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## **Women's Evaluations of and Affective Reactions to Mainstream Violent Pornography, Nonviolent Pornography, and Erotica**

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Women's reactions to three types of sexually explicit materials were examined. Ninety-six female undergraduates completed questionnaires measuring previous exposure to pornography, past history of coercive sexual experiences, attitudes toward feminism, hostility toward men, adversarial sexual beliefs, and rape myth acceptance. They were then randomly assigned to one of four conditions: (a) erotica, (b) nonviolent pornography, (c) violent pornography, and (d) control. They viewed 50 slides during each of two 30-minute sessions, completed a measure of mood disturbance, and evaluated each slide. The erotica was evaluated positively, while the pornography was evaluated negatively, and the violent pornography was evaluated more negatively than the other three conditions. Mood disturbance increased significantly from pre- to postexposure in the violent and nonviolent pornography conditions only. In addition, women with past coercive sexual experiences evaluated pornography more negatively and erotica more positively than women who had no such experience.

Although "pornography"<sup>1</sup> is created largely for the male consumer, its pervasiveness virtually ensures that the majority of women will be exposed to it at some point in their lifetimes, whether or not they seek it out. Several feminist theorists have suggested that women are affected at a psychological level by images that show the female body subjected to painful and demeaning treatment (e.g., Vivar, 1982; Brownmiller, 1975). Recent empirical work suggests a link between exposure to certain kinds of sexually explicit materials and violence toward women (Malamuth & Donnerstein, 1984; Russell, 1988), although this remains highly controversial (Donnerstein, Linz, & Penrod, 1987). This study focused on women's reactions to sexually explicit stimuli as this area has received relatively little attention. Moreover, although the effects may be subtle, they are likely to affect large numbers of women and to be of interest to health care professionals.

Sexually explicit media portrayals can vary considerably in their content, and only some types of images may have negative effects on women. Yet, few researchers have systematically compared women's reactions to various types of clearly identified stimuli

in order to determine what characteristics of the images affect their reactions. Moreover, within the research literature there is no single agreed-upon definition of "pornography," let alone a set of definitions with which to classify all sexually explicit images. In addition, it is sometimes difficult to determine from the researchers' descriptions whether the stimuli were developed for educational purposes or with artistic or entertainment goals in mind.

The presence/absence of violence has been of recent concern (Kelley, 1985a), but there has been less interest in distinguishing between nonviolent sexually explicit materials which contain sexist themes and those which do not. Feminists such as Steinem (1980) have argued that subtle expressions of exploitation and inequality as well as those stimuli containing explicit violence may be harmful. Check (1984; cited in Check & Malamuth, 1986) attempted to make this distinction, using three categories of sexually explicit materials identified as (a) sexually violent, (b) nonviolent dehumanizing, and (c) erotica, but there was no verification that the stimuli selected belonged in their assigned categories or that people can reliably discriminate between the categories. Also, the research participants were all male. More recently, Donnerstein et al. (1987) developed a six-category typology that is applicable to a variety of media. They distinguished between low- and high-degradation sexually explicit stimuli, violent pornography, nonexplicit sexual aggression, sexualized explicit violence against women, and negative-outcome rape depictions. This typology was used in a review of the literature to classify the stimuli used in previous research which did not necessarily involve a direct comparison of different types of sexually explicit images. In this study we directly compared women's reactions to three types of sexually explicit stimuli similar to those used by Check (1984). The stimuli were selected on the basis of carefully worded operational definitions of the categories and were reliably classified into categories by five independent raters. As far as we know, this is the first study to systematically compare women's reactions to erotica with their reactions to pornography.

The categories employed were labeled (a) erotica (nonsexist and nonviolent), (b) nonviolent pornography (nonviolent but sexist), and (c) pornography (violent and sexist). Sex education materials were specifically excluded as irrelevant to concerns about harm to women. The categories were not distinguished in terms of the nature of the sexual act, and it was assumed that all forms of sexual behavior could occur in any or all of the categories. Erotica was defined as images that have as their focus the depiction of "mutually pleasurable sexual expression between people who have enough power to be there by positive choice" (Steinem, 1980, p. 37). They have no sexist or violent connotations and are hinged on equal power dynamics between individuals as well as between the model(s) and the camera/photographer (Sontag, 1977). Nonviolent pornography included images that have no explicitly violent content but may imply acts of submission or violence by the positioning of the models or the use of props. They may also imply unequal power relationships by differential dress, costuming, positioning (Steinem, 1980), or by setting up the viewer as voyeur (the model is engaged in some solitary activity and seems totally unaware or very surprised to find someone looking at her; Parker & Pollock, 1981). Finally, violent pornography consisted of images that portray explicit violence of varying degrees perpetrated against one individual by another. This category also included images which portray self-abuse or self-mutilation (Longino, 1980) as well as images where no actual violence is occurring, but the model appears to be suffering from the aftermath of abuse.

