

Stimulus Control of Rapists' and Non-sex Offenders' Sexual Arousal

VERNON L. QUINSEY AND TERRY C. CHAPLIN

Mental Health Centre, Penetanguishene, Ontario

Fifteen rapists and fifteen non-sex offenders' penile circumference responses to audiotaped narratives were compared. These narratives involved neutral heterosexual scenes, consenting heterosexual activity in which the female partner was active or passive, and rape scenes. The rape scenes varied according to whether the female victim assertively refused or pleaded for mercy and according to whether the victim ultimately experienced pain or pleasure in the assault. Non-sex offenders responded most to the consenting sex narratives and least to the stories in which the victim suffered whereas rapists' responses did not vary over the various categories of consenting and nonconsenting heterosexual activity. These data are consistent with the theory that nonrapists' sexual responses are inhibited by nonsexual cues given by the female whereas those of rapists are not.

A number of studies have measured rapists' and nonrapists' penile responses to audiotaped descriptions of rape and consenting sexual activities (Abel, Barlow, Blanchard, & Guild, 1977; Abel, Becker, Blanchard, & Djenderedjian, 1978; Barbaree, Marshall, & Lanthier, 1979; Quinsey, Chaplin, & Varney, 1981). In general, these studies have indicated that rapists show more sexual arousal to rape cues (in comparison to their arousal to consenting sexual activity) than do nonrapists.

Although the finding that rapists' sexual arousal patterns are different from those of nonrapists has important implications for both theory and treatment, particularly since the difference is both large and replicable, previous research has not indicated which aspects of the rape or consenting sex descriptions are responsible for the observed differences. The identification of these critical dimensions would permit the construction of more powerful stimuli to be used in assessment and allow more precise

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Reprint requests should be sent to V. L. Quinsey, Research Department, Mental Health Centre, Penetanguishene, Ontario, Canada LOK 1P0.

selection of targets for a treatment intervention. There are several studies which suggest what the relevant stimulus dimensions may be. Marques (Note 1) has shown that rapists are most sexually aroused (as measured by penile responses to audiotaped stimuli) when a victim adopts a pleading resistance strategy but were most angered, according to their verbal report, when the victim angrily refused. Malamuth and Check (in press) have shown in studies of male college students' verbal and penile responses to rape cues, that more arousal occurred when the victim was portrayed as becoming involuntarily sexually aroused than when she continually abhorred the assault. Thus, the dimensions of the victim's sexual arousal and resistance strategy may be important determinants of the differences in sexual arousal between rapists and nonrapists. This conclusion, however, is speculative at present because the Marques study contained no nonrapists and the Malamuth and Check experiment included no rapists.

The first purpose of the present study was to examine the stimulus control of rapists' and nonrapists' penile responses to rape descriptions. In the present research, the victim's response was manipulated in a 2×2 factorial design where the variables were: (a) a victim resistance strategy of angry refusal or pleading and (b) a victim response to the rape of pain or pleasure. A second purpose was to further clarify the nature of the stimulus control of sexual arousal by comparing consenting sexual scenes in which the female was passive and in which she took the initiative. This active-passive comparison was included to determine whether rapists might merely be aroused by partner passivity per se.

METHOD

Subjects

Fifteen men who had committed a sexual assault on a female aged 14 years or older comprised the rapist group. These men were housed in the Oak Ridge Maximum Security Division of the Mental Health Centre in Penetanguishene, Ontario for assessment or treatment. Most of the sexual offenses leading to admission involved vaginal intercourse but occasionally involved fellatio or anal intercourse instead. The rapists averaged 28.60 ($SD = 6.76$) years of age and all were diagnosed as personality disordered.

Fifteen non-sex offenders served as controls. Seven of these were Oak Ridge patients who had been charged with an offense against persons but who had no history of any sort of sexual offenses. Of these seven, four were diagnosed as personality disordered and three as psychotic. The remaining eight subjects were recruited through a Canada Employment Centre (a governmental employment agency) from the local community; most of the community subjects were unemployed and all denied any previous criminal convictions. The patient controls averaged 26.14 ($SD = 6.54$) years of age and the community controls were selected to be between 18 and 35 years of age.

