

Influence of Popular Erotica on Judgments of Strangers and Mates

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Two studies were done to investigate the influence of exposure to centerfold erotica on sexual attraction judgments. In Experiment 1, college students judged a photograph of a nude female after being exposed either to control stimuli (abstract art or other average nudes) or to photographs taken from popular erotic magazines. The target was judged as less sexually attractive after subjects had been exposed to popular erotica. Male and female subjects showed parallel patterns of attraction ratings. In Experiment 2, male and female subjects were exposed to opposite sex erotica. In the second study, there was an interaction of subject sex with stimulus condition upon sexual attraction ratings. Decremental effects of centerfold exposure were found only for male subjects exposed to female nudes. Males who found the *Playboy*-type centerfolds more pleasant rated themselves as less in love with their wives. Results are discussed in light of general gender differences in sexual behavior, and are related to the current controversy about pornography. © 1989 Academic Press, Inc.

What is the effect of exposure to soft-core erotica, like the nude centerfolds in *Playboy* and *Penthouse*? Contrary to the beliefs of some anti-pornography crusaders, researchers do not find those materials to be involved in the etiology of sexual crime (e.g., Goldstein, Kant, Judd, Rice, & Green, 1971). Likewise vindicating are findings that it is the

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violent rather than the erotic in violent erotica that seems to increase violence toward women (Donnerstein & Berkowitz, 1981). Soft-core erotica can even reduce aggressiveness (Baron, 1974). However, it may be that this "prettier side" of popular erotica does us ill in a less readily obvious way. Exposure to the unusually attractive and well-proportioned beauties in magazines like *Playboy* or *Playgirl* may lead to a somewhat skewed perception of what an average person looks like naked. Such a skewed perception could lead to invidious comparisons between media beauties and "real world" lovers who are, on average, less attractive than models in *Playboy* or *Playgirl*.

There is indirect support for this line of reasoning. Kenrick and Gutierrez (1980) found that exposure to attractive facial photographs lowered ratings of the attractiveness and dating desirability of an average looking female. Kenrick, Stringfield, Wagenhals, Dahl, and Ransdell (1980) suggested that such effects might be most important within the realm of erotica. Although standards of facial attractiveness might be raised by media beauties, those judgments should be brought "back to earth" just by looking at the less glamorous faces in the everyday world. Such reality testing is not available to the average looking college age male who has seen hundreds of beautiful nude women in *Playboy*. The women that he gets to see naked in "real life" are likely to be fewer and, like him, average looking. Thus, the media's skewed distribution would have more influence on his standards of beauty for naked bodies than for facial beauty.

On the other hand, the contrast/attractiveness effects found by Kenrick and Gutierrez (1980) can be removed or even reversed by other factors (Cash, Cash, & Butters, 1983; Kernis & Wheeler, 1981). There are particular reasons to suspect that the facial attractiveness/contrast effect might not generalize to the realm of erotica. For instance, sexually arousing thoughts have been found to facilitate attraction for one's mate (Dermer and Pyszcynski, 1978). Besides that, erotic materials lead to other affective reactions that could interfere with a simple cognitively based contrast effect, and could do so differentially for the two sexes. For instance, other findings indicate that (a) females have, on the average, more negative affective responses to erotica than males (e.g., Griffitt & Kaiser, 1978) and that (b) same sex nudes produce more negative affect than opposite-sex nudes (Fisher & Byrne, 1978; Griffitt & Kaiser, 1978). Thus, different affective reactions to *Playboy* and *Penthouse* nudes (the stimuli used in the first study we will describe) could mediate different judgmental processes for males and females.

In Experiment 1, male and female undergraduates judged an average looking nude female after exposure to nude female centerfolds. The study was designed to answer three questions: (1) Would exposure to erotic centerfolds produce a contrast effect on judgments of an average-looking

person? (2) Would those effects differ for males and females? (3) Would affective reactions to the erotic stimuli be related to those judgment processes?

EXPERIMENT 1

Method

Subjects. One hundred seven males and 89 females participated to fulfill part of a course requirement at a large state university. Female experimenters ran subjects in same-sex groups of 2–8.

Procedure. Subjects were told that they would participate in two separate experiments. The first experiment was, ostensibly, to address a controversy about whether particular works of art, photography, or cinema are artistically valuable or just offensive to “good taste.” We explained that we were studying which characteristics separate “aesthetically pleasing from boring or unpleasant works” and that subjects would judge “materials which have aroused controversy with regard to their aesthetic significance.” Since the materials might include nude photographs, subjects were told that they were free to withdraw by simply not joining the group in the experimental room (one female subject declined participation).