Byrne's (1977) theory of the Sexual Behavior Sequence was the source of our main predictions. According to this theory, dispositional variables influence the psychological

reaction to sexually explicit stimuli (i.e., sexual arousal and affect) which in turn influence attitudes and behavior. We focused on affective and evaluative (i.e., attitudinal) reactions to the stimuli because we were interested in women's thoughts and feelings about the images as a first step in the study of how "pornography" shapes women's views of themselves. Previous research on the effects of sexually explicit stimuli that has included women as research participants has typically compared their responses to those of men. In general, affective and evaluative responses are more positive for males than for females (Becker & Byrne, 1985; Byrne, Fisher, Lamberth, & Mitchell, 1974; Schmidt, 1975) except when they depict same-sex masturbation (Kelley, 1985b) or subjects are erotophobic and the materials are sexually explicit (Kelley, 1985a). When females are compared to one another, their reactions also seem to depend on the test stimuli. For example, Kelley (1985b) reported that females scoring low on sex guilt reacted in the same fashion to heterosexual and same-sex masturbation depictions but were significantly more negative about depictions of opposite-sex masturbation. In another relevant study, females reacted more positively to a film portraying nonviolent sexual activity than to a film portraying sexual aggression (Kelley, 1985a). In general, these findings suggest that further research ought to carefully consider the characteristics of the stimuli in studying reactions to sexual explicitness. Specifically missing are data concerning women's reactions to nonviolent material that is sexist compared to that which is nonsexist. One goal of the present study then was to fill this gap in the literature.

In order to assess affective and evaluative responses, we included a measure of the participants' attitudes toward the stimuli and assessed changes in mood after exposure to the stimuli. The attitudinal measure consisted of adjectives selected from the evaluative domain of the Semantic Differential (Osgood, Suci, & Tannenbaum, 1957). It was expected that violent and nonviolent pornography would be rated less positively on the Semantic Differential measure than erotica or control slides. The Profile of Mood States (POMS; McNair, Lorr, & Droppleman, 1971) with its six mood subscales was used to establish a reliable measure of mood before and after exposure to the slides. The subscales were combined to yield a total mood disturbance score which was expected to increase following exposure to sexism and violence in sexually explicit materials. Exposure to erotica was expected to have no effect or to have effects in the opposite direction to those hypothesized for violent and nonviolent pornography. Finally, based on the theory of the Sexual Behavior Sequence we expected a relationship between the ratings on the Semantic Differential and self-reported mood (Byrne, 1977; Byrne et al., 1974). The individual difference variables that we chose to examine included rape myth acceptance and adversarial sexual beliefs (Burt, 1980), previous coercive sexual experiences (Koss & Oros, 1982), attitudes toward feminism (Smith, Ferree, & Miller, 1975), hostility toward men (Check, Elias, & Barton, 1987), and negative experiences with pornography (Russell, 1980). As pornography involves an imbalance in power expressed in a sexual context, it was hypothesized that attitudes about the nature of sexual relationships between men and women would be related to women's perceptions of such materials. Experience with coercion in male-female relationships and/or the coercive use of sexually explicit materials were expected to be strongly related to reactions to pornography with women who had experienced more violence and coercion being more negative about images which reflected this type of behavior. In addition, Cowie (1977) has commented that pornographic images "exist together with the images (positive or negative) women already have of themselves, their mothers, and women generally" (p. 23). On this account women with nontraditional

attitudes about the role of women (i.e., high on attitudes toward feminism) and/or extremely negative attitudes toward men (i.e., high on hostility toward men) are likely to be particularly negative in their reactions to violent pornography. It was hypothesized that these relationships would be strongest within the violent pornography condition and present to a lesser extent in the nonviolent pornography condition due to the difference in how explicitly the power imbalance is portrayed.