Apparatus and Procedure

The apparatus and procedure followed that of Quinsey, Chaplin, and Varney (1981). Briefly, penile responses were measured with a mercury-in-rubber strain gauge connected to a Parks Model 270 Plethysmograph and a Beckman R511A dynograph. Subjects were instructed to listen carefully to the tape and to imagine that they were the person "saying it."

Stimuli

Twenty-two audiotaped stories narrated by the same male in the first person, present tense were presented to each subject in one session. There were 4 orders of these narratives which were random with the restriction that no more than 2 narratives of the same category could occur consecutively. Approximately one quarter of the subjects in each group received one of the 4 orders of stimulus presentation (complete counterbalancing was impossible with 15 subjects per group). Two of the narratives were neutral hetero-social stories; one involved mailing a package and the other shopping in a market. Sixteen of the narratives described a rape scene. Each of these narrations conformed to the same format of 6 sections presented in the following order: (a) 11–19 words describing the environment, (b) 16–27 describing the woman, (c) 13–23 words describing the initial physical contact, (d) 46–54 describing the woman's resistance, (e) 46–53 describing further physical contact, and (f) 45–60 describing the victim's response to the rape. Sections d and f were varied in a 2×2 factorial design. Section d contained one of two assertive refusals (e.g., "and her muscles tense as she attempts to struggle free. With anger she shouts, 'Get your . . . hands off of me, you creep.' Her voice is furious in outrage. Her face grows crimson red as resentment flashes from her eyes. She bitterly resists my attempts to have her") or one of two pleading strategies (e.g., "Her body grows rigid as she falls back. Tearfully she begs, 'Please don't touch me, leave me alone.' Her voice is trembling with dread. An expression of alarm fills her eyes. She implores me to let her go. Her appeals sound desperate as she sobs and whimpers."). Section f contained one of two victim pleasure descriptions (e.g., "Her breathing comes in short gasps of pleasure. Despite herself, her passion is mounting and as she arches her back she exclaims, 'Oh, yes, don't stop now.' Her legs spread further apart welcoming me to surge deeper. She begins moaning with enjoyment, unable to hold herself back.") or one of two victim pain descriptions (e.g., ". . . 'her agonized body begins to convulse with waves of pain. She screams in agony 'Oh that hurts.' My vicious scratches cause red welts . . . She is suffering through the wretched torture of my abuse. Her breathing is interrupted by tormented moans."). There were 4 versions of each of the other 4 story segments (a, b, c, and e) which were varied independently across narratives. Thus, each subject heard four different narratives in each of the four nonconsent categories.

In addition to the neutral and rape scenes, there were 4 consenting sex scenes. Two of these described the woman as active and controlling in section d (e.g. "Taking my hand, she eases it onto her breast . . . Her excited hands grab me and she pulls me closer. Lustfully she exclaims 'Please touch me, I want you so bad.' Her voice taunts me seductively. A flame of passion burns in her eyes as she beckons me to have her. She actively encourages my every caress. Reaching down, she unzips my pants . . .") and two as passive (e.g. "Her body quivers as

she allows me to draw near. With a smile, she gasps, 'Oh yeah, quickly, do it to me.' Her voice is consumed with passion. Mounting desire fills her eyes as she urges me on. Her churning body jerks and writhes with the growing anticipation."'). Section f of the consent narratives contained one of the two pleasure descriptions.

Each of the narratives involving sexual activity was explicit and described vaginal intercourse. None of the scenes described the male's sexual arousal other than to mention that he had an erection. Narrative length varied between 70 and 82 sec and the interstimulus interval was between 68 and 80 sec or until the erectile response returned to baseline.

Treatment of the Data

Penile responses were scored by measuring the difference between the dynograph reading at narrative onset and the largest positive deflection in the 2 to 120 sec period following the start of the narration. Penile responses were analyzed in the form of raw scores, z scores (a transformation based on each subject's raw responses to all of the narratives which results in each subject's scores having a mean of 0 and a standard deviation of 1), and rape indices of several kinds. The first rape index was calculated for each subject by dividing the mean response to the nonconsenting or rape stories by the mean response to the consenting narratives. Other rape indices were calculated by dividing the mean response to each of the four non-consent categories by the mean response to the consenting six scenarios. These three types of scores reflect different aspects of the data. Raw scores reflect absolute magnitude of responding; unfortunately, however, individual differences in responsiveness can obscure relative preference. A z -score transformation removes these individual differences in responsiveness and more adequately allows the examination of relative preferences for various stimuli. Ratio or rape index transformations similarly measure relative preference but focus on only the two stimulus categories that are used in the calculation of the ratio.

