

Penile Tumescence and Perceptual Responses to Rape as a Function of Victim's Perceived Reactions¹

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Seventy-five male students participated in an experiment designed to address two interrelated issues. The first concerned conflicting findings regarding non-deviants' sexual responsiveness to rape depictions. In the present experiment, a rape portrayal in which the assailant perceived that the victim became sexually aroused was found to result in high sexual arousal (as indicated by penile tumescence) in comparison to a rape emphasizing the victim's abhorrence of the assault. These differences would appear to successfully reconcile earlier conflicting data. In addressing the second issue, it was found that exposures that portrayed rape in a relatively negative or "positive" manner affected subsequent reactions to rape. More specifically, sexual responsiveness to rape was inhibited following an earlier exposure to a depiction emphasizing a rape victim's abhorrence, while undesirable cognitive-perceptual changes occurred as a result of exposure to a rape depiction portraying the victim as sexually aroused. Further, self-reported possibility of engaging in rape was found to correlate with callous attitudes to rape and with self-reported sexual arousal to violent sexuality in a predicted pattern.

The present experiment is part of a series of studies focusing on college students' responses to rape stimuli. The impetus for this research program comes from two important areas of theorizing and research. The first is the work of Gene Abel and his colleagues on developing objective assessment techniques for use in the treatment of rapists. The second area is the writings of feminists on the subject of sexual violence.

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Abel, Barlow, Blanchard, and Guild (1977) report clear differences between the sexual responsiveness of rapists and nonrapists to portrayals of sexual assault. Whereas rapists in their sample evidenced high levels of penile tumescence to audio-taped portrayals of both rape and consenting sexual acts, the nonrapist comparison group showed substantial sexual arousal to the mutually-consenting depictions only. These investigators, therefore, suggest that sexual responsiveness to the depiction of sexual violence relative to sexual arousal to consenting themes serves as a measure of the "proclivity to rape" that can be used in the diagnosis and treatment of rapists (see also Abel, Blanchard, & Becker, 1976, 1978). The question of what is or is not sexually arousing to "normals" is therefore not only of theoretical interest, but has important implications for the type of "rape proclivity" measures developed by Abel et al. (1977). This type of measure has recently been extended to the identification and treatment of pedophiles (Note 1).

Both the rapist and nonrapist samples studied by Abel and his colleagues were male patients referred for evaluation of their deviant sexual arousal. A recent study by Barbaree, Marshall, and Lanthier (1979), however, successfully replicated the Abel et al. (1977) findings using college students as the nonrapist sample. These studies thus suggest that the portrayal of rape is not sexually arousing to nondeviants.

Such a conclusion appears incongruous with content analyses revealing that a great deal of "hard core" pornography (Note 2; Smith, 1976) and to an increasing degree "soft core" erotica (Malamuth & Spinner, 1980; *Time*, 1976, 1977) incorporate violent themes. It seems likely that publishers' decisions to include violent pornography is to some degree a reflection of buyers' interests. It may well be, therefore, that certain dimensions distinguish the type of sexual violence found in commercially available erotica from that used in the research studies cited above. Consistent with this possibility are the data reported by Schmidt (1975) and by Farkas (1979). Schmidt found that both male and female students were highly aroused by a pornographic film depicting rape. Unfortunately, this investigator's description of the rape stimulus is not sufficiently detailed to pinpoint how it may have differed from the stimuli used by Abel et al. (1977). Farkas found that rape stimuli tended to elicit nonsignificantly greater sexual arousal (as measured by penile tumescence) than nonrape stimuli in subjects from the university community. Farkas' stimuli differ from those of Abel et al. along several dimensions. Any one or combination of these dimensions may account for the conflicting findings.

Malamuth, Heim, and Feshbach (1980) recently attempted to pinpoint the basis for such conflicting data by systematically varying the content of written portrayals of rape along several dimensions. They found that only manipulation of the victim's reactions significantly affected self-reported sexual arousal: Male and female college students reported relatively high levels of sexual arousal

to a rape depiction when the victim was depicted as involuntarily experiencing sexual arousal (as is typically the portrayal in pornography) as compared to when the victim responded with nausea. The stimuli used by Abel et al. (1977) and Farkas (1979) do indeed differ along the dimension of victim arousal: Abel et al. employed stimuli that stressed the victim's abhorrence whereas Farkas' rape depictions were judged by raters to be extremely sexually arousing to the female victim. In the experiment by Malamuth et al. (1980b), however, a nonrape portrayal was not included. The first purpose of the present experiment was to extend Malamuth et al. findings by using a penile tumescence measure of sexual arousal and by including both rape and nonrape depictions within the same experiment.

