

THE UNIVERSITY OF CALGARY

A COMPARISON OF WOMEN'S REACTIONS TO
NON-VIOLENT PORNOGRAPHY, VIOLENT PORNOGRAPHY, AND EROTICA

BY

CHARLENE Y. SENN

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE

DEGREE OF MASTER OF SCIENCE

DEPARTMENT OF PSYCHOLOGY

CALGARY, ALBERTA

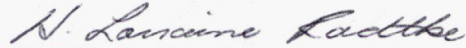
SEPTEMBER, 1985

© Charlene Y. Senn 1985

THE UNIVERSITY OF CALGARY

FACULTY OF GRADUATE STUDIES

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled "A Comparison of Women's Reactions to Non-violent Pornography, Violent Pornography, and Erotica," submitted by Charlene Y. Senn in partial fulfillment of the requirements for the degree of Master of Science.



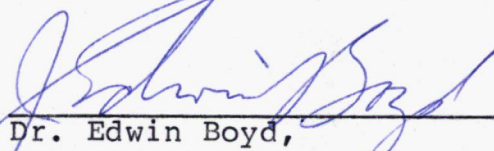
Supervisor, Dr. H. L. Radtke,

Department of Psychology



Dr. June Adam,

Department of Psychology



Dr. Edwin Boyd,

Department of Psychology



Dr. Marlene Mackie,

Department of Sociology

DATE September 23, 1985

ABSTRACT

The present research examined women's perceptions of different types of sexually explicit materials, the effect of these materials on women's mood, and the relationship between certain background and attitude variables and women's perceptions.

Subjects were 96 female undergraduates. Operational definitions were developed to categorize sexually explicit materials into three groups: (a) erotica, (b) non-violent pornography, and (c) violent pornography. The images were reliably placed into these categories by five independent raters and were the basis of the three exposure conditions. In addition, a control condition was included in which subjects saw images of nature and scenery. All images were presented in the form of slides. Subjects returned to the laboratory four times. In the first session subjects completed a set of background and attitude questionnaires. In Sessions 2 and 3, subjects completed the Profile of Mood States (POMS: McNair, Lorr, & Droppleman, 1971), rated 50 randomly chosen slides on seven adjective pairs of the evaluative domain of the Semantic Differential (Osgood, Tuci, & Tannenbaum, 1957), and completed the POMS for a second time. In the fourth session, subjects completed the

post-exposure set of attitude questionnaires and were then debriefed.

Women's evaluations of the slides reliably differentiated between erotica and pornography, and between non-violent and violent pornography. On the whole, erotica was perceived positively, and pornography was perceived negatively. Violent pornography received the most negative ratings. Exposure to pornography increased women's negative affect within a session. Some affective desensitization was found across sessions even though the slide ratings did not change. Exposure to erotica, on the other hand, had no effect on negative mood. In addition, there were no significant effects of exposure to pornography on attitudes, self-esteem, or body-image.

All but three of the women had previously been exposed to some form of pornography. Exposure to pornography, the frequency of non-violent and violent coercive sexual experiences, and emotional upset associated with the coercive use of pornography were all significantly intercorrelated suggesting a possible link between pornography and the sexual abuse of women. There were also some significant relationships between the attitude and experience variables and the women's ratings of the erotic slides and changes in mood. The results are discussed in terms of their implications for social policy.

ACKNOWLEDGEMENTS

I would like to express my sincere appreciation to my supervisor, Lorraine Radtke. Not only has she given me excellent academic supervision, but also encouragement and support for my strong and sometimes difficult political views. She helped me to translate my visions into a concrete experimental method without giving up my ideals.

I would also like to thank my dear friends and classmates, Jo-Anne Barnard, Marlys Reynar, and Bryan Rooney, for their unending support and encouragement, not to mention all the coffee and food, helping to keep me healthy and strong. Special thanks go out also to my wonderful women friends, Rhonda Sim, Rose Knoepfli, Jennifer Berezan, Berniece Gowan, Kathi Duncan, Bari Castle, Marj MacDonald, Deborah Jehn, Joan Hollenberg, and Terry Teskey, and my friend Glen Fletcher, who have given me strength, ideas and love since long before my thesis was a reality.

Special gratitude extends in particular to my parents, Jean and Norman Senn, who brought me up to believe that I could do anything if I just worked hard enough, and to my sister, Tanya, for her trust and love. Best friends are priceless; I can't thank Tracy Davis enough for her long-distance advice, pep-talks, and affection. To my

confident and special friend, Kate Jarosz, thank you for
your endless affection and support.

DEDICATION

This thesis is dedicated to women everywhere, and in particular to those women in my study and at the Calgary Women's Emergency Shelter who shared with me their experiences with pornography.

TABLE OF CONTENTS

	PAGE
ABSTRACT	iii
ACKNOWLEDGEMENTS	v
DEDICATION	vii
TABLE OF CONTENTS	viii
LIST OF TABLES	xi
LIST OF FIGURES	xiii
INTRODUCTION	1
Overview	1
The Definition of "Pornography"	2
Early Research	10
Effects on Men	13
Sexual arousal	13
The link between pornography and aggression .	16
Attitudinal and cognitive effects	20
Effects on Women	23
Sexual arousal	23
The link between pornography and aggression .	27
Attitudinal and cognitive effects	30
Rationale	35

METHOD	43
Subjects	43
Stimuli	43
Measures	44
Procedure	54
RESULTS	59
Slide Ratings	59
Mood Ratings	62
Relationships Between Slide Ratings and Mood Subscales	86
Background Questionnaires	91
Attitude and Belief Measures	99
Relationships Between Background and Attitude Measures	104
Effects of Exposure on Self-Esteem, Body-Image and Attitudes	106
Relationships Between Background and Attitude Measures and Slide Ratings	107
Relationships Between Background and Attitude Measures and Mood Subscales	109
DISCUSSION	116
Effects of the Experimental Manipulations on Evaluations, Mood, Attitudes, Self-Esteem, and Body-Image	116

Relationship of Evaluations and Mood	
with Attitudes and Experiences	123
Relationships Among Experience Variables	127
Relationship of Experience to Attitudes,	
Self-Esteem, and Body-Image	131
Relationships Among the Attitude Measures	132
Strengths and Weaknesses	134
Directions for Future Research	135
Summary and Implications	137
REFERENCES	142
APPENDICES	151

LIST OF TABLES

<u>Table</u>	<u>Title</u>	<u>Page</u>
1	Interrater Agreement by Condition	45
2	Intercorrelations Between Semantic Differential Items	60
3	Summary Table for Group (No Pretest/Pretest) X Session ANOVA on Slide Ratings	61
4	Summary Table for Group X Session ANOVA on Slide Ratings	63
5	Mean Slide Ratings	64
6	Summary Table for Group (No Pretest/Pretest) X Time X Session MANOVA on Mood	66
7	Summary Table for Group X Session X Time MANOVA on Mood	67
8	Univariate F Tests for Significant Group Effect on Mood	69
9	Group Main Effects on Mood	70
10	Univariate F Tests for Significant Time Effect on Mood	71
11	Time Main Effects on Mood	72
12	Univariate F Tests for Significant Time X Group Interaction	74
13	Univariate F Tests for Significant Session Effects on Mood	82
14	Session Main Effect on Mood	83
15	Univariate F Tests for Significant Session X Group Interaction	84
16	Correlations Between Ratings and Pre- and Posttest Mood Scores	87

17	Correlations Between Slide Ratings and Mood Change Scores	90
18	Reported Sexual Experiences (Coercive and Non-Coercive)	92
19	Frequency of Non-violent Coercive Sexual Experiences	94
20	Frequency of Violent Coercive Sexual Experiences	95
21	Previous Exposure to Pornography	97
22	Intercorrelations Among Background Measures .	98
23	Intercorrelations Between Self-Identity and Body-Image Measures	100
24	Intercorrelations Among Attitude Measures . .	101
25	Intercorrelations Between Attitude, Self-Esteem, and Body-Image Measures	103
26	Intercorrelations Between Attitude and Belief and Background Measures	105
27	MANOVA Table: Effects on Questionnaire Measures	108
28	Regression of Background and Attitude Measures on Slide Ratings	110
29	Beta Weights for Regression on Slide Ratings: Erotic Condition	111
30	Regressions on Mood Subscales	112
31	Results of Regression for Violent Condition: Depression	114
32	Regression Results for Mood Subscales: Anger	115

LIST OF FIGURES

FIGURE	TITLE	PAGE
1	Tension: Time X Group	
	Interaction	75
2	Depression: Time X Group	
	Interaction	76
3	Anger: Time X Group	
	Interaction	77
4	Vigor: Time X Group	
	Interaction	79
5	Confusion: Time X Group	
	Interaction	80
6	Anger: Session X Group	
	Interaction	85

Introduction

Overview

Pornography is currently a contentious social issue which has been the subject of much popular media attention as well as feminist and psychological discussion. Coverage of the topic revolves around issues of censorship, of the morality of such portrayals, and of harmful or liberating effects. The media rely upon spokespersons from various interest groups for opinions on censorship and morality and upon psychological studies for evidence relating to the effects of pornography on the individual. For this reason the study of pornography must be done with caution and care as it may be used by the media, thereby influencing public opinion and possibly social policy. Thus, pornography research must be done with a social conscience and with an awareness of the sensitivity of the subject.

