

PSYCHOTICISM AND SEXUAL AROUSAL TO RAPE DEPICTIONS*

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Summary—This study tested the hypothesis that high scorers on the Eysencks' P scale would become more sexually aroused by erotic material of a violent nature than low scorers. One hundred and forty-five college Ss were exposed to erotic auditory messages varying in degree of violence and pain experienced by the victim. Personality was assessed by a median split on the Eysencks' P scale. Sexual arousal was assessed by mercury strain gauge and self-report. Results, as predicted, showed a significant interaction between psychoticism and level of violence (rape vs nonrape): high P scorers showing greater sexual arousal (by both self-report and physiological assessment) to rape as compared to nonrape depictions whereas the opposite pattern occurred for low P scorers.

INTRODUCTION

In his book *Sex and Personality*, Eysenck (1976) hypothesized that high P scorers might be expected to be more interested in impersonal sex or aggressive sex and be more inclined to participate in socially-disapproved acts than low P scorers. Results reported by Eysenck (1976) showing that high P scorers were characterized by a combination of promiscuity, premarital sex and curiosity, along with hostility and lack of satisfaction supported this hypothesis. Eysenck suggested that this "all's fair in love and war" attitude associated with psychoticism might be termed a Don Juan syndrome. Findings of an unpublished study reported by Eysenck (1976) suggesting that sex offenders were high P scorers were particularly important in providing the impetus for this study.

The main objective in this research was to examine the association between psychoticism and 'rape proclivity' in a normal population. Although the topic of rape has stimulated a great deal of current academic and public interest, there has been relatively little attention focused on the perpetrator of the offense (Groth and Birnbaum, 1979). Of the few studies which have been done on the psychological characteristics associated with rape, most have been done on incarcerated samples, and have employed the Minnesota Multiphasic Personality Inventory (MMPI). In reviewing this literature Armentrout and Hauer (1978) concluded that "there seems to be emerging consensus with the primacy of scale 4, often in conjunction with scale 8 in the MMPI's of sex offenders" (p. 330). In their own research Armentrout and Hauer (1978) compared the MMPI profiles of three different types of sex offenders: (1) rapists of adults, (2) rapists of children and (3) nonrapists. The three groups were all elevated on the Psychopathic Deviate scale (4) of the MMPI, but differed in the extent of their elevations on the MMPI Schizophrenia (8) scale, with rapists of adults having the highest elevations on this scale. The MMPI 4-8 code type, according to Armentrout and Hauer (1978) is described as "indicative of hostile, irritable, unpredictably impulsive individuals who avoid close emotional involvement, show poor judgment and social intelligence and are frequently in conflict with agents of authority" (pp. 331-332). This description matches the description of a high scorer on the Eysencks' (1976) P scale very closely. Although

*The data presented here are part of a larger project assessing varied causes of sexual arousal to rape depictions. Findings from that research were previously presented by Malamuth and Check (1983).

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research of this type may be useful in determining the characteristics of convicted sexual offenders, it has been argued that convicted rapists are not representative of rapists as a whole and that many men in the general population who may not be actual rapists may have relatively strong inclinations to aggress against women (e.g. Brownmiller, 1975; Clark and Lewis, 1977). In our own research the main objectives were to determine whether high scorers on the Eysenck P scale in a sample of 'normal' males would be characterized by a greater self-reported interest in rape and whether or not this greater proclivity toward rape would also be apparent in an experimental study, in which Ss were provided with an opportunity to become sexually aroused to a rape depiction.

In the initial correlational phase of this research, which is described at length elsewhere (Barnes, Malamuth and Check, 1984) and will not be dealt with in detail here, an association between high P-scale scores and unconventional sexual interests were observed. High P scores were found to be significantly associated with:

- (1) the acquisition of sexual knowledge at a later age;
- (2) less interest in love and affection motivation for sex;
- (3) greater tendency to fantasize about the use of force;
- (4) less favorable attitudes toward conventional sexual activities;
- (5) greater perceived likelihood of participating in a variety of unconventional sexual activities, including rape and pedophilia; and
- (6) more positive reactions to pornography depicting rape.

Correcting for possible social desirability effects by eliminating high L-scale scores or using partial correlations did not affect correlational results appreciably.