A second interrelated issue addressed concerns the effects of sexually violent stimuli that portray rape in a "positive" or negative light on subsequent reactions to rape. Feminist writers have forcefully contended that pornographic depictions that portray sexual violence in "positive" terms (e.g., resulting in victim arousal) constitute "hate literature" against women that have antisocial effects (Brownmiller, 1975; Gager & Schurr, 1976; Kostach, 1978).

These assertions seem inconsistent with the research of the President's Commission on Obscenity and Pornography (1970) which concluded that there was no evidence of adverse effects of pornography. However, specific hypotheses regarding the effects of sexual violence were not adequately tested by the Commission for it did not clearly distinguish between materials that merely depicted explicit sexual content from those involving violent and/or coercive-exploitative portrayals of sexual relationships. In fact, materials of the latter type were generally not employed in the Commission's studies. There were a few studies that included extreme sadomasochistic materials (e.g., Mann, Sidman, & Starr, 1971) but not the type of violence that is common in today's pornography and elsewhere.

A recent study by Malamuth, Haber, & Feshbach (1980) yielded some suggestive data consistent with the feminist position. Subjects were exposed to either a "mild" sadomasochistic or a nonviolent version of the same sexual passage, and then all subjects were exposed to a portrayal of rape. Some non-significant trends were noted, suggesting that the exposure to the sadomasochistic portrayal in which the violence inflicted on the woman was, to her own surprise, sexually arousing may have affected males' sexual responsiveness to rape. Moreover, it was found that self-reported sexual arousal to sexual violence (both as portrayed in the sadomasochistic version and the rape) but not arousal to sexual nonviolence was correlated with a self-reported likelihood of engaging in rape. This self-reported proclivity to rape was, in turn, associated with a generally callous attitude towards rape and rape victims. The present study was also intended to extend these data by examining the impact of exposure to relatively "favorable" (i.e., resulting in victim's sexual arousal) vs.

unfavorable (i.e., resulting in victim's abhorrence) rape depictions on subsequent sexual responsiveness to and perceptions of rape.

METHOD

Subjects

Introductory Psychology students (109 males) at the University of Manitoba signed up for an experiment described as investigating the use of physiological measures of sexual arousal. Subjects were given experimental credit for arriving at the laboratory, irrespective of whether or not they chose to actually participate in the experiment. Thirty-four subjects decided not to participate after being given a complete description of the measures to be used. An analysis of the number of subjects who decided not to participate indicated no significant difference as a function of sex of experimenter. The remaining 75 subjects were randomly assigned to the various experimental conditions.

Overview of the Experiment

In Phase 1, subjects were exposed to one of three audio-taped versions of a passage and their arousal assessed. Group A listened to a rape story in which the rapist perceives that the victim becomes sexually aroused.³ Group B heard a rape in which the victim continuously abhors the assault. Group C heard a mutually-desired intercourse story.

In Phase 2, all of these three groups listened to the same "rape-criterion" story in order to determine the effects of the prior exposures on subsequent responses to rape.

About half of the subjects in each group had a male experimenter for both phases and half had a female experimenter for both phases. The dependent measures consisted of sexual arousal (penile tumescence and self-reports) in each phase and perceptions of the rape in the rape-criterion story, assessed by means of a questionnaire.

Materials

Stories. Four stories were constructed and presented via an audio tape recorder. Except for the rape-criterion story, the depictions were directly based

³As indicated below, a strong statement concerning the absolute falsehood of such depictions and the true horror of rape was given to all subjects (in both the validation study and the experiment) following exposure. Resent data (Note 4; Note 5) indicate that such debriefings are effective in counteracting possible adverse effects of exposure to sexually violent depictions. Moreover, these studies indicate that the experience of exposure to rape portrayals followed by a debriefing results in less acceptance of rape myths than control subjects on assessments conducted days or weeks following exposure.

on those used by Abel et al. (1977). They were recorded by a male speaker.

Rape-arousal story. The rape-arousal story was a rape story, told from the perspective of the rapist. This story was of about equal length and very similar in content to the rape-aborrence depiction described below, *except* that the rapist perceived that the victim became sexually aroused. The following portion illustrates the arousal aspect of the passage content:

You're holding her down, forcing yourself on her and you can tell she likes it. She's telling you to stop, to please stop. You can tell she's getting really excited now. She's really aroused. She's pleading with you and it's no use. You just hold her down, screwing her and fucking her. You've got her just where you want her.

Rape-aborrence story. The rape-aborrence story was virtually identical to that reported by Abel et al. (1977). It depicted a victim that continuously abhors the assault. The following is an illustration of the story's content:

... and she's fighting you. You slap her a little. You tell her to quiet down, to remain still. She's starting to scream now and cry. You slap her and you tell her to be quiet, and you take her hand and you muffle her voice there. You're holding her down, you've got her pinned down there, just forcing yourself on her.