Alpha coefficients were calculated within each of the stimulus categories. The alpha coefficients for the raw and z scores, respectively, were .50 and .44 for Active Consent, .80 and .65 for Passive Consent, .89 and .35 for Plead-Enjoy, .69 and .52 for Assertive Refusal Enjoy, .82 and .42 for Plead-Suffer, and .84 and .53 for Assertive Refusal-Suffer. The alphas for the raw scores were higher because they include subject responsivity. Considering there were 2 stimuli in the consent categories and 4 stimuli in the nonconsent categories, these coefficients are quite high and the average responses of each subject to the categories were used in subsequent analyses.

These data speak to three separate issues and were analyzed with three separate analyses of variance. The first issue is whether rapists and nonrapists respond differently to consenting and nonconsenting scenes; this was addressed by an analysis of variance based on each subject's average response to consent and nonconsent sex scenes. The second issue relates to the factors responsible for the differential responsiveness of rapists and nonrapists to rape scenes and was addressed by an analysis of variance on the average of each subject's response to each of the four categories of rape scenes. The third issue was whether rapists and nonrapists responded similarly to active and passive consent; in this analysis, each subject's average response to each of these two categories was included in the analysis. Because the z -score transformation ensures that the average of each

TABLE 1
F VALUES FOR ANALYSES OF VARIANCE

Variable	Score Type		
	Raw	z	Ratio
1. Group (Rapists vs. Nonrapists)	.30	52.79***	32.00***
Consent (Consent vs. Rape)	4.33*	31.22***	
Group \times Consent	7.87**	78.04***	
2. Group (Rapists vs. Nonrapists)	1.33	79.00***	20.80***
Resistance (Plead vs. Assertion)	.20	.55	.79
Group \times Resistance	.21	4.16	.37
Response (Enjoy vs. Suffer)	2.88	9.09**	.14
Group \times Response	3.82	9.28**	4.10
Resistance \times Response	.06	3.08	.21
Group \times Resistance \times Response	.12	.95	.57
3. Group (Rapists vs. Nonrapists)	.00	69.16***	
Consent Type (Active vs. Passive)	2.94	2.96	
Group \times Consent Type	.99	.70	

Note: All *F* Ratios are based on 1 and 28 *df*.

p* = .05; *p* = .01; ****p* = .001.

subject's responses are zero, main effects of group membership (although possible since not all of the categories are analyzed at once) are somewhat difficult to interpret and will not be discussed.

RESULTS

The rapists were very clearly differentiated from the nonrapists by means of the rape index (nonconsent/consent ratios). The average rape index was .41 and 1.43 for the nonrapists and rapists, respectively. With a cut-off between .6 and .78, only 1 subject (a community volunteer non-rapist) was misclassified as to group membership. As shown in the first analysis in Table 1, the group differentiation was highly significant with the ratio data. Because the rape index reflects the relative responsiveness of subjects to the consenting and rape scenes, we would expect significant Group \times Consent interaction effects in the raw and z-score data which, as shown in Table 1 and Figure 1, were obtained.

Given that rapists respond more highly to rape cues in relation to consenting sex cues than do nonrapists, do they also respond differently to victim resistance strategy and victim response to the rape than nonrapists? The raw score data, unfortunately, are not helpful in this regard (see second analysis in Table 1); there were no significant effects in further analyses of these data, largely because one rapist achieved nearly full erections to all of the narratives except neutrals. This subject, therefore, greatly inflated the error variance in the raw scores because all other subjects showed responses of relatively low magnitude. This source of variance was, of course, removed by the ratio and z-score transformations.