Although correlational data provide one useful source of information, experimental data on the association between psychoticism and proclivity toward rape would also be desirable. Fortunately there is now available a reliable and generally valid technique for measuring sexual arousal in males to a variety of sexually-arousing conditions. The advent of penile transducer technology in the mid 1970s has allowed an investigation into the conditions which produce sexual arousal. Research employing this technique has been reviewed elsewhere (e.g. Abel, Becker and Skinner, 1980; Malamuth, 1981; Malamuth, 1983b) and will not be discussed at length here. One of the most interesting aspects of this research has been the ability of the penile transducer technology to discriminate the sexual responses of rapists from nonrapists (e.g. Abel, Barlow, Blanchard and Guild, 1977). Rapists show greater penile tumescence in response to rape depictions than nonrapists (Abel *et al.*, 1977). Further, higher arousal to rape has been found to be predictive for 'normal' males of greater aggression against women within a laboratory setting (Malamuth, 1983a). The penile transducer technology provides a useful vehicle for examining the hypothesis that psychoticism and sexual arousal to rape depictions are associated. The specific prediction to be tested in this study is that psychoticism, as measured by the Eysenck Personality Questionnaire (EPQ; Eysenck and Eysenck, 1975), will be differentially associated with sexual arousal to rape as opposed to nonrape sexual-arousal depictions.

METHOD

Research Design and Data Analysis

The experiment was conducted in two separate sessions. At an orientation session Ss filled out a number of questionnaires including the EPQ* (Eysenck and Eysenck, 1975). Ss, who were part of the Introductory Psychology S pool at the University of Manitoba, were then given a description of the laboratory session which was to follow and volunteers were recruited. In the laboratory itself Ss were exposed to one of four audiotaped pornographic passages which differed on the dimensions described below. Sexual arousal was assessed throughout the laboratory session. Assignment to high- and low-P groups was carried out following the experiment via a median split (scores of ≥ 3 were classified as high P, with ≤ 2 classified as low P). Data was analyzed via a 2 (high P vs low P) \times 2 (woman's consent vs nonconsent (rape)) \times 2 (woman's pain vs no pain) analyses of variance. Dependent variables included: (1) self-reported sexual arousal and (2) penile tumescence.

*The PI version of this test was employed.

Subjects

Three hundred and seven male Introductory Psychology students signed up for the orientation session of the experiment. After being given a description of the procedures and measures to be employed in the laboratory session, 145 Ss signed up and appeared at the laboratory phase of the experiment. Ss were randomly assigned to the various experimental conditions.

Materials

Psychoticism

The EPQ (Eysenck and Eysenck, 1975) P scale was used as a measure of psychoticism. The P+ personality is characterized by Eysenck and Eysenck (1975) as being "solitary, troublesome, cruel, lacking in feeling, lacking in empathy, hostile to others, sensation seeking and liking odd and unusual things." (p. 202). Eysenck (1976) hypothesized that higher scores on this measure should be associated with a preference for aggressive and impersonal sex.

Experimental stories

Each of the four versions of the audiotaped stories was about 1000 words, and was presented at a speed of about 200 words/min. The content of these depictions was systematically manipulated in a fully-crossed factorial design, along the dimensions of Violence (woman's consent vs nonconsent) and Pain (woman's pain vs no pain). These depictions are identical to those used by Malamuth and Check (1980), who presented data validating the intended manipulations as well as a more detailed description of their content.

Sexual-arousal Measures

Self-reported arousal

Self-reported sexual arousal was measured in both phases on an 11-point scale ranging from 0% (not at all sexually arousing) to 100% (very sexually arousing) in units of 10%. Ss were asked to indicate their arousal on this scale immediately after hearing each story.

Penile tumescence

Penile tumescence was monitored by the use of a mercury-in-rubber strain gauge (D. M. Davis Inc., New York), a device recommended in recent analyses of differing measurement instruments (Laws, 1977; Rosen and Keefe, 1978). Changes in resistance of the gauge as a function of changes in penile circumference were amplified and recorded on a microcomputer. Penile tumescence was computed on the basis of the maximum positive deflection from baseline taken before the depiction. A comparison between this approach and that of computing the area under the curve has shown that the two procedures yield similar results (Abel, Blanchard, Murphy, Becker and Djenderdjan, 1981).

Postexperimental Questionnaire

At the end of the experiment, Ss filled out a Postexperimental Questionnaire. Ss were asked a number of questions designed to assess whether they were aware of the key experimental hypotheses. Two independent raters agreed that none of the Ss indicated awareness of these hypotheses.

PROCEDURE

Orientation Session

The orientation sessions were held in large groups. Ss first filled out the Orientation Questionnaire, and then they were given a sheet explaining the procedures to be employed in the experiment proper. Ss then decided whether or not to sign up for the experiment.