Mutually-desired intercourse. The mutually-desired intercourse depiction was a somewhat shorter version of the nonviolent story employed by Abel et al. (1977) in which both partners are portrayed as obviously desiring and enjoying the experience. The two rape stories were just slightly over 2 minutes duration, whereas the mutually-desired depiction was 1 minute and 33 seconds.

Rape-criterion. The rape-criterion story was that used by Malamuth et al. (1980a). The story was of a male student raping a female student in an alley and was in the third person. This story was 3 minutes and 38 seconds in duration.

Validation Study

To validate the intended manipulation of the audio tapes, 81 male and female introductory psychology students, fulfilling part of a course requirement, were randomly distributed one of the four stories (rape-arousal, rape-aborrence, mutually-desired, and rape-criterion) in written format. They were asked to indicate their judgments concerning their own perceptions of the woman's willingness and how much pleasure, if any, she derived from the act. Raters were also requested to indicate their judgments of the perceptions of the man depicted in the story.

Perceptions of the woman's pleasure. The two items measuring perceptions of the woman's pleasure were each subjected to a one-way ANOVA, with the four stories as levels of the independent variable. These analyses yielded a

TABLE 1
PERCEPTIONS OF THE WOMAN'S PLEASURE AND WILLINGNESS AS A
FUNCTION OF DEPICTION

Items rated	Depiction			
	Rape-arousal (n = 21)	Rape-aborrence (n = 20)	Mutually desired (n = 20)	Rape-criterion (n = 20)
Woman's pleasure				
Rater's perceptions	3.14 _b	1.80 _a	7.60 _c	1.85 _a
Man's judged perception	7.81 _b	4.70 _a	8.45 _b	5.45 _a
Woman's willingness				
Rater's perceptions	3.00 _a	2.35 _a	9.35 _b	2.75 _a
Man's judged perception	7.71 _b	4.55 _a	9.55 _c	6.40 _b

Note. Higher numbers indicate greater pleasure/willingness. Degree of pleasure was rated on scales ranging from 1 (no pleasure) to 10 (complete pleasure). Willingness was rated on a scale from 1 (completely willing) to 9 (completely unwilling). (For consistency, the willingness scale has been reversed.) Within each row means with common subscripts do not differ from each other at the .05 level using the Newman-Keuls procedure.

significant effect for raters' own perceptions of the woman's pleasure, $F(3,77) = 67.56, p < .001$, and judgments of the man's perceptions of the woman's pleasure, $F(3,77) = 15.41, p < .001$. Mean ratings on these two items for the four stories appear in rows 1 and 2 of Table 1. These data indicate that as expected, the rape-arousal as well as the mutually-desired intercourse were associated with greater perceived woman's pleasure than the victim-aborrence and rape-criterion stories. This was true for judgments of both rater-perceived woman's pleasure and the man's perception of the woman's pleasure.

Perceptions of the woman's willingness. Analysis of the two woman's willingness items yielded a significant effect for raters' ratings of their own perceptions of the woman's willingness, $F(3,77) = 70.76, p < .001$, and raters' judgments of the man's perception of the woman's willingness, $F(3,77) = 16.09, p < .001$. Mean ratings of the woman's willingness from both the raters' perspective and the man's perspective for each of the four stories can be found in rows 3 and 4 of Table 1. As expected, the woman was generally rated as less willing in the three rape depictions than in the mutually-desired intercourse depiction.

In summary, the results of the validation study suggest that the victim was effectively portrayed as unwilling in the three rape depictions and that the

woman was effectively portrayed as experiencing pleasure in the rape-arousal and mutually-desired intercourse depictions.

Assessment Instruments

Penile tumescence. Penile tumescence was monitored by the use of a mercury-in-rubber strain gauge (Parks Electronics Laboratory, Beaverton, Oregon), a device recommended in recent analyses of differing measuring instruments (Laws, 1977; Rosen & Keffe, 1978). Changes in resistance of the gauge as a function of changes in penile diameter were amplified through a Wheatstone Bridge and recorded using a Fisher Recordall Series 5000 Chart Recorder (Fisher Instruments, Winnipeg, Manitoba, Canada). The strain gauge was sterilized by both a 2-hour exposure to ultraviolet light and cleansing with an alcohol solution. Penile tumescence to a story was computed on the basis of the maximum positive deflection from baseline, measured just prior to the story's beginning. A comparison between this approach and that of computing the area under the curve has shown that the two procedures yield very similar results (Abel, Blanchard, Murphy, Becker, & Djenderdjian, in press).

Self-reported arousal. After each erotic phase, subjects were asked to indicate how sexually erotic they felt. They were asked to indicate their responses on an 11-point scale ranging from 0% (not sexually erotic) to 100% (extremely erotic).