## METHOD

### Research Participants

Ninety-eight female University of Calgary undergraduates, ages 18 to 43 ( $M = 22.22$ ,  $SD = 5.94$ ), were randomly selected from the psychology department subject pool. During the initial contact by telephone, they were informed that (a) the experiment involved rating the characteristics of slides which might include sexually explicit and/or violent content, (b) their participation in the study was confidential with all questionnaires and ratings forms being identified only by their subject number, (c) they would be required to participate in four sessions for a total of three hours and, (d) they would receive \$5.00 upon completion of the experiment. At this point, two women declined to participate due to the sexually explicit nature of the experimental stimuli. In addition, due to the nature of the stimuli, one woman chose to withdraw from the experiment following a single exposure session in the violent condition. She was debriefed and paid in the third session, and another subject was recruited to replace her. Thus, the final sample was composed of 96 women.

### Stimuli

The experimental stimuli were sexually explicit images obtained from three magazines (*Playboy*, *Penthouse*, and *Hustler*) and two books ("Rising Goddess" and "Women's Experience of Sex"). Five female raters independently classified 310 slides<sup>2</sup> into the three categories discussed previously, i.e., (a) erotica, (b) nonviolent pornography, and (c) violent pornography, according to the researcher's operational definitions.<sup>3</sup> All five raters agreed on the classification of 131 (42%) of the slides, four out of five agreed on the classification of another 99 (32%) slides, and three or fewer agreed on the classification of the remaining 80 (26%) slides. Using the effective reliability index (Rosenthal, 1984), the interrater reliability was .93. For each of the three categories, 75 slides with the highest levels of agreement were selected from the slide pool. Attempts were made to ensure common content in the three conditions. All three contained images of simulated heterosexual petting and intercourse, heterosexual and lesbian oral-genital contact, and so on. The control condition consisted of 75 slides depicting nature and scenery.

### Measures

The Sexual Experiences Survey (SES; Koss & Gidycz, 1985) is a measure of sexual victimization consisting of 10 descriptions of coercive sexual experiences, and has a reported internal consistency of .74 for women and test-retest reliability of 93%. Women's self-reports of coercive sexual experiences correlated .73 with their reports in a face-to-face interview. Burt (1980) developed both the Rape Myth Acceptance (RMA) scale,

which taps agreement with the most commonly held myths about rape and rape victims, and the Adversarial Sexual Beliefs (ASB) scale, which assesses the belief that intimate relationships are based on exploitation, manipulation, lying, cheating, and distrust. The Cronbach's alphas for each scale are .88 and .80, respectively. Scores on the ASB scale predicted subsequent aggression of men against women within a laboratory paradigm (Malamuth & Check, 1982), and scores on RMA correlated significantly with self-reported likelihood of raping in a male sample (Malamuth, 1984). The Attitudes Toward Feminism scale (ATF; Smith, Ferree, & Miller, 1975) taps agreement with the central tenets of feminism. It has an interitem reliability of .91 and correlated positively with measures of activism within the women's movement and identification with the women's movement. The Hostility Toward Men scale (HTM; Check, Elias, & Barton, 1986) assesses the female participant's hostile feelings toward men in general and has test-retest reliability of .90 over a one-week period. It correlated significantly with previous coercive sexual experience. The question pertaining to the coercive use of pornography was taken from Russell (1980) and was worded, "Have you ever been upset by anyone trying to get you to do what they'd seen in pornographic pictures, movies, or books?" The Profile of Mood States (POMS; McNair, Lorr, & Droppleman, 1971) was designed to measure transient or fluctuating affective states. Internal consistency for the subscales is reported to be .84 to .90 with test-retest reliability of .80 to .90. The six subscales are intercorrelated, making it possible to obtain a total mood disturbance score by summing the scores across all six scales. The scales' validity has been demonstrated in a number of studies investigating the impact of emotion-inducing conditions. Seven adjective pairs (good-bad, pleasurable-painful, cruel-kind, healthy-sick, positive-negative, clean-dirty, beautiful-ugly) were selected from the evaluative dimension of the Semantic Differential (SEM; Osgood, Suci, & Tannenbaum, 1957). The evaluative dimension has been shown to yield smaller errors of measurement, smaller deviations for retest intervals, and overall better reliability than the other dimensions of the SEM. The internal consistency for the seven selected items was high,  $r = .96$ .