Experimental Procedure

The experiment proper was conducted at a date following the orientation phase. The Ss appeared at the laboratory and were given credit for experimental participation upon their arrival. Ss were

then escorted to a soundproof room, handed a set of written instructions, and left alone. The instructions indicated that the *S*'s responses were anonymous and that he was free to leave at any time during the experiment without loss of credit and without notifying the experimenter. If the *S* chose to remain he then closed the door, signed or initialed a consent to participate form, placed the strain gauge on his penis, did his trousers back up and notified the experimenter via intercom that he was ready to begin.

When the *S* was ready, the experimenter started the tape recorder, operating it from the control room. The instructions on the tape indicated that there would be stories interspersed with music and that the *S* was to imagine the events described during the presentation of the stories but not to fantasize sexually during the musical interludes. After the initial instructions there was a 2-min musical interlude and then an erotic passage was presented by a male voice. At the end of the passage a second male voice on the tape asked the *S* to indicate on the scale provided how sexually erotic he found the story.

At the end of the experiment, the *S* filled out the Postexperimental Questionnaire and notified the experimenter via intercom that he was finished. The experimenter then brought the *S* a debriefing sheet, which, for *S*s who were exposed to rape depictions, stressed the violent nature of rape and presented several points designed to dispel rape myths.

RESULTS

Self-reported Sexual Arousal

Results of the analysis of variance for the self-reported sexual-arousal dependent variable are presented in Table 1. As can be seen from Table 1 this analysis yielded the expected significant Psychoticism \times Violence (i.e. rape depiction) interaction effect ($P < 0.02$). This interaction effect is depicted graphically in Fig. 1. While high *P* scorers reported more sexual arousal to a rape depiction the reverse trend was observed with low *P* scorers. There were no other significant effects for the self-reported arousal variable.

Table 1. Analysis of variance for the self-reported sexual arousal dependent variable

Source	<i>df</i>	\bar{X}	<i>F</i>
Psychoticism (A)	1	1074.325	2.159
Violence (B)	1	16.823	<1
Pain (C)	1	3.700	<1
A \times B	1	3001.920	6.032*
A \times C	1	230.643	<1
B \times C	1	135.769	<1
A \times B \times C	1	97.374	<1
Error	134	497.630	

* $P < 0.05$.

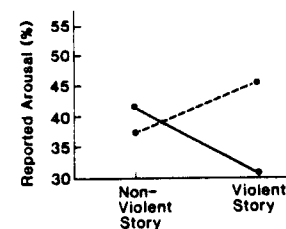


Fig. 1. Self-reported sexual arousal to violent and nonviolent tapes: --- high *P*; — low *P*.

Penile Tumescence

Results of the analysis of variance for the penile tumescence dependent variable are presented in Table 2. Once again the expected Violence \times Psychoticism interaction ($P < 0.03$) emerged. This interaction effect, which is displayed graphically in Fig. 2, closely resembles the results for

Table 2. Analysis of variance for the penile tumescence dependent variable

Source	<i>df</i>	\bar{X}	<i>F</i>
Psychoticism (A)	1	3.058	<1
Violence (B)	1	0.018	<1
Pain (C)	1	63.260	1.915
A \times B	1	158.737	4.806*
A \times C	1	26.824	<1
B \times C	1	36.956	1.119
A \times B \times C	1	32.765	<1
Error	134	33.030	

* $P < 0.05$.



Fig. 2. Physiological arousal to violent and nonviolent tapes: --- high *P*; — low *P*.

self-reported sexual arousal. High P scorers became more sexually aroused by a rape depiction than by a story of a nonviolent sexual encounter, while low P scorers showed the reverse trend. None of the other effects reached the conventional level of significance ($P < 0.05$). Results of analyses for both dependent variables clearly support the hypothesis that high P scorers are more turned on by violent sex than low P scorers.

DISCUSSION

The hypothesis that high P scorers would be more sexually aroused by rape depictions than low P scorers was supported by both the self reported sexual arousal and penile tumescence data. Findings in this experiment are consistent with results of the questionnaire phase of this study (Barnes *et al.*, 1984), which also suggested a greater proclivity toward rape in high P scorers. The penile tumescence results from the present study are also similar to findings reported by Abel *et al.* (1977) in a sample of rapists. High P scorers, like rapists, showed greater sexual arousal to rape depictions than did low P scorers and nonrapists. These findings are also consistent with results reported by Eysenck (1976) suggesting that sexual offenders are high P scorers and with Armentrout and Hauer's (1978) MMPI findings showing elevated 4-8 profiles in rapists. What makes the findings in this study particularly noteworthy and perhaps disturbing is the fact that our sample as a whole had relatively low scores on the P scale (mean = 2.5). Even though our median split on psychoticism occurred at a very low P-scale value (2.5) our higher P scorers still showed a pattern of greater sexual arousal to rape depictions than low P scorers. Thus, these college student data suggest that the same characteristics (i.e. psychoticism) which discriminate incarcerated rapists from normals may be useful in predicting rape proclivity in a normal population.

