure, subjects in the control group were not given any materials by the experimenter.

Postexposure. Two to three days following the above 4-week exposure period, each subject returned for another laboratory session (ie, postexposure session) in which sexual arousal was assessed to six stories similar in order, theme, and medium to those in the preexposure session. Data for the sexual arousal measures employed are reported in detail by Ceniti and Malamuth [1984].

Phase III: Aggression Assessment

Assignment to ESP Roles. The third phase of the research was conducted by a different experimenter than the one conducting the two previous phases. In the third phase of the research (the ESP experiment), each subject was introduced to a female confederate posing as another subject. They were told that they would be taking part in a study to determine the extent to which punishment affects performance on an ESP task. They were subsequently placed in adjoining rooms. The male subject, who was assigned the role of transmitter by a bogus lottery, was instructed to sit in front of a video terminal and to attempt to send a series of numbers ranging from 1–4 to the confederate (receiver) for 20 trials. If the receiver guessed incorrectly, the subject was instructed to make his own decision regarding the extent of punishment by choosing one of the numbers 1–7, with each number increasing the aversiveness of the noise stimuli. If the receiver guessed correctly, the subject was told to reward the receiver by pressing the reward key a maximum of 5 times, with each press earning the receiver 8¢. The instructions also indicated that research has shown that punish-

ment has a negative effect on the receiver's performance but that the findings were not fully conclusive. This statement was made in light of the research of Baron and Eggleston [1972] indicating that it is important to emphasize the negative impact of the punishment to be able to define performance on the "aggression machine" as hostile aggression.

The computer was programmed to give the same series of responses to each subject, with 5 being correct and 15 incorrect. The primary dependent measure of behavioral aggression was the average intensity of aversive noise delivered across the 15 trials.

Anger Inducement. Prior to proceeding with the ESP task, the subject and confederate filled out an attitude questionnaire on political and social issues, on the pretext that "subjects who see themselves as being similar to each other tend to perform better on ESP tasks." The subject was told that the receiver and he would exchange their questionnaires when completed. Upon completion the experimenter gave the transmitter a questionnaire, which ostensibly had been completed by the receiver, with responses generally at the other end of the scale from those the subject had selected. Both the subject and the confederate were then asked to read the other's responses and to write a brief evaluation of the other, based on the answers given on the questionnaires and certain guiding questions presented by the experimenter. They were then told that these evaluations would be exchanged on completion. The evaluation prepared by the confederate was the same for each subject and was of a negative nature, with the confederate indicating that she would not consider becoming involved with or ever date such a "narrow-minded" and "phony" individual.

Questionnaire and Debriefing. At the completion of the 20 ESP trials, each subject filled out a post-task questionnaire. Additional dependent variables of this study were two of the items on this questionnaire: A 5-point item inquiring about subjects' anger toward the receiver, and a 7-point item inquiring about the degree to which the subject wanted to hurt the receiver with the aversive noise [Baron and Eggleston, 1972].

After the questionnaire was completed, subjects received a form that inquired about their perceptions of the research. They were asked about the purpose of the study and whether they thought this research was related to any other study in which they participated. Two raters, "blind" to the subjects' performance, independently rated these forms and determined that none of the subjects was aware of any association between the ESP experiment and the previous sexual response study.² Subjects were also fully debriefed about the experiment.

Subjects later attended a second debriefing session associated solely with the sexual response study. Those who had not chosen to participate in the ESP experiment were also in attendance. In this session, they were given a handout outlining the purpose and procedure of the study and specifying that some types of pornographic materials may perpetuate myths regarding sexual violence and rape. A group discussion concerning the details and purpose of the study ensued. Recent data by Donnerstein and Berkowitz [1981], Check and Malamuth [1984], and Malamuth and Check [1984] suggest that this type of debriefing may be effective in counteracting undesirable

²A few subjects were rated as expressing varying degrees of suspiciousness regarding the "Buss" paradigm (eg, whether the victim was actually receiving the aversive noise). Analyses performed without these subjects showed essentially the same conclusions as those presented with all subjects.

effects of exposure to pornography, especially in reducing subjects' acceptance of rape myths.