## Procedure

The research participants were randomly assigned to one of the four conditions: (a) erotica, (b) nonviolent pornography, (c) violent pornography, or (d) control ( $n = 24$ ). Each participated in two 60-min. questionnaire sessions and two 30-min. exposure sessions. Two exposure sessions were employed in order to assess the consistency of reactions over time. During the first session, the research participants filled out the consent form in private to avoid any possible coercion by the experimenter or other participants. They then completed the background and attitude questionnaires (SES, RMA, ADS, ATF, HTM, coercive use of pornography) and were scheduled to return for the remaining sessions in the following two-week period, the average completion time overall being eight school days (min = 6, max = 20). During Sessions 2 and 3, the participants viewed the slides. They were seated at a table in the experimental room facing a projection screen and were tested alone or with one other participant in the room. To prevent the participants from influencing one another, they were seated at separate tables and were instructed not to talk to each other. They first completed the POMS and then were instructed in the use of the SEM scale for rating the slides. Participants rated each slide on the same seven adjective pairs. Detailed written instructions were given and the experimenter clarified these directly with the participant. Five example slides were shown to familiarize participants with the

procedure, the speed of presentation, and the content. The participants did not continue until they felt comfortable with the rating task, repeating the example slides if necessary. At this point, participants were given a short break and the option of leaving or continuing the experiment. All chose to continue. The participants then rated 50 slides randomly selected from the pool of 75 slides for the appropriate condition. This ensured that they viewed some novel slides as well as some presented during the first session. An automatic timing device controlled the presentation rate of the slides to 25 sec. per slide, yielding a total viewing time of approximately 21 min. At the end of each session, participants completed the POMS for a second time. During the fourth session, participants once again completed the attitude questionnaires.<sup>4</sup>

## RESULTS

### Slide Evaluations

The SEM scores for each participant were obtained in the usual manner. Each slide had been rated on seven adjective pairs, and the rating for each pair was scored as a number between -3 and +3. Thus, summing across the ratings for a single slide, the scores could range between -21 and +21. A participant's score for a single session was her average rating for the entire set of 50 slides. A mixed analysis of variance (ANOVA) with one between-groups variable (Group: violent/ nonviolent /erotic /control) and one within-groups variable (Session: one/two) yielded a statistically significant group main effect,  $F(3, 92) = 96.05$ ,  $p < .01$ , but no session main effect or interaction. Post hoc comparisons using Tukey's HSD test (Kirk, 1982) revealed that all three experimental groups were significantly different from the control and from each other ( $p < .05$ ). Ratings in the violent pornography condition ( $M = -10.60$ ,  $SD = 4.16$ ) were the most negative, ratings in the nonviolent pornography condition ( $M = -1.62$ ,  $SD = 4.34$ ) were negative but significantly more positive than those in the violent condition, ratings in the erotic condition ( $M = 5.34$ ,  $SD = 6.41$ ) were positive, and ratings in the control condition ( $M = 12.09$ ,  $SD = 4.23$ ) were the most positive. A test of the differences between the variances indicated that the erotic group's variance was significantly larger than that of the violent condition,  $F(23, 23) = 2.36$ ,  $p < .05$ , and marginally larger than the variances of the nonviolent,  $F(23, 23) = 2.18$ ,  $p < .10$ , and control conditions,  $F(23, 23) = 2.30$ ,  $p < .10$ . None of the other variances differed significantly.

### Mood Effects

A mood disturbance score was obtained in the standard fashion by summing the five negative mood subscale scores (Anger, Depression, Confusion, Fatigue, and Anxiety) and subtracting the score on the Vigor subscale. The larger the score on mood disturbance, the higher one's negative affect is relative to one's positive affect. Mood was analyzed, using a mixed ANOVA with one between-subjects variable (Group: violent/ nonviolent/ erotic/ control) and two within-subjects variables (Session: one/ two; Time: pre/post). Main effects were found for the group,  $F(3, 92) = 2.77$ ,  $p < .05$ , session,  $F(1, 92) = 9.55$ ,  $p < .01$ , and time,  $F(1, 92) = 19.48$ ,  $p < .01$ , variables. In addition, the group and time main effects were qualified by a significant Group X Time interaction,  $F(3, 92) = 9.53$ ,  $p < .01$ .