Given the finding that high P scores are associated with greater sexual arousal to rape depictions, it is interesting to speculate as to what underlying aspect of psychoticism might be involved in this relationship. Unfortunately the true meaning of the Psychoticism dimension is a somewhat controversial topic at the present time. While the Eysencks' (Eysenck, 1977; Eysenck and Eysenck, 1975, 1976, 1977; Eysenck, White and Eysenck, 1976) have argued that the validity data they have collected support the label they have assigned the P scale, others disagree (e.g. Bishop, 1977; Block, 1977a, b, 1978; Hirschfeld, 1978). Hirschfeld (1978), for instance, suggests that the scale should more appropriately be considered as a measure of antisocial personality, not psychoticism. In examining the association between the P scale and psychopathy, however, Hare (1982) argues that the P scale measures general antisocial tendencies rather than classic psychopathy (i.e. lack of empathy, guilt).

In addition to the problem associated with assigning a label to the P scale, the physiological underpinnings of the scale are also somewhat uncertain. The Eysencks (Eysenck and Eysenck, 1976) suggested that since there are strong sex differences on this scale, P scores could be linked with androgens. Other possible physiological characteristics associated with P-scale scores could be uric acid levels, plasma testosterone levels or differences in sympathetic adrenal medullary reactions (Eysenck and Eysenck, 1976). One important correlate of psychoticism which has already been demonstrated is the tendency of high P scorers to become less emotionally aroused in response to emotive words than low P scorers (Barry, 1980).

Given the above findings and speculation concerning the nature of the P dimension the following explanations for our results were considered.

- (1) results were produced by higher levels of androgen in high P scorers;
- (2) results were produced by higher impulsivity in high P scorers; and
- (3) results were produced by lower emotional responsiveness of high P scorers.

The first explanation would not be consistent with results observed in this study. If greater amounts of androgen produced higher P scores and greater sexual arousal to rape depictions, why would the P dimension not produce a main effect on sexual arousal? The second explanation encounters the same problem. Although it is possible to explain why high P scorers cannot inhibit their arousal to rape depictions on the basis of impulsivity, this does not explain why they appear to be less aroused by nonviolent sexual material than low P scorers. The relatively low level of sexual arousal of high P scorers in the consenting sex condition of this study may provide some insight. This

experimental finding is in agreement with our correlational data (Barnes *et al.*, 1984) showing lower levels of satisfaction and interest in conventional sexual activity among high P scorers. It also coincides with data in a recent study by Siever (1983) showing that schizotypes (as measured by poor eye tracking) in a normal population showed very low levels of sexual satisfaction.

The findings that high P scorers and schizotypes do not seem to find satisfaction in conventional sexual activity brings to mind Rado's (1956) theory. According to this theory there are two types of emotions including:

- (1) emergency emotions (which center around pain and the expectation of pain such as fear and rage); and
- (2) welfare emotions (which center around present pleasure or the expectation of pleasure and include joy, love and pride).

According to Rado (1956) schizotypes lack the second type of motivation and suffer from "integrative pleasure deficiency" (p. 276). Because of this deficiency in welfare emotions, emergency emotions become excessive in motivational strength. The schizotypes' limited capacity for pleasure and love, according to Rado, renders the development of a healthy sexual function impossible.

If Rado's (1956) theory is correct and high P scorers lack the positive emotional responses characteristic of low P scorers then perhaps the third explanation proposed above (i.e. that results were produced by the lower emotional responsiveness of high P scorers) has the greatest potential for accounting for these results. If high P scorers do not become aroused by positive welfare emotions, perhaps they require the activation of emergency emotions, including rage, to become sexually aroused. Although Rado's (1956) theory of the schizotype has not been empirically substantiated to date, many of his hypotheses could be investigated empirically. An examination of the Eysencks' (1976) P scale indicates that many of the items appear to measure the inability to experience positive emotions. Further investigation in this direction might help to clarify the meaning of Eysencks' P dimension which has thus far proved to be somewhat of an enigma for researchers.

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