The present research examined women's perceptions of different types of sexually explicit materials, the effect of these materials on women's moods, and the relationship between certain background and attitude variables and women's perceptions. Although it is clear that women are exposed to pornography, there is very little previous research looking specifically at its effects on women. In particular, few studies have examined questions of special relevance to women, for example, how women's perceptions of themselves are affected by viewing pornographic depictions

in which women are portrayed as having low status and as being subjected to painful and demeaning treatment. The present study tested several hypotheses that apply particularly to women. With this in mind, the research literature on pornography will now be reviewed.

The Definition of "Pornography"

Psychological research has lacked an agreed-upon operational definition of "pornography" (Amoroso & Brown, 1973; Blachford, 1978; Brown, 1981; Malamuth & Donnerstein, 1982; Zillmann & Bryant, 1982). This is not particularly surprising since there is also no consistent ordinary language definition of the term. "Pornography" is a highly value laden word, and perhaps for this reason, many researchers have chosen to use other terms such as "erotica", "sexually explicit materials", "obscenity", and so on. Unfortunately, this trend has served to further confuse the issue since these terms too have lacked a consistent operational definition. As a consequence, it is often questionable what kinds of materials are actually being discussed. Sexually explicit materials can vary tremendously in their content and therefore it is extremely important to establish a clear definition of the terms used to describe them. This in turn will lead to a more precise evaluation of the effects of pornography since only some types of content may be harmful.

Legal descriptions have tended to use another

value-laden term, "obscenity", in referring to these materials. "Obscene" is a latin derivative meaning "dirty, containing filth" (Steinem, 1980, p. 36). A modern dictionary definition of "obscenity" is "offensive to modesty or decency, lewd; causing or intending to cause sexual excitement or lust" (cited in Riddington, 1983, p. 1). Assuming that all depictions of sexuality are immoral because of their explicitness, they would be defined rightfully as obscene. On the other hand, assuming that it is not their explicitness that is harmful to society, one must begin to make other distinctions. Legal definitions however have almost exclusively focused on the moral implications of sexual explicitness. For example, in 1978 the United States Supreme Court ruled that in order to be considered obscene the following must be true: "(1) materials must be patently offensive to community standards, (2) materials have to appeal to the prurient interests of the average person, (3) materials must be utterly without redeeming social value" (McDonald, Perkins, Sheehan & Curtis, 1981, p. 64-65). Canadian law has been updated more recently and maintains the moral element but recognizes that violence may be an integral part of some of these materials. "For the purposes of this Act, any publication a dominant characteristic of which is the undue exploitation of sex, or of sex and any one or more of the following subjects, namely, crime, horror, cruelty and violence, shall be deemed to be obscene."

(cited in Riddington, 1983, p. 1) Nonetheless, because the term "obscenity" does not distinguish between types of sexually explicit materials that include violence and those that do not, it has little utility for research that aims to identify what characteristics of sexually explicit materials, if any, have harmful or beneficial effects.

A more useful set of terms may be "pornographic" and "erotic". The term "pornography" comes from the Ancient Greek words "porne" and "graphos" (Dworkin, 1979). In essence, it means "writing about whores". More specifically, "porne" refers "exclusively to the lowest class of whore", i.e., the "brothel slut available to all male citizens" (Dworkin, 1979, p. 199). "Erotica", on the other hand, comes from the root "eros" which means "passionate love" (Steinem, 1980, p. 37). Steinem (1980) has argued that the two terms are often confused in everyday usage because both refer to depictions of sexuality separated from conception and procreation. Furthermore, she has suggested that "erotica" be used to mean "a mutually pleasurable sexual expression between people who have enough power to be there [in the depiction] by positive choice" (p. 37). This definition is consistent with the original meaning of the word and would pertain to non-exploitive sexual depictions. "Pornography" then is defined as "any depiction of sex in which there is clear force, or an unequal power that spells coercion. It may be very blatant, with weapons or torture or bondage,

wounds and bruises, some clear humiliation, or an adult's sexual power being used over a child. It may be more subtle: a physical attitude of conqueror and victim, the use of race or class difference to imply the same thing, perhaps a very unequal nudity, with one person exposed and vulnerable while the other is clothed. In either case there is no sense of equal choice or equal power."

(Steinem, 1980, p. 37) This definition stresses the exploitive use of sex and the resulting unequal status of the participants and as such does not deviate from the original meaning of the word. Thus, the important distinction made by this feminist theorist (and others as well; e.g., Diamond, 1980; Dworkin, 1979; Longino, 1980; Lourde, 1980; Riddington, 1983; Russell, 1980) between pornography and erotica relates to the power relationships amongst the persons depicted (i.e., unequal vs. equal power).

Such distinctions however have not been reflected in the operational definitions employed in scientific research. In fact, most researchers have chosen to use only mildly sexually explicit (e.g., nude females) or, alternatively, the most blatantly violent depictions in their research. Problems arise with the use of the former type of materials as the context of the materials and the positioning of the models generally are not described and therefore, the materials could be erotic or could have sexist connotations. These studies then normally focus on

the degree of sexual explicitness of the stimuli, thereby ignoring all other factors. The descriptions of the stimulus materials used in the latter category have included "violent erotica" (a contradiction in terms of the feminist definitions presented here; Tannenbaum & Zillmann, 1975), "sadosomachistic themes" (Malamuth & Check, 1981; Zillmann, Bryant, Comisky & Medoff, 1981), depictions of "bestiality" (Zillmann, Bryant, & Carveth, 1981), and "rape depictions" (Donnerstein & Berkowitz, 1981; Malamuth, Heim, & Feshbach, 1980; Stock, 1983). Several problems are associated with the usage of these materials. First, while they are examples of blatantly violent pornography they represent only a small subsample of the types of violent pornography currently available. Thus, the results obtained with such specialized stimuli cannot be generalized to violent pornography as a whole but only, for example, to "rape depictions". Second, it is often assumed that any materials which are not explicitly violent fit into the category "erotica". In fact, such materials are often used as controls for violent conditions. According to Steinem's (1980) definition, there are many portrayals that are more subtle in their expression of exploitation and inequality than those which are extremely violent, but that are nonetheless pornographic. Thus, experimental groups exposed to nonviolent sexually explicit materials may not have viewed "mutually consenting" representations of "equal power" and in fact may have viewed nonviolent

pornography. Obviously, this confusion makes it difficult to clearly interpret the research literature.

A solution to this dilemma is to define the terms "pornography" and "erotica" so that whenever they are employed there will be a consistency of content. As Steinem (1980) has pointed out, sexism and violence are often confounded in pornography. Therefore, it may be useful in defining the terminology to distinguish between the non-violent, subtly coercive forms of pornography and the more blatant violent forms, with erotica as a separate category. Check (1984) seemed to approach this ideal by using the following three categories of sexually explicit materials: (a) violent, (b) nonviolent/ dehumanizing, and (c) nonviolent/prosocial. He did not however operationally define these terms and has not assessed whether people can reliably discriminate between the categories.

Thus, for the purposes of this study it was necessary to generate the needed definitions. The term "sexually explicit materials" refers to all depictions of sexual behavior and nudity, and these depictions have been classified into four categories (three of which were the basis for the experimental conditions). All of the following definitions refer to sexually explicit materials that have common content of nude or partially clothed male and/or female models and detailed drawings or photographs of sexual acts between individuals. These categories were not distinguished in terms of the nature of the sexual act,

and it is assumed that all forms of sexual behavior could occur in any or all of the categories:

1. SEX EDUCATION MATERIALS - These include medical diagrams, anatomical drawings or photographs, and explicit representations of sexual activity designed specifically for educational purposes. These images are aimed at a predominantly heterosexual mixed gender audience and are not designed to be used for entertainment and/or titillation.
2. EROTICA - NON-SEXIST AND NON-VIOLENT - These images have as their focus the depiction of "mutually pleasurable, sexual expression between people who have enough power to be [involved] by positive choice." (Steinem, 1980, p. 37) They have no sexist or violent connotations and are hinged on equal power dynamics between individuals as well as between the model(s) and the camera/ photographer (Sontag, 1977).
3. PORNOGRAPHY - A. NON-VIOLENT BUT SEXIST - These images have no explicitly violent content but may imply acts of submission or violence by the positioning of the models or the use of props. They may also imply unequal power relationships by differential dress, costuming, positioning, (Steinem, 1980) or by setting up the viewer as a voyeur (the model is engaged in some solitary activity and seems totally unaware or very surprised to find someone looking at her; Parker & Pollock, 1981).

4. PORNOGRAPHY - B. VIOLENT AND SEXIST - These images portray explicit violence of varying degrees perpetrated against one individual by another. This category also includes images which portray self-abuse or self-mutilation (Longino, 1980). Also included are images where no actual violence is occurring, however the model appears to be suffering from the aftermath of abuse.

These four categories may be used to classify all sexually explicit materials as either pornographic (Type A, non-violent, or Type B, violent) or nonpornographic (erotic or sex education materials). In the present study only three categories were employed: (a) violent pornography, (b) non-violent pornography and, (c) erotica. All the experimental stimuli were classified by five independent raters according to the definitions outlined above (see Method section).