Stimulus materials. Experimental subjects viewed 16 slides of highly attractive nude females from *Playboy* and *Penthouse* magazines. Two control conditions were run, in which subjects were shown either (a) 16 abstract art slides (e.g., Josef Albers’ “Homage to the Square”), or (b) 16 photos of average-looking nude women, chosen from a men’s magazine to which males supposedly submit photos of their wives or girlfriends (these had previously been judged as most nearly “average” by a group of five judges who rated 50 such photographs). Each slide was shown for 15 seconds and rated on 7-point scales tapping three dimensions: highly artistic/not at all artistic; unpleasant/pleasant; not at all socially valuable/socially valuable.

Rating of the average nude. After rating the 16 “aesthetic” slides, subjects were told they had completed the first experiment and were given a credit slip. They were told that they would now be participating in a second experiment that was not connected with the first one, but that was being conducted simultaneously because both required subjects who consented to view sensitive materials. A written description explained that we were examining an assumption of the encounter group movement: that people can learn a great deal about another’s personality by observing that person without clothing. Participants were told they would see a photograph of a person who took part in an encounter group workshop. Their task was to view the photo, and to try to accurately judge her personality (which had presumably been measured by “an extensive battery of psychological tests”).

Subjects then viewed a slide of an average attractive nude woman (chosen in the same way as the average control photographs) for 60 seconds. They were then asked to rate her on a “Psychological Accuracy Inventory” that included 17 filler items and 3 items tapping her attractiveness. These were: (1) a bipolar scale anchored with “sexually unattractive/sexually attractive,” and the questions (2) “How attractive is this person to males?,” and (3) “How desirable would you imagine that males find this person as a date?” (anchored with “not at all/very much”). All were 9-point scales. The main dependent variable was a composite score including all three sexual attractiveness items.

Subjects next filled out a suspicion probe, and discussed any suspicions with the experimenters. Two subjects were dropped from the analysis. One was a female who suspected that there was a connection between looking at the first nudes and rating the target person. The other was a male subject in the art control condition whose friend had informed him that we were showing nudes in the other conditions. Subjects were fully debriefed regarding

TABLE 1
CELL MEANS AND CORRELATIONS: EXPERIMENT 1

Dependent variables	Female Ss			Male Ss		
	Center folds	Average nude	Art	Center folds	Average nude	Art
(a) Pleasantness of prior stimuli	3.2	2.4	3.8	4.9	3.6	3.8
(b) Sexual attractiveness of target	11.6	13.7	12.9	9.6	14.1	11.8
Intracell correlations						
(a) with (b)	-.12	+.17	+.00	+.27	+.06	+.34*

Note. For ease of interpretation, scalings for sexual attractiveness scores are reversed here, so that higher scores in this table indicate more pleasantness and more sexual attractiveness. Signs of the correlations reflect this scaling change.

* $p < .05$.

the true purpose of the study. Finally, they were asked to sign an agreement not to discuss the study.

Results

Ratings of prior stimuli. Analysis of variance indicated a main effect of subject sex, $F(1, 188) = 43.9$, $p < .001$, and of type of prior stimuli, $F(2, 188) = 15.5$, $p < .001$, on ratings of how pleasant/unpleasant the aesthetic stimuli were. Both these effects were moderated by a significant interaction, $F(2, 188) = 12.17$, $p < .001$. For males only, a contrast pitting the two control conditions against the centerfold condition yielded an $F(1, 103) = 31.58$, $p < .001$. The residual contrast (comparing the two control groups) was not significant, $F(1, 103) < 1$. A similar analysis of female data indicated an $F(1, 85) < 1$ for the contrast pitting the two control conditions against the centerfold condition. For females, the residual contrast, comparing the two control conditions, was $F(1, 85) = 23.23$, $p < .001$. In short, males found the centerfolds more pleasant than both controls, but did not differentiate between the two control conditions. Females found the centerfolds no more pleasant than controls, but did differentiate between art and average nudes, finding the latter less pleasant.