TABLE 1. Mean Mood Disturbance for Time by Group Interaction

	Preexposure		Postexposure	
	M	SD	M	SD
Violent pornography	2.29 <sub>a</sub>	13.75	23.48 <sub>b</sub>	33.31
Nonviolent pornography	6.52 <sub>a</sub>	17.65	18.00 <sub>b</sub>	33.59
Erotica	-.04 <sub>a</sub>	12.84	2.56 <sub>a</sub>	14.84
Control	3.65 <sub>a</sub>	13.20	-.35 <sub>a</sub>	13.06

Note: Means with different subscripts differ significantly,  $p < .05$ .

The session main effect is due to participants exhibiting higher mood disturbance scores in the first session ( $M = 9.65$ ,  $SD = 22.99$ ) than in the second session ( $M = 4.38$ ,  $SD = 19.19$ ). Tukey's HSD post hoc procedure was used with alpha set at .05 to explore the nature of the Group x Time interaction (see Table 1 for Ms and SDs). None of the group means differed significantly on pretesting, however, after exposure, the violent and nonviolent pornography conditions were significantly higher than both the erotic and control conditions. The two pornographic conditions did not differ from each other and neither did the erotic and control conditions. Only the two pornographic conditions showed significant increases in mood disturbance from pre- to postexposure.

### Correlations Among Measures

For each session, postexposure mood state was correlated with the slide evaluations, controlling for preexposure mood state (see Table 2). These partial correlations were performed within each of the four groups. For the violent pornography condition, more negative evaluations were associated with greater mood disturbance only in Session 2. In the nonviolent pornography condition, this relationship was statistically significant for both sessions. A similar relationship is also evident in the erotic condition, but only for Session 1.

Twenty-three (24%) of the research participants had experienced the coercive use of pornography. Scores on this single item as well as responses on the SES were intercorrelated with scores on the attitude questionnaires. For this purpose, responses on the SES were collapsed to create three scores: (a) the frequency of violent coercion (items 1,2,5,7,8), (b) the frequency of nonviolent coercion (items 3,4,6,9,10), and (c) the degree of coercion (no

TABLE 2. Partial Correlations Between Mood Disturbance and the Slide Ratings

Condition	Session 1	Session 2
Violent pornography	.20	-.35*
Nonviolent pornography	-.53**	-.40**
Erotica	-.54**	.02
Control	.22	-.15

\* $p < .05$ . \*\* $p < .01$ .



TABLE 3. Correlations Between Slide Ratings and Background Measures

	Violent	Nonviolent	Erotica	Control
Frequency of force	-.37*	-.01	.35*	.45**
Frequency of coercion	-.03	.00	.39*	.30
Coercion	-.21	-.08	.46**	.42*
Coercive use of pornography	-.08	-.33	.04	.50**

\* $p < .05$ . \*\* $p < .01$ .

coercion, coercion only, force only, or coercion and force—summed across all 10 items). Hostility Toward Men correlated positively with degree of coercion,  $r(94) = .17$ ,  $p < .05$ , and the coercive use of pornography,  $r(94) = .30$ ,  $p < .01$ , but otherwise no statistically significant relationships emerged.

The attitude questionnaires were also intercorrelated, and the pattern of correlations which emerged was similar to that found in other research. All reported correlations were significant at  $p < .01$ . Specifically, ATF was negatively related to ASB,  $r(94) = -.39$ , and RMA,  $r(94) = -.56$ , but not related to HTM,  $r(94) = .05$ . Hostility Toward Men was positively related to ASB,  $r(94) = .42$ , and RMA,  $r(94) = .25$ , and ASB and RMA were also positively correlated,  $r(94) = .39$ . Correlations were performed between the slide ratings, averaged across sessions, and the background and attitude variables within each condition. None of the correlations involving the attitude variables achieved statistical significance and therefore they are not presented here. Nonetheless, several correlations with the background variables emerged (see Table 3). In the violent pornography condition, the greater the number of forceful sexual experiences, the more negative the slide ratings. Similarly, experiences of force, coercion and the coercive use of pornography were related to more positive evaluations of both the erotic and control images.

## DISCUSSION

In this experiment the sexual explicitness of the stimuli was held constant while the presence of sexism and violence was manipulated. This manipulation affected both the women's evaluations of the images as well as their subsequent mood. The evaluations reliably differentiated between erotica and pornography and between nonviolent and violent pornography as they were defined for the purposes of our research. This occurred even though the subjects were exposed to only one stimulus type and were not informed about the types of stimuli used in the other experimental conditions. On the whole, erotica was perceived positively, while pornography (violent and nonviolent) was evaluated negatively. Violent pornography received the most negative ratings.