Having established the definitions, the research literature on pornography will now be reviewed. While this study focuses on the perceptions of females and the effects on them, there is little relevant research specifically on women. There is however a larger literature focussed on men which has to a great extent determined the types of questions which have been asked about women. For this reason, the research on men will be discussed, laying out the areas which have been investigated. The research which has relevance for female subjects will then be reviewed

including studies comparing men and women and those which studied women only. First, however, the earliest research will be briefly discussed to provide a historical context.

Early Research

The earliest psychological research on sexually explicit materials was carried out in the 1950's. In summary form, these studies indicated that (a) a significant proportion of individuals are sexually aroused by sexually explicit stimuli in pictorial and text form, (b) adult and adolescent males become sexually aroused by portrayals of female nudity and of sexual activity more frequently than do females, (c) females are more frequently sexually aroused to "complex" stimuli which involve romance or love relationships, (d) individual differences in males' arousal are accounted for by factors such as their masculine sexual identity, guilt feelings related to sexual behavior, physical maturity, and intellectual ability, (e) environmental cues affect arousal and therefore arousal or the lack of it in the laboratory may be a laboratory artifact, and (f) viewing sexually explicit materials is for some males and females an aversive experience, presumably caused by sex guilt (Cairns, Wishner & Paul, 1962). Although interesting, these early studies of sex differences in arousal did not take into account the amount and type of previous exposure to pornography which would have differed for males and females. Moreover, although

the types of materials used as stimuli were considered to be "hard core" in the 1950's, they would be classified as mild by today's standards. The biggest limitation of these investigations however is that they focussed on sexual arousal and did not study the effects of viewing sexually explicit materials on other aspects of the subjects' behavior or their attitudes and beliefs.

One of the earliest investigations into the subsequent effects of pornography was conducted by the United States government's Commission on Obscenity and Pornography which published its findings in 1970. The Commission concluded that pornography had no harmful effects on men or women and recommended that restrictions on the availability of such materials be lifted. This surprising conclusion came less than a year after the National Commission on the Causes and Prevention of Violence concluded that media violence had harmful and anti-social effects (McCormack, 1980). The apparent inconsistency in the conclusions of these two commissions is best understood in the light of the types of sexually explicit materials included in the former's investigations. The Commission stated that they directed their inquiry "toward a wide range of explicit sexual depictions in pictorial and textual media" (cited in Renchkovsky Ashley & Ashley, 1984, p. 353). Although they did not conduct a content analysis of the stimuli (Smith, 1977), they stated at one point that they reviewed "sexually oriented mass-market periodicals", e.g., Playboy.

They described the contents of Playboy as pictures featuring "partially nude females. In most cases there is only breast and buttock exposure, although on occasion very discreet photographs of feminine pubic hair have been printed" (cited in Renchkovsky Ashley & Ashley, 1984, p. 356). When the Commission was conducting its research, violent pornography was relatively rare and this may explain the focus on primarily nonviolent depictions in still photos and films, some of which could best be termed sex education materials (Malamuth & Donnerstein, 1982)

Other problems with the research were various. First, except for opinion polls, subjects were either exclusively male or married couples tested together. The studies were thereby biased by the omission of unmarried females. Moreover, it was impossible to accurately assess the effects on women since the pressure for a woman, in her husband's presence, to conform to his opinion was not taken into account (McCormack, 1980). Second, the measures used often supported myths about "female sexual passivity". Many of the questions asked of both male and female participants portrayed the male in the active role and the female in the passive role. For example, an item like "pornography makes men want to do new things with their wives" was not counterbalanced with a question such as "pornography makes women want to do new things with their husbands" even for female subjects. The research therefore had a sexist bias (McCormack, 1980). In addition, Cline

(1974) and Davis and Braucht (1973) have argued that the Commission misrepresented the research findings by ignoring those studies finding harm, interpreting partial or incomplete data, and ignoring police officers' testimony concerning known sex offenders.

Subsequent research on males has involved studies of arousal as well as an examination of the effects of pornography on aggression and cognitions. Each of these areas will now be reviewed.

Effects on Men

Sexual arousal. Much of this research has focussed on whether "aggressive" (i.e., violent) pornographic depictions are sexually arousing to convicted rapists and how their level of arousal compares to the reactions of "normal" males. Arousal has been measured either by self-report or penile tumescence. When arousal was measured by penile tumescence, rapists showed high and approximately equal levels of arousal to audio-taped consenting sex and rape depictions (Abel, Barlow, Blanchard, & Guild, 1977; Barbaree, Marshall, & Lanthier, 1979). Abel et al. (1977) also found that the more violent rapists were more aroused to rape than to consenting depictions. Research on "normal" males, usually undergraduates, has involved exposure to violent rape depictions, consenting sex depictions and neutral stimuli by means of film, written communication or audiotape.

Generally, the self-report data has indicated that "normal" men are more aroused to consenting portrayals than to force-oriented sexual activity (Baron & Byrne, 1977). Nonetheless, men do become highly aroused to the violent sexual interactions when arousal is measured by penile tumescence (Briddell et al, 1979; Malamuth, 1981a; Malamuth & Check, 1980a, 1980b, 1981b). Further research along these lines has attempted to establish the predictive validity of arousal to rape depictions as a means of identifying males in the general population who are high on rape proclivity (Malamuth & Check, 1981), diagnosing and treating rapists (Abel, Becker, Murphy, & Flanagan, 1979), and predicting recidivism (Quinsey, Chaplin, & Carrigan, 1980).

Other research has suggested that repeated exposure to certain types of sexually explicit materials affects subsequent arousal to rape depictions. For example, Malamuth, Haber, and Feshbach (1980a) found that males who were first exposed to violent pornographic stimuli were later more aroused to a rape depiction than controls. Zillmann and Bryant (1984) reported that exposure to non-violent sexually explicit materials did not affect arousal to a post-exposure sexually violent stimulus. Ceniti and Malamuth (1984) measured arousal to rape and mutually consenting depictions and then classified subjects as force-oriented, nonforce-oriented or unclassified (i.e., not strictly force or non-force oriented). Subjects were

then exposed to sexually violent, sexually nonviolent or control stimuli. A "satiation pattern" was found for the force-oriented subjects who, after exposure to either of the sexually explicit experimental stimuli, showed decreased arousal to subsequent rape depictions and to a lesser degree to non-rape depictions. No significant differences were found for either the nonforce-oriented or the unclassified subjects. Unfortunately, clarification of these contradictory findings must await further research since the studies did not use comparable stimuli (i.e., Zillmann and Bryant (1984) used films, Malamuth, Haber, and Feshbach (1980) used written descriptions and Ceniti and Malamuth (1984) used pictorial and written depictions).

The significance of such results for subsequent behavior is also unclear since many rapists cannot complete the act of rape due to the lack of an erection or do not ejaculate during the rape (Clark & Lewis, 1977). Thus, the sample identified as aroused to rape by such research may be highly selective and not representative of the population of rapists as a whole. In addition, arousal or lack thereof may be an artifact of the penile tumescence recording itself (e.g., movement artifacts, adaptation effects, voluntary control, and stimulation as a result of the device itself; Amoroso & Brown, 1973). Moreover, arousal to the depictions used in these studies may be due to the nature of the stimuli which usually focus on the victim's sexual attractiveness and other such features and

not to the rape situation per se (Stock, 1983). Finally, there is no evidence that sexual arousal or reported sexual arousal in a contrived laboratory setting relates to behaviour outside the laboratory. In other words, it is difficult to establish the significance of research that finds arousal to materials which were specifically designed to be arousing. While it is alarming that many men are aroused to non-consensual sexual acts this is probably a reflection of current societal conditions rather than any deviant process within the responsive individuals. Outside of a clinical context, arousal research that does not take into account behavior and attitudes has limited utility.

The link between pornography and aggression. The original motivation for this research lay in the hypothesized relationship between aggression and physiological arousal. Experiments on this topic have used a laboratory paradigm in which aggression is the dependent variable and the viewing of pornography constitutes one of the experimental conditions. Most commonly, the subject is a male who is (a) insulted (i.e., angered) by a confederate, (b) exposed to stimuli (usually films) that are aggressive but not sexually explicit, aggressive and sexually explicit, non-aggressive but sexually explicit, or neutral, and then, (c) allowed to administer shock or noxious noise to the confederate (i.e., behave aggressively) in an artificial learning experiment or game.

The results from these studies tend to be contradictory, however they may be best understood by examining them in the context of the type of stimuli used and the confederate's gender. Of the research studying the aggressive behavior of male subjects toward a male confederate, some studies revealed more aggression following exposure to sexually explicit stimuli compared to nonsexual stimuli (e.g., Meyer, 1972; Zillmann, 1971), while others showed less aggression following exposure (e.g., Baron, 1974; Baron & Bell, 1973). These studies varied in terms of the content of the sexually explicit stimuli utilized. Those studies which found reduced aggression tended to use less sexually explicit and less arousing stimuli (e.g., nude females); those that found increased aggression tended to use more explicit and more arousing stimuli (e.g., couples engaged in sex acts).