Ratings of the target person. Ratings of the target person showed a main effect for type of prior stimuli, $F(2, 188) = 7.20$, $p < .001$. As shown in Table 1, exposure to attractive centerfolds lowered judgments of the target's attractiveness compared to both the art and the average attractive controls. No effect of subject sex, $F(1, 188) = 1.54$, nor any interaction between type of prior stimuli and subject sex ($F < 1$) was found. The means are shown in Table 1. A contrast pitting the centerfold

condition against the two control conditions resulted in an $F(1, 191) = 9.49, p < .002$. The residual contrast, comparing the two control conditions, yielded an $F(1, 191) = 3.88, p < .06$.

Correlational analyses. Overall, there was no significant correlation of ratings of the target with ratings of the prior stimuli's pleasantness, $r(194) = .12$. Only the correlation for males exposed to abstract art was significant, and there was no evidence of a distinctive pattern of correlations among subjects exposed to the centerfolds.

Discussion

In the first study, exposure to nudes from popular erotica produced a contrast effect on ratings of an average nude. That effect was similar for males and females and was not related to subjects' affective reactions to the erotic stimuli. Given that subjects rated a stranger, these findings are most directly applicable to those crucial initial interactions, during which potential partners may lose interest in someone they judge to be unattractive (Walster, Aronson, Abrahams, & Rottmann, 1966).

Beyond first impressions, do these findings apply to judgments made within actual relationships? Attraction researchers have debated the extent to which processes found in laboratory encounters between strangers reflect on initial encounters as opposed to established relationships (e.g., Byrne, Ervin, & Lamberth, 1970; Levinger, 1972). Kenrick and Johnson (1979) found that minimal interaction with a stranger could alter attraction processes in important ways. Differences between our current findings and the sexual arousal-enhancement findings of Dermer and Pyszcznski (1978) could be due to their use of actual couples. Consistent with this reasoning, Stephan, Berscheid, and Walster (1971) found a sexual arousal-enhancement effect only when subjects expected to date the target person. The second study was designed to examine the effects of exposure to centerfold beauties on ratings of actual partners. It also differed from the first study in that females were exposed to attractive male centerfolds from *Playgirl* magazine.

EXPERIMENT 2

Method

Subjects. Thirty males and 35 females enrolled at a large state university or a community college participated for partial fulfillment of course requirements. Subjects were run by female experimenters in same-sex groups of 2–8 persons.

Procedure. The experimental signup sheet stated that participants must either be married or involved in a similar live-in relationship with someone of the opposite sex. As in Experiment 1, a cover story indicated that we were studying standards of aesthetic and artistic judgment. The experimental males were first exposed to 16 female centerfold slides from *Playboy* and *Penthouse*. Experimental females were exposed to 16 male centerfold slides from *Playgirl*. Control subjects viewed the 16 abstract art slides.

Partner ratings. After making the aesthetic judgments, subjects were told that there was

TABLE 2
CELL MEANS: EXPERIMENT 2

Dependent variables	Female Ss		Male Ss	
	Centerfolds	Art	Centerfolds	Art
Pleasantness of prior stimuli	4.9	3.9	4.9	4.0
Sexual attractiveness of partner	22.2	22.5	22.1	26.2
Love for partner	82.3	85.0	87.2	98.8

Note. Higher scores indicate relatively more pleasantness, attractiveness, and love.

some controversy about how relationships influenced responses to art. Subjects were told that some psychologists believe that being in a stable relationship enhances people's appreciation of art, others feel that the deep involvement interferes with aesthetic appreciation, and still others believe that it depends on the type of relationship. Subjects were then asked to rate their relationship on a questionnaire that included three filler items (rating the length of the relationship, partner's interest in art, and partner's conservatism). This questionnaire also included the three attractiveness items used in study 1, which were aggregated to form one dependent variable. The other dependent variable was an aggregate of the 13 items from Rubin's (1970) Love Scale. All items were rated on 9-point scales.

After completing this questionnaire, subjects filled out a suspicion questionnaire (no subject indicated any awareness of the experimental ruse). Following this, subjects were fully debriefed regarding the purposes of the research and were asked to sign an agreement not to discuss the study.

Results

Ratings of the prior stimuli. Subjects rated the nudes as more pleasant than the abstract art slides, $F(1, 65) = 12.40, p < .001$ (see Table 2). There was neither a main effect of subject sex nor a sex by condition interaction (both F s < 1).

Sexual attraction ratings. An analysis of variance on the composite attractiveness measure showed a main effect for type of exposure, $F(1, 65) = 5.7, p < .02$, moderated by an interaction with sex of subject, $F(1, 65) = 4.9, p < .05$. As suggested by the means in Table 2, an analysis of simple main effects showed that males' ratings of their mates' sexual attractiveness were significantly adversely affected by prior exposure to erotica, $F(1, 30) = 8.2, p < .001$. Females' ratings were not influenced by type of prior stimuli ($F < 1$).