RESULTS

Likelihood to Rape

LR scores were obtained before and after the exposures to the various pornographic stimuli (pre-LR and post-LR, respectively). An ANOVA with the post-LR as the dependent variable and the pre-LR and Exposure as the independent variables was conducted to determine whether the LR ratings were affected by the exposure. Results revealed no significance for the exposure variable nor any interaction. However, the pre-LR factor did achieve significance, $F(1,37) = 9.43, p < .004$. This effect simply reflects a consistency in subjects' LR ratings despite the intervening exposures to pornographic stimuli.³

Subsequently, correlational analyses among the three dependent variables associated with aggression toward the female confederate (intensity of noise level, anger, and desire to hurt the receiver) and subjects' self-reported likelihood to rape on both pre- and postquestionnaires were performed. In this instance, the original raw data with responses ranging from 1-5 were employed rather than the dichotomous LR index used in the ANOVA. Since a directional hypothesis had been made [Hick, 1971], the correlations were evaluated with one-tailed tests.

Using the prequestionnaire responses, Table I shows that the relationship between likelihood to rape (pre-LR) ratings and noise intensity as well as between pre-LR ratings and reported desire to hurt the receiver approached significance. The relationship with anger, while in the expected direction, was not statistically significant. In respect to the postquestionnaire response, subjects' reported likelihood to rape (post-LR) was significantly correlated with all three dependent measures of aggressive responses (see Table I). Correlations between LR ratings and the rewards administered were insignificant using both the pre- and post-LR ratings.

Exposure Effects

A multivariate analysis of variance (MANOVA) with pre-LR dichotomous variable and Exposure (SV,SNV,C) as the independent factors on the four dependent variables (noise intensity, anger, desire to hurt and reward) was performed. A separate MANOVA using the post-LR scores was also conducted. The results were very similar in both analyses. They revealed no significant effects nor any effects approaching significance at the multivariate or univariate levels on any of the dependent measures. Examination of the cell means also did not suggest any consistent pattern.

DISCUSSION

With respect to likelihood of raping reports, the data on the whole suggest some relationship with aggressive behavior. While the dichotomizing of these reports did not result in a significant main effect in the ANOVA, the correlational data using the continuous variable did suggest relationships between LR ratings and the key measure

³Computing the correlation between pre-LR and post-LR ratings (ie, test-retest reliability) yielded a value of $r(40) = .70, p < .0001$.

TABLE I. Correlations Between Aggression Measures (noise intensity, anger, desire to hurt) and Likelihood to Rape (LR) Indices (Pre- and Post-Exposure)

LR index	Aggression correlates		
	Noise intensity	Anger	Desire to hurt
Preexposure LR	.20 ^a	.16	.23 ^a
Postexposure LR	.32 ^b	.36 ^c	.37 ^c

^ap < .10, one-tailed.

^bp < .02, one-tailed.

^cp < .009, one-tailed.

of aggression (ie, noise intensity). These data provide additional support for the validity of LR ratings as one index of inclinations to aggress against women that may under some circumstances be reflected in overt behaviors. Particularly noteworthy is the fact that the laboratory aggression predicted did not have any sexual elements. These data provide further support for the assertion that diverse acts of aggression against women may share some similar underlying causes [see Malamuth, 1983 for a more detailed discussion of this issue].

With respect to exposure effects, the results did not reveal that repeated exposure to violent or nonviolent pornography had any significant effect on laboratory aggression against women. These findings appear to be inconsistent with previous data showing that exposure to violent pornography may increase males' laboratory aggression toward women [eg, Donnerstein, 1980a,b; 1984; Donnerstein and Berkowitz, 1981; Malamuth, 1978]. The most apparent explanation for this discrepancy is that earlier investigations examined immediate effects (ie, in same session that exposures were presented) whereas the present experiment tested for relatively long-term effects. It may be that exposure to violent pornography might have an immediate impact on aggressive behavior against women but this effect may dissipate quickly over time.