Zillmann, Bryant, Comisky, and Medoff (1981) attempted to resolve these contradictions by varying the excitatory potential, sexual explicitness, and pleasantness (positive vs. negative hedonic valence) of the stimuli. All subjects were angered prior to exposure. Compared to a no-exposure control condition, subjects exposed to stimuli with high excitatory potential and negative hedonic valence showed higher levels of aggression regardless of whether the stimuli had sexual content (e.g., a woman fellating and masturbating a dog) or no sexual content (e.g., slaughter of baby seals). Thus, sexually explicit stimuli that are

highly arousing and unpleasant increase male-male aggression, but to the same extent as nonsexual stimuli with the same characteristics of high arousal and unpleasantness. In addition, subjects in these two conditions behaved more aggressively than subjects exposed to stimuli with low excitatory potential and positive hedonic valence (e.g., in the sexual condition, attractive nude or scantily clad females; in the nonsexual condition, - baby animals). Alternatively, other studies have found that exposure to less explicit and less arousing sexually explicit stimuli result in reduced aggression when subjects are angered before exposure and increased aggression when subjects are angered after exposure (Donnerstein & Evans, 1975). Thus, the research findings remain inconsistent.

While the effects of exposure to sexually explicit stimuli on male-male aggression is interesting from the perspective of understanding the relationship between aggressive behavior and physiological arousal, the effects of exposure on male aggression toward female targets is perhaps more socially relevant. This is particularly so because females are typically the targets of aggression within pornographic depictions (Smith, 1976). To this end, several studies have compared male subjects' aggressive responses toward male and female targets following exposure to sexually explicit stimuli with and without violent content. Donnerstein and Barrett (1978) reported no differential effects of a non-violent sexually explicit

stimulus on aggression toward male or female targets. However there was some indication that male subjects inhibited aggressive behavior when the target was a female. When the depictions involved violence against a woman however, aggression toward a female confederate was facilitated regardless of the presence or absence of sexual content, but aggression toward a male confederate was facilitated only by a nonaggressive sexually explicit stimulus (Donnerstein, 1980; 1982).

Although laboratory aggression studies are limited due to their artificial nature, these findings have interesting implications with regard to the ways in which pornography might affect men. Commonly available pornography is composed of a mixture of sexually explicit, non-violent and violent images, but there is some indication that the latter type of materials are increasing in frequency (Malamuth & Spinner, 1980) and that the target of the aggression is usually a female (Smith, 1976). Those studies which included pornographic representations (i.e., sexual violence against women) and then subsequently examined their effect on aggression toward male and female confederates almost without exception showed increased aggression toward female but not male confederates even though aggression is normally inhibited against females (Donnerstein & Berkowitz, 1981). This increase is probably due to the messages about violence against women contained within the images rather than to the sexual explicitness of

the images. If this interpretation is correct, then changes in cognitions and attitudes relating to females would be expected to result from exposure to these stimuli. This will be discussed in the following section.

Attitudinal and Cognitive Effects. Malamuth (1981b) studied the effect of aggressive pornography on men's sexual fantasies. He exposed males to depictions of either mutually consenting intercourse or rape using a slide-audio format. All subjects were then presented with an audio-taped description of rape. Later, the men were instructed to fantasize and to write down the fantasies. Content analysis showed that the males exposed to the rape depictions had more violent sexual fantasies than those who saw the consenting depiction.

Three studies have looked at the effect of positive outcome rape portrayals on perceptions about rape and rape victims (Malamuth et al., 1980a; Malamuth & Check, 1980; Malamuth & Check, 1981b). Male subjects were presented with a positive outcome depiction of rape (i.e., the typical pornographic depiction in which the victim's abhorrence gives way to sexual abandon), a negative outcome rape depiction (i.e., a portrayal focussing on the victim's constant disgust and abhorrence) or a mutually consenting depiction of sex. Later, all subjects were given a different "objective" portrayal of rape (i.e., the rape criterion which described the rape but did not give details

of the victim's reactions) and asked to report their perceptions of the rape victim's experience. In two of the studies (Malamuth et al., 1980a; Malamuth & Check, 1980), subjects exposed to the positive outcome depiction indicated that the rape victim in the objective depiction suffered less compared to men who had seen the other portrayals. Furthermore, Malamuth and Check (1981b) found that males exposed to the positive outcome condition believed that "a larger percentage of women in general would derive some pleasure from being raped or being forced to engage in various sexual acts" than men who were exposed to the other portrayals (cited in Malamuth & Donnerstein, 1982, p. 14). Taken together these findings indicate a lessened sensitivity to rape and rape victims in subjects exposed to positive outcome violent pornography.

In addition, some studies have found that exposure to pornography increased male subjects' self-reported likelihood of raping (e.g., Malamuth, Haber & Feshbach, 1980). While studies of this nature are interesting, their validity is difficult to determine for several reasons. First, approximately 35% of college men who are not exposed experimentally to pornography report a greater than zero likelihood of raping provided that they would not be caught (Malamuth, 1981). While this might be a symptom of a rape supportive society, it could also be similar to asking a poor student if they would rob a bank if they could be guaranteed that they would not be caught. Second, while

self-reported likelihood of raping has been found to correlate with variables such as the use of pornographic books (Briere, Corne, Runtz, & Malamuth, 1984), identification with the rapist in rape depictions (Malamuth, Haber, & Feshbach, 1980; Malamuth & Check, 1981), beliefs that victims enjoyed their rape (Malamuth et al, 1980; Malamuth & Check, 1981), beliefs that women desire and enjoy victimization (Malamuth et al., 1980), high rape myth acceptance, and acceptance of interpersonal violence (Ceniti & Malamuth, 1984), it has not been shown conclusively to predict behavior outside of the laboratory.

A recent field study suggested that exposure to violence against women in commercial films may affect rape myth acceptance and acceptance of interpersonal violence (Malamuth & Check, 1981c). Subjects were exposed to two films which showed either violence against women in sexual and non-sexual contexts or no violence against women. Several days later a survey, ostensibly not linked to the films, was conducted to determine the students' attitudes toward rape and violence against women and their beliefs about relationships between men and women. Males who saw the sexually aggressive films had significantly higher acceptance of interpersonal violence, and marginally significant higher acceptance of rape myths.

In conclusion, the study of the effects of violent pornography on males' attitudes and beliefs has found that exposure may (a) increase their violent fantasies, (b)

cause lessened sensitivity to rape and rape victims, (c) increase their self-reported likelihood of raping, and (d) increase their acceptance of interpersonal violence. Maximally, a combination of these factors could have serious consequences on a man's attitudes toward women and thereby indirectly or directly affect the way in which he interacts with women. Minimally, pornography perpetuates myths about women and about rape.

Effects on Women

Thus, women may be affected by pornography in two ways. They could be affected indirectly through contact with a male or males who have been exposed to pornography and whose subsequent behavior or attitudes have been altered in a negative manner. The women may in this way be the victims of misogynistic comments or practices and/or the victims of violent sexuality. On the other hand, they may be affected directly by themselves viewing pornography. This might change their behaviors or attitudes in a way that harms them psychologically. The research which includes women as subjects or in which women are studied exclusively will now be reviewed. Again, the research has focussed on sexual arousal, aggressive behavior, and attitudes and cognitions.

Sexual arousal. Much of the data on females can be found in studies that compared the arousal of males and females to sexually explicit stimuli. The early research

on women's sexual arousal to sexually explicit materials reported that women consistently were less aroused and less interested in the materials than men (e.g., Kinsey, Pomeroy, Martin, & Gebhard, 1953). Whether due to the biases of those times or today's changing attitudes toward sex, recent studies are no longer finding large sex differences. For example, Griffitt (1973) reported no significant differences between males and females when arousal was averaged across 19 stimulus themes. Moreover, no differences have been found for depictions in slide or written format (Byrne & Lamberth, 1971) or when the presence of an affectional or romantic context has been manipulated (Fisher & Byrne, 1978; Schmidt, 1975). Also, Fisher and Byrne (1978) found no sex differences in arousal to an erotic film depicting heterosexual intercourse.

Some studies however have found sex differences depending on whether the stimuli included opposite- or same-sex portrayals. Griffitt (1973) found that males were significantly more aroused than females to (a) a fully clothed woman with her thigh partially exposed, (b) group activity involving two females and one man with oral-genital contact, (c) a woman performing fellatio on a man, (d) a nude female masturbating, and (e) a nude female. Females on the other hand were significantly more aroused than males to a male in undershorts and a nude male. Schmidt (1975) also found sex differences in arousal when he studied autoerotic stimuli. Males were more aroused to

a female masturbating while females were more aroused to a male masturbating. In addition, females were more aroused by same-sex masturbating than were males. Most of these sex differences are not terribly surprising since the subject populations were predominantly heterosexual, and the patterns of arousal reflect greatest arousal to opposite sex portrayals. In fact, they merely represent an appropriate arousal response on the part of both .