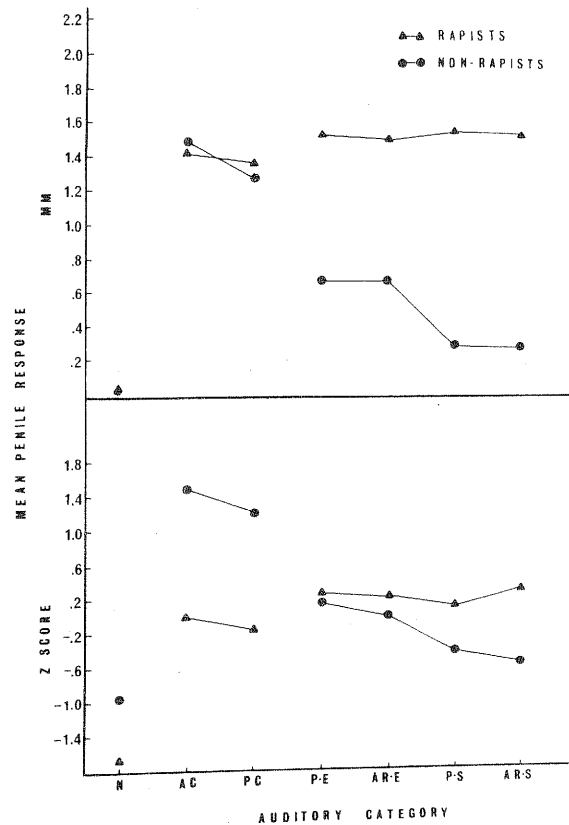


Fig. 1. Mean penile responses of rapists and nonrapists to the following categories of story: neutral heterosocial (N), active consenting sex (AC), passive consent (PC), plead-enjoy (P-E), assertive refusal-enjoy (AR-E), plead-suffer (P-S), and assertive refusal-suffer (AR-S).

As expected, the rapists responded more to the rape scenes than the nonrapists in the z-score and ratio data (where the ratios were defined according to the type of rape scene); these analyses are shown in the second analysis in Table 1. Victim resistance strategy, however, did not affect subjects' responses; victim response to the rape, in contrast, exerted a large effect. In the z-score data, there was greater responsiveness over all subjects to the victim enjoy than to the victim suffer category. The significant interaction between groups and victim response category was due to the nonrapists responding less to the victim suffer than to the victim enjoy categories ($F(1,28) = 9.19, p < .01$) while rapists showed no significant difference ($F < 1$). There was no significant effect of partner passivity in the consent scenes (see third analysis in Table 1).

DISCUSSION

The present study found that rapists did not discriminate among any of the sexual narratives whereas the nonrapists responded most to the consenting sex narratives, less when the sexual partner did not consent, and least when the victim experienced pain. The top panel of Figure 1 shows this effect clearly, whereas it is obscured in the bottom panel because the z-score transformation makes the average response to all the stimuli equal in the two groups. These data are in agreement with the suggestion of Barbaree et al. (1979) that rapists differ from normals in that their sexual arousal is not inhibited by nonsexual victim cues such as, in this instance, partner nonconsent and victim suffering. The most straightforward practical implication of this research is that differentiation of rapists from nonrapists is best when the rape scenes involve victim suffering. It is important to note in this connection, however, that victim suffering or abuse is in itself not a sufficient stimulus to achieve differentiation; rapists are not differentiated from nonrapists by their responses to nonsexual violence scenes (Quinsey et al., 1981), although rapists who have physically damaged their victims do tend to respond more highly to descriptions of nonsexual physical abuse of women than rapists who have not (Quinsey & Chaplin, Note 1).

The sexual arousal patterns of rapists found in this and other studies raises the question of whether rapists have a sexual problem or are merely callous. It might be argued that rapists are merely psychopathic and that is why their responses to sexual material are not inhibited by victim reactions. If this interpretation were correct, however, all personality disordered persons or psychopaths should show sexual arousal patterns similar to those of rapists. In the present investigation, the sexual arousal patterns of the four personality disordered offenders were similar to those of the psychotic offenders and community volunteers. Similarly, our previous study (Quinsey et al., 1981) differentiated both personality disordered non-sex offenders and community subjects from personality disordered rapists with the rape index. Although rapists show a callous pattern of sexual responding, therefore, their sexual arousal patterns are clearly different from personality disordered non-sex offenders.

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