Rape questionnaire. After the second phase exposure, subjects filled out a 16-item questionnaire asking their perceptions of the rape-criterion story. This questionnaire was similar to that employed by Malamuth et al. (1980a). On the basis of factor analysis data (described in detail in the Results section), the questionnaire items were classified in five factors reflecting perceptions of the *Victim's Experience*, the *Normality of Rape*, the *Criminal aspect of rape*, the *Victim herself*, and the *Rapist*.

Procedure

Subjects were run individually. The experimenter signed subject's experimental credit card as soon as subject arrived at the laboratory. Subject was then escorted to a soundproof room, handed a set of written instructions, and left alone. The instructions indicated that subject's responses were anonymous and that he was free to leave at any time during the experiment without loss of credit and without any notice to the experimenter. If subject chose to remain, he then closed the door, signed or initialled a consent to participate form, placed the strain gauge on his penis, did his trousers back up, and turned on the tape recorder.

The instructions on the tape indicated that there would be stories interspersed with music, and that subject was to image the events described in the

stories but not to fantasize sexually during the musical interludes. After the initial instructions, there was a 2-minute musical interlude and then the first erotic passage (Phase 1). At the end of the first passage, the voice on the tape asked subject to indicate on the scale provided how sexually erotic he found the story. A 10-minute musical interlude followed (during which all subjects returned to baseline levels of arousal) and then the rape-criterion story was presented followed by instructions to rate how erotic the passage was (Phase 2). A third phase followed in which subjects were instructed to reach 100% arousal without touching the penis. This procedure was intended to enable the transformation of the physiological arousal scores to a percentage of maximum arousal. Following the 100% erection phase, subject removed the strain gauge and notified the experimenter by intercom that he was finished. At this point, he was told to go to a corner of the room and fill out questionnaires in separate envelopes on the shelf.⁴ After filling out the questionnaires, subject buzzed the experimenter again, was brought a debriefing sheet and personally thanked for his participation. The debriefing sheet cautioned subject that the rape passages were pure fiction and pointed out that rape was, in fact, a terrible crime abhorred by women and a serious criminal offense.

RESULTS

Effects of Outcome on Initial Arousal

Penile Tumescence. A 3 (story) \times 2 (sex of experimenter) ANOVA was calculated on the penile tumescence scores. This analysis yielded a significant main effect for story, $F(2,65) = 4.97, p < .01$, but no sex of experimenter effect nor interaction effect. Mean levels of arousal for each story are presented in Figure 1. Follow-up simple effects tests on these means, using the Newman-Keuls procedure with a significance criterion of $p < .05$, revealed that, as predicted, the rape-arousal story generated significantly more arousal than the rape-aversion story. There were no other significant paired comparisons.

Self-reported arousal. Self-reported arousal to the first erotic presentation

⁴The questionnaires consisted of the 16-item rape questionnaire described above as well as a postexperimental questionnaire. The latter questionnaire was designed to determine whether any subjects were aware of the hypothesis regarding the effects of exposure in Phase 1 on reactions to the rape-criterion story presented in Phase 2. Subjects were asked if they had heard anything about the experiment and what they felt psychologists could learn from an experiment of this sort. No one indicated any awareness of the prior exposure hypothesis, and so all 75 subjects were included in the analyses.

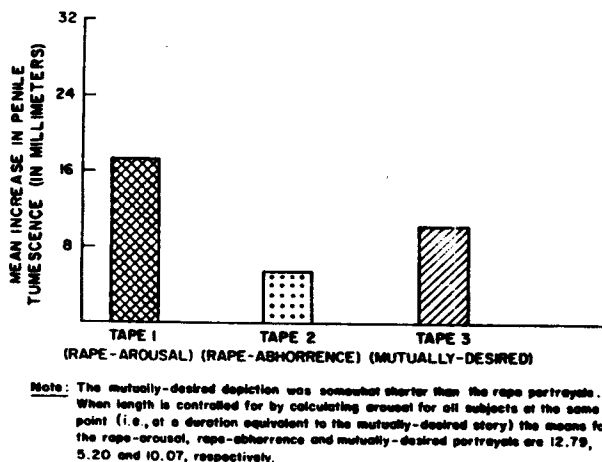


FIG. 1. Penile tumescence (measured as deflection from baseline) as a function of story.

correlated $r(69)^5 = 0.54, p < .001$ with penile tumescence. This correlation is similar to those found in previous research (e.g., Heiman, 1977). The ANOVA yielded no significant effects, although the mean differences were in the same direction as those of the penile tumescence measure (e.g., 28.6% for the rape-arousal vs. 20.4% for the rape-abhorrence).

Effects of Prior Exposure on Subsequent Arousal to Rape

To reiterate, the second erotic presentation was the rape-criterion story for all groups so as to assess the effects of prior exposure on subsequent sexual arousal to rape and perceptions of rape.