Females and males also exhibit different levels of arousal to violent sexually explicit depictions, with females showing less arousal to gang rape films than males (Schmidt, 1975). Moreover, manipulating various features of written rape depictions has differential effects on women and men. For example, Malamuth, Heim, and Feshbach (1980) found that females were most aroused to a rape story when the victim suffers no pain and experiences an orgasm, while males were aroused most when the victim experienced both pain and an orgasm. In addition, Garcia, Brennan, DeCarlo, McGlennon, and Tait (1984) found that females reported more sexual arousal and less negative affect when the female character was dominant than when the male character was dominant. While this study did not use violent pornographic portrayals, it used subtle dominance implied by who was active and in control. This variable could be important in understanding women's reactions to rape portrayals and other more extreme dominance interactions, and in explaining the inherent contradictions

in much of the female arousal literature.

Stock (1983) investigated women's sexual arousal to rape depictions and the subsequent effects of this exposure on arousal to another rape depiction. Subjects were exposed to one of four pre-exposure conditions: (a) a neutral control stimulus depicting a non-aggressive, non-sexual interaction between a man and a woman, (b) a violent "eroticized" version of rape where initial resistance by the victim gives way to sexual abandon (i.e., the rape myth condition), (c) a portrayal of mutually consenting intercourse, or (d) an empathic description of rape focusing on the victim's trauma (i.e., the rape empathy condition). Following pre-exposure, one-half of the subjects in the neutral pre-exposure condition and all of the subjects in the other three conditions heard a realistic depiction of a rape (i.e., the realistic rape criterion). The remaining control subjects heard a more "eroticized" depiction (i.e., the eroticized rape criterion taken from Malamuth (1980)). Arousal was measured by self-report and a vaginal photometer. In fact, this is the only study that has used a physiological measure of female sexual arousal. Stock found that the "rape myth" scenario resulted in high subjective and physiological arousal that differed significantly from that of the "rape empathy" and neutral conditions but did not differ from the mutual consent condition. There was no significant difference between the "rape empathy" and neutral conditions

suggesting that the women were not aroused by realistic victim reactions. In addition, the pre-exposure manipulation had no significant effects on subsequent arousal to the realistic rape criterion. In fact, the highest level of arousal associated with the rape criterion was comparable to the lowest level of arousal found in the pre-exposure neutral control condition. In addition, arousal to the "eroticized" rape criterion was second only to the "rape myth" condition and was significantly different from arousal to the "rape empathy" and neutral depictions. Thus, while the women were aroused by the highly unrealistic, "eroticized" rape depictions, they were not aroused to realistic descriptions of rape.

These studies, taken as a whole, suggest that females' arousal to sexually explicit materials is equal to that of males except when the materials include male dominance or realistic male violence against women. In these cases, females appear to be more sensitized to the violence. Thus, sex differences in arousal are not due to the sexual explicitness of the stimuli but rather to other characteristics of the content, e.g., the power relations between the male and female models.

The link between pornography and aggression. Very few aggression studies have used female subjects however those that have typically employed the same experimental paradigms as the research on males. For example, Baron (1979) conducted a study using both female subjects and

confederates. The subjects were asked to look at photographs of (a) furniture and other non-sexual objects, (b) semi-nude young males, (c) nude males or (d) couples engaged in various acts of "lovemaking". They then played a rigged battleship game with the confederate, administering shock to her as punishment for incorrect responses. Aggression in angered subjects was inhibited by exposure to nude males (mildly sexually explicit) and enhanced by exposure to the couples engaged in sex (highly sexually explicit). This parallels the results for male subjects if one assumes that the stimuli employed here were comparable to those used in the studies on males. This assumption is questionable, however, for several reasons. First, women's previous exposure to nude males is likely to be much lower than their exposure to nude females or men's previous exposure to nude females. Thus, the significance of the stimuli differ for males and females (Stauffer & Frost, 1976). Second, the females rated the sexually explicit images as quite unpleasant whereas the males in other studies have rated the images of women quite positively. Thus, the stimuli used with the female subjects had a negative hedonic valence. Finally, Baron (1979) used only female confederates and therefore was unable to assess differences in aggression when the persons depicted in the stimuli and the confederate have the same gender as opposed to opposite gender. At any rate, this research has little relevance to the study of the effects

of pornography since the sexually explicit stimuli were not comparable to what is most available to consumers.

A study which did examine the effect of the confederate's gender found that exposure to sexually explicit stimuli in prose form increased female's aggression to the same extent as males, irrespective of the sex of the confederate or experimenter (Jaffe, Malamuth, Feingold, & Feshbach, 1974). Cantor, Zillmann, and Einsiedel (1978) followed a similar procedure but exposed subjects to films instead of prose. They used a standard aggressive film (an excerpt from "Champion", a prizefight film) and a sexually explicit film (an excerpt from "Naked Under Leather"). Neither of the films combined explicit violence and sexuality. The female subjects exposed to the aggressive film did not show increased aggression and had lower levels of arousal compared to the control film (a documentary on Marco Polo). When exposed to the sexually explicit film, angered women showed more aggression compared to the control condition; non-angered women did not differ across the two conditions. In this case, the females did not react to the aggressive film the same way as males had in other studies; males were highly physiologically aroused by the film. Although the results obtained when females were exposed to the sexually explicit film parallel those obtained for males, it is not clear that the females' aggressive behavior can be attributed to high levels of sexual arousal. More generally, the social

relevance of this line of investigation is questionable. Female aggression is not a major social problem and therefore is unlikely to be counted as one of the harmful effects of pornography.

Attitudinal and cognitive effects. Whereas the research on men has focussed on both aggression and attitudinal variables, fruitful research on women is more likely to lie with an examination of the effects of pornography on emotional and attitudinal variables. Justification for this focus rests with the observation that males are predominantly the perpetrators of violent crimes in society (Russell, 1984) and within pornographic portrayals females are predominantly the victims of these crimes (Smith, 1976; Stock, 1983; Malamuth & Check, 1981). Therefore, the psychological effects of exposure to pornography on women may in some cases be qualitatively different from the effects on men. More specifically, reactions to pornography are likely to be tied into the nature of women's sexual experiences, their perceptions of themselves and their views on male-female relationships.

Pornography is produced predominantly for the male consumer and therefore it is not surprising that males respond more favorably to it than females. Research has routinely found that females' affective responses to this kind of material are more negative than males regardless of level of sexual arousal. For example, Griffitt (1973) used slides depicting heterosexual, homosexual and autosexual

acts and found that females reported more disgust, anger, and nausea than males. In Schmidt's (1975) study in which female subjects had significantly lower arousal to rape films than men they mentioned in a group discussion later that the films produced a fear response of being "hopelessly overpowered" (p. 359). Similarly, a study of women's fantasies after exposure to rape depictions found that in contrast to findings with males, not a single realistic rape fantasy was created by females following exposure to rape depictions. A few "rape mythical" fantasies were created but only following exposure to an "eroticized" version of rape (Messe, 1984). Clearly, women's affective and emotional responses to pornographic materials are different from men's. What needed clarification however was how this difference relates to other aspects of women's perceptions and the subsequent effects of pornography.

Byrne, Fisher, Lamberth, and Mitchell (1974) attempted to establish how affective reactions predict evaluations of sexually explicit materials. They assumed that evaluation was mediated in some way by positive and negative affect. Subjects rated each image on a 6-point scale with end-points "non-pornographic" and "pornographic", where "pornography" was defined by a common dictionary definition as being "lewd, obscene", etc.. The affect measure was an 11 dimension Feelings Scale, measuring responses to the items: sexually aroused, disgusted, entertained, anxious,

bored, angry, afraid, curious, nauseated, depressed, and excited. Affect was related to evaluation in a different manner for women and men. Female's evaluations were derived from the level of negative affect; evaluation of the materials as pornographic was associated with high levels of negative affect regardless of the level of positive affect. Males' evaluations on the other hand, were a product of the interaction of both positive and negative affect. Males rated materials as pornographic only if they had high levels of negative affect and low levels of positive affect. Consistent with previous studies, female subjects reported more anxiety, anger, and nausea than did males.

Sex differences in the evaluation of pornography were also found by McDonald, Perkins, Sheehan and Curtis (1981). Females were more likely to agree that pornography is "a serious issue that could cause a breakdown in morals" and that it "would cause an increase in sex crimes" than males. If men and women differ in their basic perceptions of pornographic images, then one might expect to find sex differences in other areas as well, especially for those variables in which males and females may have quite different levels of personal investment, for example, attitudes toward rape.

Along this line, Malamuth and Check (1981) found that for males acceptance of interpersonal violence increased significantly after exposure to sexually violent commercial

movies. For females however there was a marginally significant effect in the opposite direction; acceptance of interpersonal violence tended to decrease following exposure.

Stock (1983) investigated the effects of exposure to various rape depictions on later perceptions of rape in women only. She also examined whether subsequent reactions to rape depictions could be predicted by various attitude and behavior measures. A seven-item mood checklist was used to assess the women's subjective reactions to the rape depictions. The rape empathy group reported significantly higher frustration and anger than the other groups and was also significantly lower in reports of positive feelings. The rape myth and mutual consent groups reported significantly higher levels of sexual arousal and sensuous feelings than either the rape empathy or neutral groups. In other words, the women were not subjectively aroused to realistic rape portrayals but only to consensual and eroticized rape depictions. Levels of embarrassment were not significantly different in the neutral or rape empathy conditions but the neutral condition exhibited significantly less embarrassment than the rape myth and mutual consent conditions. The neutral control group exhibited low scores on all items except positive feelings.