Love ratings. Love Scale items showed a marginally significant effect of type of stimuli, $F(1, 65) = 3.6, p < .06$. The tendency for subjects to indicate less love after exposure to centerfolds appears only for men's ratings, $F(1, 29) = 4.29, p < .05$. A comparable test of the simple effect for female subjects yielded an $F < 1$, although the interaction of sex and type of prior stimuli was not significant for the love ratings, $F(1, 65) = 1.58, p > .10$.

TABLE 3
INTRACELL CORRELATIONS: EXPERIMENT 2

Correlations of	Female Ss		Male Ss		\bar{X}
	Centerfolds	Art	Centerfolds	Art	
Ns	(18)	(17)	(16)	(15)	
Pleasantness with sexual attractiveness	+ .07	-.28	-.23	-.01	-.11
Pleasantness with love	-.19	-.25	-.45*	+.16	-.19
Sexual attractiveness with love	+.24	+.65*	+.78**	+.45*	+.55

* $p < .05$, ** $p < .01$.

Correlational analyses. Correlations between the three dependent variables are depicted in Table 3. Of interest is the discrepancy between male subjects' correlations across conditions. For males, the correlation between pleasantness ratings and ratings of love for partner is significant and negative in the centerfold condition, but tends to be slightly positive in the abstract art condition. The other interesting discrepancy is that, compared with the art conditions, ratings of partner attractiveness correlate with love more strongly in the centerfold conditions for males, but less strongly for females.

GENERAL DISCUSSION

Experiment 1 found that exposure to attractive models from popular erotica decreased the rated attractiveness of a "normal" looking woman. Experiment 2 extended this finding to ratings of mates, but found the effect to hold only for males. Why the gender difference? One might speculate that females did not find the male centerfolds attractive or pleasant. However, pleasantness ratings suggest that females found the male centerfolds as pleasant as males found the female centerfolds. To further examine this possibility, we asked 28 female undergraduates from the same population to rate both the male and female centerfolds. They saw the male centerfolds as equal to female centerfolds in physical attractiveness and sexual attractiveness. Further, the females' ratings of the male centerfolds' attractiveness did not differ from 21 males' ratings of female centerfolds.

The gender difference found in Experiment 2 may fit with other findings on gender differences in mating behaviors (Hinde, 1984; Kenrick, 1987; Kenrick & Trost, 1987, 1988). That literature indicates that females are, on the average, likely to show a higher commitment to a monogamous relationship. Conversely, males are generally more inclined toward promiscuity, more interested in new partners, and more likely to initiate

heterosexual relationships. Finally, physical attractiveness appears to be a more central criterion for males' sexual responses than it is for females (Buss, 1985). When males focus on other physically attractive women just before rating their partner, then, the awareness of those potential alternatives might undermine their relatively more tenuous monogamous commitment. Females' commitment, more monogamous and less based on physical attractiveness, might simply be less related to their perception of physically attractive alternatives. The sex difference in commitment might also explain the differential within-cell correlations found in Experiment 2. Looking at gorgeous opposite sex centerfolds seems to have made attractiveness more salient as a criterion for mate satisfaction, but for male subjects only. For female subjects it appears that attractive male centerfolds made sexual attractiveness somewhat less salient as a criterion.

We began with a reference to the research on violence and erotica. Donnerstein and others find that violent erotica, like other filmed depictions of violence, can enhance aggression. However, that research has indicated that erotic content alone has no violence enhancing effect, and may even reduce violence. Opponents of erotica often overlook this important distinction. It is important to avoid similar misinterpretation of the present results. It would appear that it is the physical beauty of Playboy type stimuli, and not their erotic nature, that is responsible for the effects we obtained. Kenrick and Gutierrez (1980) found similar attractiveness/contrast effects after subjects were exposed to media beauties that were fully dressed, whereas Dermer and Pyszcznski (1978) found that sexual arousal by itself enhanced males' ratings of their spouses. Also, female subjects showed the same contrast effects for ratings of a female stranger that males did, even though their affective reactions to those centerfolds were unpleasant. Like the findings in the aggression area, then, these findings make less of a case for avoiding sexually arousing materials than they do for avoiding the popular media in general.

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