Penile tumescence. A 3 (prior exposure) \times 2 (sex of experimenter) ANOVA calculated on penile tumescence to the rape-criterion story (Phase 2) yielded a significant effect for prior exposure, $F(2,63) = 4.46, p < .02$, and an effect for

⁵There are slight variations in the degrees of freedom reported due to a few instances of missing data for the physiological measure at either Phase 1 or Phase 2. These were due to mechanical failure.

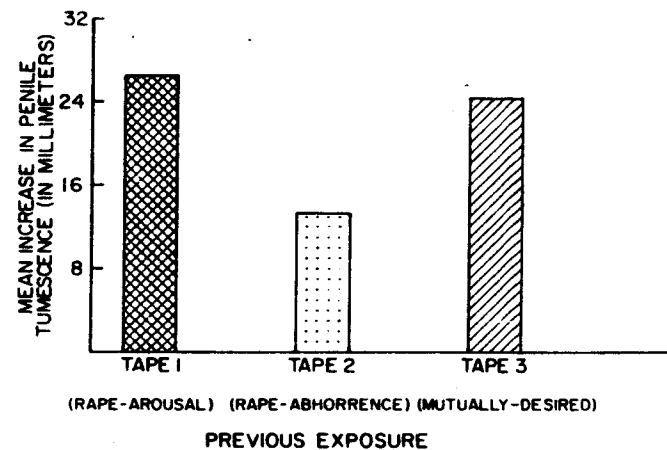


FIG. 2. Penile tumescence (measured as deflection from baseline) in response to rape-criterion as a function of previous exposure.

sex of experimenter, $F(1,63) = 6.67, p < .02$, but no interaction effect. The means for each condition are presented in Figure 2. As predicted, subjects who were previously exposed to the rape-arousal outcome depiction were subsequently more aroused to the rape-criterion story than subjects who listened to the rape-abhorrence story prior to exposure to the rape-criterion. This difference was statistically significant using the Newman-Keuls procedure with a criterion of $p < .05$. However, subjects who had first heard the mutually-desired intercourse story were also subsequently highly aroused to the rape-criterion story, significantly higher than those who listened to the rape-abhorrence story prior to hearing the rape-criterion story. The sex experimenter effect occurred as a result of subjects being more aroused when the experimenter was male than when the experimenter was female (means 26.59 and 16.28, respectively).

Self-reported arousal. Self-reported arousal to the second erotic presentation correlated $r(67) = 0.31, p < .01$ with penile tumescence. The ANOVA yielded no significant effects, although the means were again in the same direction as the penile tumescence means (e.g., 48.6% for rape-arousal vs. 30.6% for rape-abhorrence).

100% Arousal Phase

A large percentage of subjects indicated in their self-reports that they did not reach 100% erection during the third phase of the experiment, in which they were instructed to reach as high a level as possible without external physical stimulation. Consequently it was not feasible to translate the physiological arousal scores from Phases 1 and 2 into percentage of full erection scores. Self-reports of arousal during this phase indicated that subjects reached an average of 65% of full erection. In order to determine whether there was any generalized effect as a function of earlier exposure, levels of arousal during this phase were analyzed. ANOVAs calculated for both penile tumescence scores and self-reported arousal yielded no effects, with the means being virtually identical in all of the conditions.

Questionnaire Data

The 16 questionnaire items were factor analyzed by means of a principal components factor analysis followed by varimax rotation. Table 2 presents the item loadings for the five factors which were extracted using a minimum eigenvalue of 1.0 as the criterion for extraction. The first three factors had multiple questionnaire items, whereas the remaining two factors had only one item each. These five factors accounted for 64% of the total variance of the original 16 questionnaire items.

The three sets of items corresponding to the three multiple-item factors were each analyzed by a multivariate analysis of variance (MANOVA). For each of the three multi-item factors, a 3 (prior exposure) \times 2 (sex of experimenter) MANOVA was performed. A significant multivariate effect was obtained as a function of the exposure variable on the four items in the perceptions of the *Victim's Experience* factor (Factor 2, Table 2), Multivariate $F(8,132) = 2.45, p < .02$. Univariate effects tests in this item set indicated a significant F value only on the item assessing perceptions of the woman's trauma, $F(2,69) = 6.33, p < .004$. Follow-up analyses using the Newman-Keuls procedure revealed that subjects who first listened to the rape-arousal story rated the woman as experiencing less trauma in the rape-criterion story ($\bar{x} = 3.00$) than subjects who had heard the rape-abhorrence story ($\bar{x} = 3.96$) or those who had listened to the mutually-desired intercourse ($\bar{x} = 3.83$) prior to hearing the rape-criterion story.