Consistent with the Malamuth and Check (1981) finding exposure to the rape portrayals resulted in a marginally significant decrease in acceptance of interpersonal

violence, and there was a similar tendency for rape myth acceptance to decrease. Correlations among the various attitude and behavior measures suggested that the women's reactions to violent pornography were related to a complicated set of attitudes about rape and the nature of male-female relationships as well as the women's previous familiarity with pornography. Scores on the positive adjectives, i.e., sexual arousal, positive feelings, and sensuous feelings, were related to various attitudinal and background measures. Specifically, acceptance of interpersonal violence, self-reported frequency of violent fantasies and past exposure to pornographic material correlated with self-reported sexual arousal to the rape depictions. As well, rape myth acceptance and adversarial sexual beliefs were positively correlated with positive feelings. In addition, adversarial sexual beliefs were negatively related to sensuous feelings. Scores on the negative adjectives, i.e., frustration and anxiety, were also related to attitude measures. Specifically, rape myth acceptance, adversarial sexual beliefs and acceptance of interpersonal violence were negatively related to reported frustration and rape myth acceptance was negatively correlated with anxiety. Perceptions of the victim's experience were also significantly related to rape myth acceptance and acceptance of interpersonal violence. These findings suggest that women who have high exposure to pornography may become desensitized to the negative aspects

of violent portrayals. In addition, negative attitudes about male-female relationships may mediate responses so that women do not feel as negatively towards the pornography as they would if they believed male-female relationships were positive and constructive. This may be a situation similar to that of a battered child who hates the violence but believes that it is "normal" and therefore grows up believing that things cannot be any different. Such a self-destructive viewpoint would in fact be reinforced by pornography.

Stock's research is hindered by a lack of statistical sophistication, for example, the predominance of t-tests to determine differences between groups and pre- and posttest measures. Nonetheless, her results are consistent with those of other studies in suggesting that women do not perceive pornography in the same way as men.

Rationale

Studying the effects of pornography on women however is only relevant if in fact women are exposed to it in the course of their everyday lives. The information available suggests that one should not underestimate the amount of exposure to pornography that women experience in their lifetimes. For example, Wilson and Abelson (1973) found that "[a]n overwhelming majority of adults report having been exposed at some time in their life to very explicit sexual materials that are often labelled pornography." (p.

19) Moreover, statistics collected in 1981 show that the magazines, Playboy and Penthouse, have a combined readership of over 29 million (Miner, 1981). In Canada it has been suggested that an average of four pornographic magazines are sold each year to every male over the age of 16 (Canadian Coalition Against Media Pornography, 1983). In addition, seven out of the 10 top selling magazines in North America are so called "men's" magazines (Riddington, 1984). While subscribers to pornography are predominantly male, the pervasiveness of pornographic materials suggests that women are exposed to these magazines by intentional or unintentional viewing of them in cornerstores and newstands, in the homes of male subscribers, or by purchasing them for personal use. Thus, the direct effect of pornography on women is an issue of relevance.

Although the potential psychological effects of pornography on women have not received sufficient empirical investigation, they have been discussed by feminist writers for some time. For example,

"A woman who enters a neighborhood where pornographic images of the female body are displayed, for instance, is immediately shamed. Once entering the arena of pornography, she herself becomes a pornographic image. It is her body that is displayed. And if she is interested in pornography, this interest becomes the subject of pornographic speculation. If she is shocked and turns away from the pornographic image in disgust, she becomes the pornographic "victim". She cannot escape pornography without humiliation. And we know humiliation to be the essence of sadism. It is thus that pornography exists as an act of sadism toward all women" (Griffin, 1981, p. 83).

Longino (1980) also noted that, "Women, too, are crippled by internalizing as self-images those that are presented to us by pornographers. Isolated from one another and with no source of support for an alternative view of female sexuality, we may not always find the strength to resist a message that dominates the common cultural media" (p. 46). A feminist analysis, then, regards pornography as having direct effects on women's views about themselves and their sexuality.

The design of this study involved several components and was based, in part, on the research by Stock (1983). Three types of sexually explicit materials were used: erotica, non-violent pornography, and violent pornography. These were the basis of the three experimental conditions. In addition, a control condition in which women were exposed to slides of scenery and nature images was included. No previous research has systematically compared women's reactions to sexually explicit depictions that vary in terms of the erotica-pornography dimension as well as the violent-non-violent dimension for pornography. The first goal of the study then was to ascertain how women perceive these different types of sexually explicit materials. This was accomplished by having the participants rate the images on the evaluative domain of the Semantic Differential (Osgood, 1957). A secondary goal was to examine the effects of exposure on subjects' mood. Stock (1983) found that mood was affected by exposure to

the various rape depictions. She, however, used single adjective descriptors to measure mood and conducted separate statistical analyses on each descriptor. This study used the Profile of Mood States (POMS: McNair, Lorr, & Droppleman, 1971) with its six mood subscales to establish a more reliable measure of mood before and after exposure to the slides. Since the evaluation of sexually explicit stimuli can be considered to be a result of affect (particularly negative affect in the case of women), a relationship between ratings on the Semantic Differential and self-reported mood was expected (Byrne et al., 1974).

Feminists such as Bat-Ada (1980) have also pointed out that women cannot achieve the standards of attractiveness established by unrealistic media portrayals. Thus, one might expect at least a subtle psychological effect of such portrayals on females' body-image and self esteem. Stock (1983) found no effect of exposure to rape depictions on body-image however the stimuli utilized were audiotaped depictions and as such supplied no visual information to conflict with the women's existing views about themselves. Since the stimuli used in this study were still images in the form of slides, it was expected that stimulus exposure would affect body-image and self-esteem at least in the pornography conditions. More specifically, it was hypothesized that, while these self-perceptions are well established by adulthood, exposure to non-violent pornography may nonetheless alter the aspects of body-image

and self-esteem that relate specifically to appearance and sexuality. Comparably, it was expected that existing levels of self-esteem and body-image would influence how women perceive the sexually explicit images.

Since violent pornography involves an imbalance in power expressed in a sexual context, it was hypothesized that attitudes about the nature of sexual relationships between men and women are related to women's perceptions of pornography. Specifically, an attempt was made to replicate Stock's (1983) findings that women who accept rape myths and who believe that male-female relationships are characterized by deceit and conflict would react more positively to violent pornography than women who are low on acceptance of rape myths and adversarial sexual beliefs. Moreover, it was expected that exposure to these messages could influence attitudes on such topics and as such post-exposure measures of these particular attitude and belief questionnaires were included. A scale measuring attitudes toward interpersonal violence was also included since it is related to rape myth acceptance and adversarial sexual beliefs (Burt, 1980). In addition, Cowie (1977) has commented that pornographic images "exist together with the images (positive or negative) women already have of themselves, their mothers, and women generally" (p. 23). One might expect that women with extremely negative attitudes toward men (i.e., high on hostility toward men and low on attitudes toward men) and/or extremely liberal

attitudes about the role of women (i.e., high on attitudes toward feminism) would be particularly negative in their reactions to violent pornography. These relationships should also be present for the non-violent pornography but to a lesser degree since the power dynamics are present in a more subtle form without the explicit use of force.

In addition to these attitude measures three aspects of the women's previous experience were assessed; their prior exposure to sexually explicit materials, previous coercive sexual experiences, and the use of pornography in a coercive sexual context. Zillmann and Bryant (1984) found that male and female subjects who were exposed to a large amount of non-violent pornography considered subsequent images as less offensive and objectionable than people with low exposure. Stock (1983) found that higher previous exposure to pornography was related to higher arousal to rape depictions. It was hypothesized in this study that women with the greatest previous exposure to pornography would rate the images in the non-violent and violent pornographic conditions more favorably than women with low previous exposure. Although there has been no empirical research on the differential effects of pornography on women who have a history of sexual assaults, it was predicted that women who have experienced sexual coercion in the form of, e.g., rape and bondage, would react more negatively to the violent depictions than women without such a history. Women with a history of such

experiences might identify more closely with the female models in the violent pornographic depictions and therefore be more negative in their evaluations. Stock (1983) did not find a relationship between coercive sexual experience and reactions to rape depictions, however she used the old version of the Sexual Experiences Survey which does not account for the frequency of the coercive experiences. The new version was used in this research as a more sensitive measure likely to correlate with reactions to the experimental stimuli. Because the erotic slides show caring interactions between people or nudity without differences in power and violence, it was hypothesized that there would be no difference in this condition between the reactions of women with a prior history of coercion and those without.

Subjects were also asked about coercive experiences with pornography. Russell (1980) carried out interviews with 930 women in the San Francisco Bay area and included an item that asked if the women had ever been upset by someone trying to force them to enact something which they knew had been seen in pornography. Ten percent of the women responded affirmatively to this question. In this study, it was hypothesized that women who had been emotionally upset by someone trying to coerce them into imitating pornographic depictions would react more negatively to the violent pornographic slides than women without such experience.