This finding clearly shows that women evaluate some types of sexually explicit materials positively and that their negative evaluations are reserved for materials which are sexist and/or violent in nature. It is noteworthy that our pornographic stimuli were obtained from mainstream magazines and that even such relatively mild pornographic portrayals evoked a negative reaction.

While the women rated the erotic images positively, they rated them less positively on average than the images of nature and scenery in the control condition. Moreover, the variance associated with the erotic group mean was larger than the variances for the other groups. In hindsight, it would have been interesting to include a measure of sexual attitudes. Recently, Becker and Byrne (1985) reported that, regardless of gender, erotophobes (individuals with negative sexual attitudes) chose to view a set of sexually explicit, nonviolent slides for a shorter period of time than did erotophiles (individuals with positive sexual attitudes), and earlier research indicated differences in self-reported interest in and experience with sexually explicit materials (Fisher & Byrne, 1978).

Differential reactions of erotophobic and erotophilic women may underlie the variability in the erotic condition (in which sexual explicitness was represented without violence and sexism). In the pornographic conditions, on the other hand, the sexism and violence may have provoked a reaction unrelated to sexual attitudes, thereby rendering the erotophobe-erotophile distinction irrelevant. In Kelley's (1985a) study female erotophobes and erotophiles did not differ in self-rated positive affect after viewing either a violent or a nonviolent sexually explicit film. These findings may support our hypothesis depending on whether the nonviolent sexually explicit film that Kelley used contained sexist themes. Nonetheless, differences in sexual attitudes may explain the difference between the erotic and control conditions. Erotophobes in particular may have found certain sexually explicit themes to be offensive, resulting in a decrease in the group mean relative to the control condition. The content of the slides within all three sexually explicit conditions was heterogeneous and included homosexual, heterosexual, and masturbatory themes. Negative reactions to certain themes, for example, lesbian images, could be expected to have greater impact in the erotic condition than in the other two conditions where the salient effects again would be those attributable to the sexist and violent themes. Such content-specific effects have been reported in the literature. For example, Kelley (1985b) found that high sex-guilt females reported less positive feelings toward slides depicting same-sex masturbation compared to those depicting heterosexual sexual activity or opposite-sex masturbation. Our study was designed to assess reactions to a variety of depictions that commonly occur in mainstream "men's" magazines and therefore did not permit fine-grained analyses of reactions to the different types of depictions. Further research is necessary to determine the extent to which individual differences in sexual attitudes contribute to the variability in women's reactions to sexually explicit images and under what conditions this occurs.

Mood disturbance scores followed the predicted pattern; participants in the violent and nonviolent pornography conditions showed a significant increase in mood disturbance after exposure and there was no change in the erotic and control conditions. Thus, exposure to sexually explicit materials that included neither sexism nor violence did not increase negative affect. These findings confirm recent research by Krafska (1985) in which female subjects reported increases in negative affect following exposure either to sexually explicit sexist movies or to sexually violent movies. In general, mood disturbance was lower in the second session compared to the first which may be attributed to participants feeling more comfortable in the experimental setting over time. Desensitization to the images cannot account for this finding as it is a main effect that occurred in the control condition as well as the experimental groups.

Based on the Sexual Behavior Sequence (Byrne, 1977), we expected affect and evaluation of the slides to be related. The pattern of findings was complicated by variability in the mood-attitude correlations across sessions. Consistent with prediction, however,

whenever a significant relation emerged, it reflected the association of negative affective responses with negative slide evaluations. As the slide ratings remained stable across sessions, the fluctuating correlation coefficients can be attributed to changes in mood across the two sessions. Mood and attitudes were unrelated in the control group, suggesting that the relations obtained were associated with the sexual explicitness of the slides. Interestingly, the inclusion of violence and sexism did not affect the mood-attitude relationship. Thus, the link between affect and evaluation appears to be a reliable one within the context of exposure to sexually explicit images.