This possibility is consistent with a recent analysis of media effects by Berkowitz [1984]. He asserts that in many instances, mass media exposure produces only short-lived effects because its influence stems largely from the temporary activation in audiences' minds of ideas that may intensify the viewers' existing behavioral tendencies. He suggests, however, that "retrieval cues" that may occur in the environment at a later point may reactivate the message presented in the media and once again strengthen the potential expression of behavioral inclinations. This perspective is well illustrated in a recent study by Josephson [1982]. In this experiment, deliberately frustrated males of elementary school age were shown part of a popular television program that was either violent or nonviolent in nature. Later, subjects played a game of floor hockey in which they could engage in naturalistic aggression against their opponents. In the violent television program, the villains had used walkie-talkie radios, so Josephson assumed that this object could serve as a retrieval cue that would reactivate in subjects' memories associations with the violent media exposure. The findings showed that only the combination of exposure to violent media and the presence of a retrieval cue (ie, the walkie-talkie) resulted in significant increases in aggressive behavior.

The impact of violent pornography may, in keeping with the position outlined above, involve two processes. First, exposure to messages in violent pornography suggesting that aggression against women has positive consequences, is justified or is erotic, may implant and/or strengthen these ideas in the audience as well as stimulate certain arousal processes that might "energize" aggressive responses. Second, behavioral tendencies to aggress may be increased only if effects are measured immediately following exposure or if retrieval cues reactivate violent pornography's messages when a later opportunity to aggress exists. To properly address this possibility it would be necessary to include within the same experiment both immediate and delayed assessments following exposure to violent pornography rather than only the delayed assessment used in the present study. Further research might also vary the presence of retrieval cues in the environment in which an opportunity to aggress occurs.

ACKNOWLEDGMENT

This research was facilitated by grants to the first author from the Social Sciences and Humanities Research Council of Canada. Portions of this paper were presented at the Annual Meetings of the American Psychological Association, Toronto, Canada, August 1984.

REFERENCES

- Adelina. (1980, February).
- Baron RA, Eggleston RJ (1972): Performance on the "aggression machine": Motivation to help or harm? *Psychonomic Science* 26:321-322.
- Berkowitz L (1984): Some effects of thoughts on anti- and prosocial influences of media events: A cognitive-neoassociation analysis. *Psychological Bulletin* 95:410-427.
- Briere J, Malamuth NM (1983): Self-reported likelihood of sexual aggression: Attitudinal vs. sexual explanations. *Journal of Research in Personality* 17:315-323.
- Brownmiller S (1975): "Against Our Will: Men, Women, and Rape." New York: Simon and Schuster.
- Burt MR (1980): Cultural myths and supports for rape. *Journal of Personality and Social Psychology* 38:217-230.
- Buss A (1961): "The Psychology of Aggression." New York: John Wiley & Sons.
- Ceniti J, Malamuth NM (1984): Effects of repeated exposure to sexually violent or nonviolent stimuli on sexual arousal to rape and nonrape depictions. *Behaviour Therapy and Research* 22:535-548.
- Check JVP, Malamuth NM (1983a, June): "The Hostility Toward Women Scale." Paper presented at the Western Meetings of the International Society for Research on Aggression, Victoria, Canada.
- Check JVP, Malamuth NM (1983b): Sex role stereotyping and reactions to depictions of stranger versus acquaintance rape. *Journal of Personality and Social Psychology* 45:344-356.
- Check JVP, Malamuth NM (1984): Can there be positive effects of participation in pornography experiments? *The Journal of Sex Research* 20:14-31.
- Chic. (1977, September).
- Clark L, Lewis D (1977): "Rape: The Price of Coercive Sexuality." Toronto, Canada: The Women's Press.
- Donnerstein E (1980a): Aggressive-Erotica and violence against women. *Journal of Personality and Social Psychology* 39:269-277.
- Donnerstein E (1980b): Pornography and violence against women. *Annals of the New York Academy of Sciences* 347:277-288.
- Donnerstein E (1984): Pornography: Its effect on violence against women. In NM Malamuth and E Donnerstein (eds). "Pornography and Sexual Aggression." New York: Academic Press.
- Donnerstein E (1984): Pornography: Its effect on violence against women. In Malamuth NM and Donnerstein E (eds): "Pornography and Sexual Aggression." New York: Academic Press.
- Eysenck HJ, Nias DKB (1978): "Sex, Violence, and the Media." New York: St. Martin.
- Eros. (1978, January).
- Hick WE (1971): A note on one-tailed and two-