There were no other significant multivariate effects for the questionnaire data or univariate effects for the two single item factors. There was, however, a significant univariate effect as a function of the exposure variable on the item which asked subjects what percentage of men they thought might engage in rape, $F(2,69) = 3.34, p < .05$. Examination of the means indicated that subjects who had first listened to the rape-arousal passage followed by the

TABLE 2
VARIMAX ROTATED FACTOR LOADINGS FOR THE QUESTIONNAIRE ITEMS

Questionnaire item	Factors				
	I "Normality" of rape	II Victim's experience	III Criminal aspect	IV Victim	V Rapist
Would you rape if not caught?	.809 ¹	.141	.009	-.024	.118
% of women who would derive pleasure from rape	.791 ¹	-.207	-.034	-.126	-.047
% of men who would rape	.790 ¹	-.193	-.031	.047	-.278
Would you rape?	.660 ¹	-.286	-.224	.009	.353
Identify with rapist	.530 ¹	-.112	-.048	-.369	.249
Woman shares responsibility	.404 ¹	-.153	-.106	-.390	-.367
Woman's pain	.084	.877 ²	-.081	.010	-.134
Woman's trauma	-.131	.724 ²	.315	-.227	.170
Woman's resistance	-.053	.578 ²	.066	.334	.124
Woman's pleasure	.477	-.554 ²	-.252	-.232	.213
Man's danger to society	-.204	.152	.758 ³	-.110	-.118
Recommended sentence	.098	-.076	.740 ³	-.033	-.125
Should have gone to police	-.106	.241	.533 ³	.439	-.081
Woman's unwillingness	-.120	.197	.497 ³	.424	.283
Woman's attractiveness	-.043	-.044	-.087	.795 ⁴	.016
Rapist's intelligence	.116	-.052	-.211	.022	.843 ⁵

¹ Factor I items; ² Factor II items; ³ Factor III items; ⁴ Factor IV item; ⁵ Factor V item.

rape-criterion story believed that a greater percentage of men ($\bar{x} = 10.79$) would rape than subjects who had first listened to the rape-aborrence story ($\bar{x} = 8.25$) or the mutually-desired story ($\bar{x} = 6.83$) prior to hearing the rape-criterion depiction. (Note that the rating scale on this item ranged from 1 to 20, with 10 representing 45% to 50%.) Follow-up analyses with the Newman-Keuls procedure indicated that the difference between subjects who had first heard the rape-arousal depiction and those who had first listened to the mutually-desired intercourse was the only effect that reached statistical significance.

Self-Reported Proclivity to Rape

Correlations with questionnaire items. Of the 75 subjects who responded to the rape proclivity questions (1 = not at all likely, 5 = very likely), 17% indicated a 2 or above in response to whether they personally would be likely to act as the rapist did in the same circumstances. Sixty-nine percent similarly responded when questioned about their behavior if they could be assured of not being punished. Furthermore, 37% chose the middle of the scale (3) or above in response to the latter question. Since these two items correlated highly, $r(73) = 0.63, p < .001$, only the correlations for the "not caught" item with the other questionnaire items are presented in Table 3. Consistent with the results of Malamuth et al. (1980a), the correlational pattern shows that this self-report was associated with a generally callous attitude about rape that is similar to the reported attitudes of many convicted rapists (Clark & Lewis, 1977; Gager & Schurr, 1976).

Stepwise multiple correlations were computed to ascertain which combination of attitudes, taking into consideration correlations among items, would best predict self-reported proclivity to rape. In conducting this analysis, only

TABLE 3

CORRELATIONS BETWEEN SELF-REPORTED PROCLIVITY TO RAPE AND QUESTIONNAIRE ITEMS ($n = 75$)

Questionnaire item	Correlation with rape proclivity
Identification with rapist	.39**
Woman shares responsibility	.31*
Woman derived pleasure from the rape	.32*
Other men would rape if not punished	.44**
Women would enjoy victimization	.44**

* $p < .01$.** $p < .005$.

variables entering the regression equation at a significant level ($p < .05$) are reported. The resulting multiple correlation was significant $R(2,100) = 0.49, p < .011$. The two items retained in the regression equation collectively accounted for 24% of the variance. These items were the belief that women in general would derive pleasure from being raped (accounting for 19% of the variance) and the extent to which subject identified with the rapist (accounting for the other 5% of the variance).

It is interesting that not only did the manipulation of victim arousal in Phase 1 affect sexual arousal to rape, but also that self-reported proclivity to rape correlated with the two items assessing subjects' beliefs concerning whether women enjoy being raped. In order to further explore this interrelationship between rape and perceived victim pleasure, an analysis was performed to determine whether there was a correlation between sexual arousal to the rape-criterion story (a depiction which in no manner implied victim arousal) and the two "pleasure" items. This analysis yielded a significant correlation between the belief that, in general, women would derive pleasure from rape for both penile tumescence, $r(67) = 0.25, p < .02$, one-tailed, as well as self-reported arousal, $r(73) = 0.24, p < .02$, one-tailed. With respect to the perception of the woman's pleasure in the rape-criterion depiction, the correlations were in the same direction, but only significant for self-reported arousal, $r(73) = 0.34, p < .002$, one-tailed.