Although the present findings revealed some negative reactions to pornography, the emotional effects of pornography on women may be more harmful than the results of this experiment would suggest. First, the materials used here are the mildest forms of pornography available. Second, the experiment provided an atmosphere in which subjects felt relatively free to express their feelings without fear of judgment. Outside of this laboratory, on the other hand, a woman is likely to be exposed to pornography by people with relatively positive attitudes toward it, most likely by male subscribers. As a result, there could be a certain amount of pressure on women to conform or at least to hide any negative feelings. This could result in internalization of the affect created by the materials. Miller (1986) has suggested that, for women, suppression of negative affect is a common response which causes emotional difficulties in many areas of their lives. Particularly in relationships with men, women may suppress such feelings so as not to risk destroying the relationship. As the present results indicate, pornography may create psychological mood disturbance in women. When put in the context of interpersonal relationships that encourage suppression of negative affect, difficulties could arise. These potential links between the conditions of exposure to pornography and women's reactions to the material are worthy of future consideration.

Individual differences in the attitudes measured here were unrelated to women's evaluations of the erotic and pornographic images, but past experiences with sexuality and pornography correlated with their evaluations. The greater the number of forceful sexual experiences reported by the women, the more negative their overall ratings of the violent pornography. It is possible that the women with a history of forceful sexual experiences identified with the female models in the violent images and therefore, based on this shared victimization, reacted more negatively than the women without such a history, who could only imagine what it is like to be exposed to violence and degradation. Alternatively, they may see their own victimization mirrored which brings back painful thoughts. The reverse of this was seen in the evaluations of the erotic images. Women who reported relatively high levels of coercive and forceful sexual experiences reacted most favorably to the sexual images which contained no sexism or violence compared to women with no such history. Contrary to expectation, this same relation was observed in the control condition.

One possible explanation is that the victimized women were relieved to know that they would not, after all, be viewing "sexual and/or violent images" and would instead be evaluating the pleasant nature scenes associated with the control condition or the nonsexist and nonviolent images associated with the erotic condition. As a consequence of this relief, they were more positive in their reactions to the slides than were the nonvictimized women. These findings suggest that future research might fruitfully examine further the relations between women's past experiences with sex and pornography and their reactions to pornography. The strengths of this study are the between-groups design and the careful selection of the stimuli associated with these groups. Thus, we can be most confident in

our conclusions regarding group differences. Given this design, however, our examination of relations among variables within each condition is more tentative. A natural follow-up to this study would be one which focuses on the relations between individual differences, background and historical variables, and reactions to sexually explicit depictions, where the type of image is held constant and selected through a procedure similar to the one employed here. The sample needed for such a correlational study ideally would be large and heterogeneous.

The findings of this study indicate that exposure to pornography increases women's negative emotional state for at least a short period of time. In addition, one-quarter of the women in this sample reported having been upset by another person's use of pornography prior to their participation in the study. Considering that the average age of the women participants was 22, the actual number of women who at some time will experience the negative effects of pornography is probably much higher. Moreover, women who have been sexually victimized may have heightened sensitivity to sexual images with reactions depending on the specific context surrounding the sexually explicit depictions. Unfortunately, the sample in this study was not sufficiently large to permit analyses of mood changes for specific subgroups of women. As negative evaluations are generally related to increases in negative affect, however, it is reasonable to suggest that women who have been victims of sexual violence may be affected more seriously than other women by direct exposure to pornography. It remains for future research to test this hypothesis.

## NOTES

<sup>1</sup>The term "pornography" is placed in quotation marks when it is used in its colloquial sense. The term "sexually explicit materials" will be used to refer to any depictions containing sexual behavior and nudity. The authors' use of the term pornography without quotation marks is highly specific and will be explained in detail later on.

<sup>2</sup>Images were photographed by the first author on a nonrandom basis from a magazine collection made available by a male consumer. An effort was made to choose images which were typical of the magazines with some special attention to particular types of images if they seemed to fit the violent or erotic definitions. This was done to ensure sufficient images in each category. The erotic condition was then completed by photographing images from the two other books which were not aimed at male consumers.

<sup>3</sup>The raters were given examples to clarify some of the concepts. An example from the nonviolent pornography condition would be, "...costuming (e.g., dressing adult models to look like children, model dressed in clothing which implies violence)."

<sup>4</sup>The research participants completed a comprehensive background information and attitude and belief questionnaire battery on separate days before and after the exposure sessions. The results of this portion of the study are reported elsewhere (Senn & Radtke, 1986; Senn, 1985).

<sup>5</sup>Following completion of the postexposure questionnaire battery in the fourth and final session, the participants were debriefed. Pilot work on 20 women was performed to establish the effectiveness of the debriefing. These results are reported elsewhere (Senn, 1985) and indicated no negative effects persisting beyond the debriefing.

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