The major hypotheses are summarized below:

1. Pornography, both violent and non-violent will be rated lower (less positively) on the Semantic Differential measure than erotica or control slides.
2. Exposure to sexism and violence in sexually explicit materials will negatively affect women's mood state as measured on the POMS (McNair, Lorr & Droppleman (1971)).
3. Rape myth acceptance and acceptance of interpersonal violence will decrease following exposure to violent pornography.
4. Women's previous exposure to pornography and previous coercive sexual experience will predict how they view pornographic images in the experimental setting.
5. Exposure to erotica will have no effect or have effects in the opposite direction to those hypothesized for violent and non-violent pornography.

Method

Subjects

One hundred and nine female University of Calgary undergraduates, 18 to 43 years of age ($M=21.94$, $sd=5.73$) were randomly selected from the psychology department subject pool. During the initial contact by telephone, they were informed that (a) the experiment involved rating the characteristics of slides which might include sexually explicit and/or violent content, (b) they would be required to participate in 3 or 4 sessions for a total of 3 hrs and, (c) they would receive \$5.00 upon completion of the experiment. At this point, two women declined to participate due to the sexually explicit nature of the experimental stimuli. In addition, one woman chose to withdraw from the experiment following the second session because of the nature of the stimuli. She was debriefed in the third session. The final sample, was thus composed of 106 women.

Stimuli

The experimental stimuli were sexually explicit images obtained from three magazines, (Playboy, Penthouse, Hustler) and two books (Rising Goddess, and Women's Experience of Sex). Five female raters independently

classified 310 slides into three categories, i.e., (a) erotica, (b) non-violent pornography, and (c) violent pornography, according to the researcher's operational definitions (see Appendix A for these definitions, instructions to raters and procedure). All five raters agreed on the classification of 131 (42%) of the slides, four out of five agreed on the classification of another 99 (32%) slides, and three or fewer agreed on the classification of the remaining 80 (26%) slides. Using the effective reliability index (Rosenthal, 1984), the interrater reliability was .93. For each of the three categories, the experimenter selected from the slide pool 75 slides with the highest levels of agreement. (Table 1 summarizes the number of selected slides in each category for which there were five agreements, four agreements, and three agreements). The control condition consisted of 75 slides depicting nature and scenery.

Measures

Two questionnaire batteries were developed: (a) a Background Questionnaire Battery composed of three independent questionnaires and (b) an Attitude and Beliefs Questionnaire Battery composed of nine independent questionnaires. In addition, a measure of mood and Semantic Differential ratings of the slides were included

Table 1.Interrater Agreement by Condition

	Erotic	Non-violent	Violent
100% agreement (5 raters)	61	37	33
80% agreement (4 raters)	14	38	29
60% agreement (3 raters)	0	0	13
Total	75	75	75

to assess subjects' immediate reactions to the experimental conditions. The measures are described in detail below.

Background Questionnaire Battery

1. Background Questionnaire.

This questionnaire was designed specifically for this study to gather information about subjects' age, level of education, major area of study at the University of Calgary, occupational status and living arrangements (see Appendix B).

2. Sexual Experiences Survey - (SES; Koss & Oros, 1982).

The SES is a measure of sexual victimization consisting of 10 descriptions of coercive sexual experiences. For each item, subjects indicate in yes-no format whether they have ever had this experience, and if yes, indicate the frequency of occurrence of the experience since the age of 14 (i.e., 1, 2, 3, 4, 5 or more times) and in the last school year (i.e., 0, 1, 2, 3, 4, 5 or more times). Three questions relate to sex play (i.e., fondling, kissing or petting) and four items relate to sexual intercourse, with type of coercion varying from continual arguments and pressure to abuse of authority and threats and physical force. Two questions relate to attempted sexual intercourse, and one question involves forced sex acts other than vaginal intercourse (i.e., anal intercourse,

oral intercourse, penetration by objects). In addition to these 10, there are two questions which ask whether the subject has ever willingly engaged in sex play and sexual intercourse. The questionnaire's design has particular merit because the experiences are described but not labelled. Thus, individual differences in the interpretation of labels such as "rape" do not influence subjects' responses. Moreover, it is a more sensitive index of hidden (i.e., unreported) sexual assault than direct questions about rape experiences. The scale was originally tested on over 2,000 college women and was found to consist of one factor accounting for a large proportion of the variance (64.3%). More recently, scores on the SES have been found to correlate with Hostility Toward Men providing some evidence of construct validity (Check, Elias, & Barton, in press).

3. Previous Exposure to Sexually Explicit Materials

Designed for this study, the questionnaire asks subjects to (a) use a six-point scale with response alternatives ranging from "never" to "more than 20 times" to rate the frequency of previous exposure to specific pornographic magazines (i.e., Playboy, Playgirl, Penthouse, Hustler), the frequency of previous exposure to general categories of pornographic materials (i.e., other men's

magazines, films, videos), and the frequency of previous exposure to sex education materials, (b) indicate the types of sexual activities observed in these materials via a checklist (adapted from Herrman & Bordner, 1983), (c) indicate their beliefs concerning the frequency of violence in sexually explicit materials on a five-point scale with response alternatives ranging from "never" to "always" and, (d) indicate whether they have ever had an upsetting experience with pornography in their intimate relationships (Russell, 1980) (see Appendix B).

Attitude and Belief Questionnaire Battery

1. Attitudes Toward Feminism - (FEM; Smith, Ferree & Miller, 1975).

This is a 20-item, Likert-type scale with five response alternatives ranging from "strongly agree" to "strongly disagree". It taps beliefs about central tenets of feminism, and has an inter-item reliability of .91. There is some evidence of construct validity as well; the FEM scale has been found to correlate negatively with the Just World Scale (Rubin & Peplau, 1973) and positively with measures of activism within the women's movement and identification with the women's movement (Smith, Ferree, & Miller, 1975).

2. Self-Esteem - (Rosenberg, 1965).

The ten-item scale allows the ranking of people along a continuum of self-esteem. High self-esteem includes the belief that one is worthy of respect from oneself and others and an expectancy of further personal growth despite one's limitations. The scale has high test-retest reliability ($r=.92$). Construct validity has also been demonstrated by testing clinical populations such as depressives, who are known to have low self-esteem. For example, the scale differentiated between individuals identified as depressed by nursing staff and those who were not identified as depressed (Rosenberg, 1965).

3. Acceptance of Interpersonal Violence - (Burt, 1980).

This six-item, Likert-type scale has seven response alternatives, ranging from "strongly agree" to "strongly disagree". Individuals with high acceptance of interpersonal violence believe that force and coercion are legitimate mechanisms to gain compliance within intimate relationships. The scale has a Cronbach's alpha of .586, and, when developed, it was found to be the strongest attitudinal predictor of Rape Myth Acceptance (Burt, 1980). In addition, Malamuth and Check (1982) found that it predicted amount of aggression displayed by men toward women within an experimental aggression paradigm. In

another study, Ceniti and Malamuth (in preparation, cited in Malamuth, 1981) reported a correlation of .54 between Acceptance of Interpersonal Violence and self-reported likelihood of raping for a sample of men.

4. Hostility Toward Men Scale - (HTM; Check, Elias & Barton, in press).

This 35-item, true-false scale assesses the female participant's hostile feelings toward men in general and has test-retest reliability of .90 over a one week period. Moreover, it has been validated on a limited sample of undergraduates; while HTM is related to previous coercive sexual experience, general hostility is not.

5. Adversarial Sexual Beliefs - (Burt, 1980).

This is a 9-item, Likert-type scale with five alternatives (i.e., "strongly agree" to "strongly disagree") designed to determine how subjects view sexual relationships. Subjects who score high on the scale believe that intimate relationships are based on exploitation, manipulation, lying, and cheating, and as such one's partner is not to be trusted. The scale has a Cronbach's alpha of .802 indicating high inter-item reliability and Malamuth and Check (1982) have provided some evidence of construct validity; scores predicted subsequent experimental aggression of men against women.

6. Attitudes Toward Men - (Iazzo, 1983).

This 32-item scale has four subscales devised to tap four domains; marriage and parenthood, sexuality, work, and physical and personality attributes. The subscales have coefficient alphas of .85, .73, .60, and .69, respectively. Correlations between the scale and the Crowne-Marlowe Social Desirability Scale (Crowne & Marlowe, 1960) were small and nonsignificant. Criterion-related validity of the scale was established by comparing the scores of battered women, rape victims, feminists and lesbians with control subjects. The ordering of the subscale means was consistent with theoretical hypotheses; the lowest scores on Sexuality were obtained by rape victims, the lowest scores on Work were obtained by lesbians, and the lowest scores on the Marriage and Parenthood and the Personality subscales were obtained by women who have been battered.

7. Rape Myth Acceptance - (Burt, 1980).

This scale was developed by Burt to tap agreement with the most commonly held myths about rape and rape victims and has a Cronbach's alpha of .875. It has been found to correlate with self-reported likelihood of raping in male samples ($r=.60$; Ceniti & Malamuth, in preparation, cited in Malamuth, 1981). In addition, males have scored higher on rape myth acceptance than females (Malamuth, 1981) and

scores were significantly related to Acceptance of Interpersonal Violence (Burt, 1980).

8. Body Esteem Scale - (Franzoi & Shields, 1984).

This is a 35-item multidimensional scale with three subscales specifically designed for female college students: (a) sexual attractiveness, (b) weight concern, and (c) physical condition. It has good internal consistency as shown by coefficient alphas of .78, .87, and .82 respectively. There is also some evidence of convergent validity; scores on Sexual Attractiveness and Physical Condition were found to correlate moderately with Rosenberg's (1965) Self-esteem scale. Discriminant validity was established for the weight concern subscale; it differentiated between anorexic and non-anorexic women.