Proclivity and sexual arousal. Malamuth et al. (1980a) found that self-reported proclivity to rape correlated with sexual arousal to sexual violence rather than sexual responsiveness per se. In the present investigation, subjects also listened

TABLE 4

CORRELATIONS BETWEEN SELF-REPORTED AROUSAL AND SELF-REPORTED PROCLIVITY TO RAPE

	Group		
	A (Rape-arousal)	B (Rape-aborrence)	C (Mutually desired)
Phase 1 stories			
$r_{\text{arousal, proclivity}}$	-.16	.35*	.07
Phase 2 stories	Rape criterion		
$r_{\text{arousal, proclivity}}$.42*	.42*	-.16

* $p < .05$, one-tailed.

to both violent and nonviolent passages. For purposes of comparison, self-reported proclivity was correlated with self-reported arousal separately for each type of story. The correlations are presented in Table 4.

As can be seen from the table, in Phase 1 self-reported proclivity correlated with arousal to the rape-abhorrence story, but not with arousal to the mutually-desired intercourse depiction nor to the rape-arousal depiction. In Phase 2, the correlations with the rape-criterion were generally significant, except for subjects who had earlier heard the mutually-desired depiction. The correlation between self-reported proclivity to rape and self-reported arousal to the rape-criterion story collapsed across all three groups was $r(73) = .26, p < .02$, one-tailed. Correlations between penile tumescence and self-reported proclivity to rape were generally in the same direction as for self-reported sexual arousal, but did not reach acceptable significance levels.

These data suggest that not only is self-reported proclivity to rape associated with a callous attitude towards rape, it also correlates with self-reported arousal to sexual violence rather than sexual responsiveness per se.

DISCUSSION

Sexual Responsiveness

With respect to the first issue addressed in this study, sexual responsiveness of "normals" to rape depictions, the results very clearly extended the earlier findings of Malamuth et al. (1980b). As indicated by the penile tumescence data, subjects were considerably more sexually aroused to a rape depiction in which the victim was perceived by the rapist to become involuntarily sexually aroused than when she continuously abhorred the assault. These data may thus explain the conflicting findings described earlier concerning nondeviants' arousal to sexual violence.

Additional data obtained in the present study point to the importance of the belief in victim pleasure. Correlational data indicated that those subjects who perceived more victim pleasure in the rape-criterion depiction, a portrayal which gave no indication of such pleasure, were more inclined to report sexual arousal to this rape depiction and to report that they would rape if they could be assured of not being caught. Similarly, men who were more inclined to believe that women in general would enjoy being victimized were more sexually aroused to the rape-criterion portrayal (as indicated by penile tumescence and self-reports) and reported a greater likelihood of raping. These data are of particular interest in light of reports by several investigators that many rapists believe that their victims derived pleasure from being assaulted regardless of how brutalized or traumatized the victim actually was (Clark & Lewis, 1977; Gager & Schurr, 1976).

While the present data do not enable a selection among the varied possible explanations outlined by Malamuth et al. (1980b) for the effect of perceived victim pleasure, the data obtained in the validation study reported herein are inconsistent with one of these explanations. The possibility that subjects reinterpret the events so that in the context of victim pleasure the assault is not perceived as coercive in nature is contradicted by ratings of the woman's willingness: Raters did not indicate any significant difference in their own perceptions of how willing the victim was in the rape-arousal as compared with the rape-abhorrence depictions, although they did believe that the rapist in the story would be more inclined to believe that the woman was willing if she was perceived as sexually aroused.

Effects of Exposure

Sexual arousal. The data bearing upon the second issue addressed, the effects of exposure to sexual violence on subsequent responses to rape, formed a somewhat complex pattern. While consistent differences on both the sexual arousal and questionnaire data were found between those earlier exposed to the rape-arousal and rape-abhorrence portrayals, comparisons with the control condition revealed somewhat different effects on these dependent measures.

The sexual arousal data suggested that those first exposed to the rape-abhorrence depiction were inhibited in their sexual responsiveness to the rape-criterion portrayal as compared to subjects first exposed to the rape-arousal depiction or to the mutually-desired depiction. These data are in keeping with the finding that the sexual responsiveness of nondeviants may be particularly sensitive to inhibitory cues (Barbaree et al., 1979). This inhibition effect may be labelled an "educational impact" in that exposure to a depiction stressing the true horror of a rape victim's experience lessened subjects' sexual arousal to a subsequent pornographic rape portrayal. The fact that during the 100% arousal phase no differences were found among the various exposure conditions suggests that a generalized inhibitory effect did not occur, but that the effects of exposure to the rape abhorrence depiction were specific to rape portrayals.