- tailed tests. In Steger JA (ed): "Readings in Statistics for the Behavioral Scientist." New York: Holt, Rinehart & Winston.
- Holliday D (1978): "Laverne's Fire Island Party." Norwalk, CT: Midwood Book.
- Josephson W (1982): "The Effects of Violent Television Upon Children's Aggression. Elicitation, Disinhibition or Catharsis?" Unpublished doctoral dissertation, University of Manitoba, Winnipeg, Canada.
- Linz D, Donnerstein E, Penrod S (1984): The effects of multiple exposures to filmed violence against women. *Journal of Communication* 34:130-147.
- Malamuth NM (1978): "Erotica, Aggression, and Perceived Appropriateness." Paper presented at the 86th annual convention of the American Psychological Association, Toronto.
- Malamuth NM (1981a): Rape fantasies as a function of exposure to violent-sexual stimuli. *Archives of Sexual Behavior* 10:33-47.
- Malamuth NM (1981b): Rape proclivity among males. *Journal of Social Issues* 37:138-157.
- Malamuth NM (1982): "Predictions of Aggression Against Females as Compared to Male Targets of Aggression." Paper presented at the Annual Meetings of the American Psychological Association, Washington, DC.
- Malamuth NM (1983): Factors associated with rape as predictors of laboratory aggression against women. *Journal of Personality and Social Psychology* 45:432-442.
- Malamuth NM (1984): Aggression against women: Cultural and individual causes. In NM Malamuth and E Donnerstein (eds): "Pornography and sexual aggression." New York: Academic Press.
- Malamuth NM, Check JVP (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 NM, Check JVP (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 NM, Check JVP (1982): "Factors Related to Aggression Against Women." Paper presented at the annual convention of the Canadian Psychological Association, Montreal.
- Malamuth NM, Check JVP (1983): Sexual arousal to rape depictions: Individual differences. *Journal of Abnormal Psychology* 92:55-67.
- Malamuth NM, Check JVP (1984): Debriefing effectiveness following exposure to pornographic rape depictions. *The Journal of Sex Research* 20:1-13.
- Malamuth NM, Check JVP (in press): The effects of aggressive-pornography on beliefs in rape myths: Individual differences. *Journal of Research in Personality*.
- Malamuth NM, Donnerstein E (1982): The effects of aggressive-pornographic mass media stimuli. In Berkowitz L (ed): "Advances in Experimental Social Psychology, Vol. 15." New York: Academic Press.
- Malamuth NM, Donnerstein E (eds) (1984): "Pornography and Sexual Aggression." New York: Academic Press.
- Malamuth NM, Haber S, Feshbach S (1980): Testing hypotheses regarding rape: Exposure to sexual violence, sex differences and the "normality" of rape. *Journal of Research in Personality* 14:121-137.
- Orne M (1961): On the social psychology of the psychological experiment: With particular reference to demand characteristics and their implications. *American Psychologist* 17:776-783.
- Smith R, Malamuth NM (in preparation). Discriminating likelihood of raping reports. Unpublished manuscript.
- Sommers H (1978): "Nympho Nurse." New York: Pleasure Books.
- Steinem G (1980): Erotica and pornography: A clear and present difference. In Lederer L (ed): "Take Back the Night: Women on Pornography." New York: William Morrow and Co.
- Thornton W (1968): "Bondage and Desire." New York: Crusader Classics.
- Tieger T (1981): Self-reported likelihood of raping and the social perception of rape. *Journal of Research in Personality* 15:147-158.
- Zillmann D, Bryant J (1984): Effects of massive exposure to pornography. In Malamuth NM and Donnerstein E (eds): "Pornography and Sexual Aggression." New York: Academic Press.