Sexual responsiveness to the rape-criterion depiction was not found to significantly differ between those earlier exposed to the rape-arousal as compared to the mutually-desired portrayal. These data thus fail to show an enhancement effect on arousal as a function of exposure to "favorable" depictions of sexual violence as reported in a nonsignificant trend by Malamuth et al. (1980a). However, the fact that sexual arousal to the rape-criterion for those first exposed to the mutually-desired portrayal was very high for a brief audio-tape presentation seriously limited the opportunity of finding such an enhancement effect. Future research employing a similar design should utilize a rape portrayal (in Phase 2) that generates relatively low levels of sexual arousal

to assess the possibility that exposures to sexual violence that portray rape in a "positive" manner may have undesirable effects on sexual responsivity.

Perceptions of rape. On rape perceptions, significant differences were found between those earlier exposed to the rape-arousal as compared to both the rape-aborrence and the mutually-desired portrayals. Since the degree of sexual arousal generated in the first phase was comparable in the rape-arousal and mutually-desired depictions (and since a delay was interposed between the two phases in which arousal was found to dissipate completely), arousal per se could not account for the perceptual effects obtained in Phase 2. Differences in perception occurred in multivariate analyses on the set of items assessing perceptions of the rape victim's experience. This finding is expected, since it was the perceived victim reaction that was manipulated in the stories used in Phase 1. Within this set of items, univariate analyses revealed a significant effect for the item measuring perceptions of victim trauma: Those earlier exposed to the rape-arousal portrayal perceived little victim trauma in the rape-criterion depiction relative to those earlier exposed to the rape-aborrence or to the mutually-desired depictions. This finding supports assertions regarding the anti-social impact of exposure to materials that portray rape in a relatively "positive" manner, causing and/or perpetuating undesirable myths. It is consistent with other recent data indicating that exposure to violent pomography may stimulate rape fantasies (Malamuth, 1981) and increase behavioral aggression (as measured by the administration of electric shock) in comparison with neutral, sexual, or aggressive stimuli (Donnerstein, 1980; Note 3).

An additional cognitive-perceptual difference reflecting an antisocial effect was found on a univariate analysis of the item assessing beliefs regarding the percentage of men who would rape if they could be assured of not being caught. Those first exposed to the rape-arousal portrayal believed that a higher percentage of men would rape than subjects in the other two conditions, although the difference between the rape-arousal and rape-aborrence conditions did not reach acceptable statistical significance. To the extent that subjects first exposed to the rape-arousal perceived less victim trauma in the rape-criterion depiction, it is understandable that they would expect other men to be relatively likely to commit such a violent act.

Taken as a whole, the data suggest that exposure to depictions that portray rape in a relatively "favorable" or unfavorable manner may affect subsequent responses to acts of sexual violence. The fact that the type of effect observed differed for the two dependent measures highlights the need to examine exposure effects on multiple measures, each of which may be relatively more sensitive to certain manipulations.

Possibility of raping. Self-reported possibility of engaging in rape was found to relate to general attitudes to rape as well as to self-reported sexual arousal. With respect to attitudes, generally callous attitudes toward rape similar to

those of many convicted rapists were found to be associated with self-reported proclivity to rape. In general, self-reported sexual responsivity to sexual violence but not to sexual nonviolence was found to correlate with the reported likelihood of raping.

In the first phase of the experiment, the relationship between sexual arousal and likelihood of raping was found for the rape-aborrence but not for the rape-arousal depiction. These data may be understood by considering the fact that most subjects were relatively aroused to the rape-arousal depiction. Thus, sexual responsiveness to this type of stimulus did not discriminate among those who reported being relatively likely or unlikely to engage in rape. Relatively few subjects, on the other hand, were not inhibited by the description of the victim's abhorrence. Arousal to such rape-aborrence depictions has been shown to discriminate between the responses of rapists from nonrapists (Abel et al., 1977; Barbaree et al., 1979). Therefore, the significant correlation between arousal to this abhorrence portrayal and self-reported likelihood of raping provides additional support for the contention that such self-reported proclivity is a meaningful measure predictive of important arousal and cognitive-attitudinal responses (Malamuth et al., 1980a). The similar correlation obtained overall between the rape-criterion passage (Phase 2) and self-reported rape proclivity is consistent with these data in that raters' judgments of this story were virtually identical to those of the rape-aborrence passage.

In light of the fact that the relationship between sexual arousal to sexual violence and proclivity to rape was significant for self-reported arousal but not for penile tumescence, it may be hypothesized that a self-perception process (Bem, 1972) mediates this relationship. A subject who perceives that he is aroused to portrayals of sexual violence, irrespective of whether corresponding tumescence changes occur, may infer that he would be sexually aroused by an actual assault. The inferences drawn from such self-perceived arousal merit further examination in that they may not only help account for the relationship with self-reported proclivity to rape, but also for the development of the motivation to actually commit acts of sexual assault, an area that is presently totally devoid of any empirical research.

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