9. Erwin Identity Scale - (EIS; Erwin, 1977).

The EIS has three subscales designed to measure the three components of self-identity; Confidence, Sexual Identity, and Conceptions About Body and Appearance. There are 59 items which the respondent rates on a five-point, Likert-type scale with response alternatives ranging from "very true of me" to "not at all true of me". This scale appears to have moderate convergent validity when correlated with Rotter's (1966) Internal-External Locus of Control Scale (I-E) and Simmon's (1973) Identity

Achievement Scale (IAS). High School students who scored higher on Confidence and Sexual Identity tended to have internal locus of control. Moreover, a moderate relationship emerged between the IAS and the EIS on the subscales, Confidence and Sexual Identity, but there was no correlation between the scales for Body and Appearance (Erwin & Schmidt, 1981).

Profile of Mood States - (POMS; McNair, Lorr & Droppleman, 1971.)

This is a 65-item adjective checklist designed to measure transient or fluctuating affective states. Six subscales representing different mood dimensions have been produced by factor analytic studies; tension/anxiety, depression/rejection, anger/hostility, vigor/activity, fatigue/inertia, and confusion/bewilderment. Internal consistency is .90 or greater for four of the subscales (tension/anxiety, depression/rejection, anger/hostility, vigor/activity) and .84 or greater for the other two (fatigue/inertia, confusion/bewilderment) Test-retest reliability is .80 to .90. Validity has been documented in studies such as those investigating emotion-inducing conditions. For example, Tension scores decreased following neutral films and significantly increased after viewing autopsy films (McNair, Lorr & Droppleman, 1971).

Semantic Differential - (Osgood, Suci, & Tannenbaum, 1957)

Seven adjective pairs (good-bad, pleasurable-painful, cruel-kind, healthy-sick, positive-negative, clean-dirty, beautiful-ugly) were selected from the evaluative dimension of the semantic differential. Each adjective pair appeared as the end-points on a seven-point scale. The evaluative dimension has been shown to yield smaller errors of measurement, smaller deviations for retest intervals, and overall better reliability than the other dimensions of the Semantic Differential.

Procedure

Subjects were randomly assigned to one of the five conditions: (a) erotica, (b) non-violent pornography, (c) violent pornography, (d) control, or (e) violent pornography, no-pretest. The no-pretest condition was included to determine the impact of pretesting on the results. The first four conditions each contained 24 subjects while the no-pretest condition contained only 10 subjects. Subjects in the first four conditions participated in four sessions; two 1-hour sessions (Sessions 1 and 4) and two 30 min sessions (Sessions 2 and 3). Subjects in the no pretest condition participated in three sessions; one 45 min session (Session 1), one 30 min

session (Session 2) and one 1-hour and 15 min session (Session 3).

Session 1. All subjects met with the experimenter either individually or in small groups of two or three. Subjects were seated at separate tables to maximize privacy and were asked not to talk to each other while the experiment was in progress. The experimenter repeated information previously given over the phone about the nature of the experiment, the time commitment involved and the type of experimental procedure. In addition, she guaranteed that confidentiality would be maintained for all aspects of the experiment. Subjects were then assigned an identification number with which to identify all questionnaires.

Subjects filled out the consent form in private to avoid any possible coercion by the experimenter or other subjects. The form stated explicitly that they were free to withdraw from the experiment at any point. Instructions to subjects and a copy of the consent form are provided in Appendix C.

Subjects in the no-pretest condition proceeded on to the task outlined in Session 2. All other subjects completed the Background Questionnaire Battery and the Attitude and Belief Questionnaire Battery. Each subject

received a different random ordering of the questionnaires in the second battery. Subjects were scheduled to return for the remaining sessions in the following two week period, the average completion time overall being 8 school days (min=6, max=20).

Session 2. Subjects were seated at a table in the experimental room facing a projection screen. They were tested alone or with one other subject in the room. To prevent the subjects from influencing one another, they were seated at separate tables and were instructed not to talk to each other. They first completed the POMS (McNair, Lorr & Droppleman, 1971) and then were instructed in the use of the Semantic Differential scale for rating the slides (Osgood, 1957). Subjects rated each slide on the same seven adjective pairs. Detailed written instructions were given (see Appendix D) and the experimenter clarified these directly with the subject. Five example slides were shown to familiarize subjects with the procedure, the speed of presentation, and the content. Subjects did not continue until they felt comfortable with the rating task, repeating the example slides if necessary. At this point, subjects were then given a short break and the option of leaving or continuing in the experiment. All chose to continue. The subjects then rated 50 slides randomly

selected from the pool of 75 slides for the appropriate condition. An automatic timing device controlled the presentation rate of the slides to 25 sec per slide. At the end of the session, subjects completed the POMS for a second time.

Session 3. Subjects returned within two school days of Session 2 and were exposed a second time to another set of 50 randomly chosen slides. They were given the option of practicing with the example slides once again, but few requested this. The POMS was completed before and after viewing the slides, and the slides were rated on the same scales of the Semantic Differential.

Session 4. Subjects returned to the lab within two school days of Session 3. No-pretest subjects filled out the Background Questionnaire Battery and the Attitude and Belief Questionnaire Battery for the first time and were then debriefed. All other subjects completed the Post-test Attitudes and Beliefs Questionnaire Battery (composed of the Erwin Identity Scale, Body-Esteem, Rape Myth Acceptance, Adversarial Sexual Beliefs, and Acceptance of Interpersonal Violence). All subjects were then debriefed (see Appendix E).

Pilot work on 20 women was performed to establish the effectiveness of the debriefing. All attitude and belief

questionnaires were re-administered following the debriefing and these scores were compared by correlated t-tests to examine the effects of the debriefing. It must be noted that one questionnaire, the Body-Esteem Scale, was not administered during pilot testing. The Body Cathexis Scale (DeLamater & MacCorquodale, 1979) was administered in its place. The only significant effects of pretesting were positive, with adversarial sexual beliefs ($\underline{M}_{pre}=26.4$, $\underline{M}_{post}=23.1$), and rape myth acceptance ($\underline{M}_{pre}=34.8$, $\underline{M}_{post}=31.3$), decreasing after the debriefing. In addition, views about men's physical and personality characteristics became more positive following the debriefing ($\underline{M}_{pre}=22.8$, $\underline{M}_{post}=24.6$).

Results

Slide Ratings

The semantic differential scores for each subject were obtained in the usual manner. Each slide had been rated on seven adjective pairs and the rating for each pair was scored as a number between -3 and +3. Thus, summing across the ratings for a single slide, scores ranged between -21 and +21. A subject's score for a single session was her average rating for the entire set of 50 slides. To verify that the adjective pairs represented a single dimension, the slide ratings for the violent condition were intercorrelated (see Table 2) and found to have high internal consistency, $\alpha=.96$. Therefore, summing across the ratings was felt to be appropriate.

The first analysis of the slide ratings was aimed at assessing the impact of the pretest questionnaires on subsequent reactions to the slides. Slide ratings for the no-pretest, violent condition were compared to the ratings for the pretested, violent condition by a mixed analysis of variance (ANOVA) with one between-subjects variable (Group: no pretest/ pretest) and one within-subjects variable (Session: one/ two). No significant effect of pretesting was found (see Table 3).

Table 2Intercorrelations between Semantic Differential Items

Adjective Pairs	1	2	3	4	5	6	7
1. good/ bad	-	.90*	.84*	.71*	.87*	.74*	.92*
2. cruel/ kind	-	-	.70*	.88*	.79*	.71*	.84*
3. dirty/ clean	-	-	-	.50*	.83*	.67*	.79*
4. pleasurable/ painful	-	-	-	-	.68*	.64*	.59*
5. ugly/ beautiful	-	-	-	-	-	.86*	.80*
6. healthy/ sick	-	-	-	-	-	-	.76*
7. negative/ positive	-	-	-	-	-	-	-

n=24.
*p<.01.

Table 3

Summary Table for Group (No Pretest/Pretest) X Session
ANOVA on Slide Ratings

Source	<u>df</u>	<u>MS</u>	<u>F</u>
Group (G)	1	37.578	1.05
Subjects within Groups (SWG)	32	1145.766	
Session (S)	1	2.777	2.81
S X G	1	0.001	0.00
S X SWG	32	31.620	

The next analysis compared slide ratings for the four pretested conditions. A mixed ANOVA with one between-subjects variable (Group: violent/ non-violent/ erotic/ control) and one within-subjects variable (Session: one/ two) yielded a statistically significant group main effect, $F(3,92)=96.05$, $p<.01$, but no session main effect or interaction (see Table 4). Post-hoc comparisons using Tukey's HSD test (Kirk, 1982) revealed that all three experimental groups were significantly different from the control group and from each other ($p<.05$). Ratings in the violent condition were the most negative, ratings in the non-violent pornography condition were negative but significantly more positive than those in the violent condition, ratings in the erotic condition were positive, and ratings in the control condition were the most positive (see Table 5 for M's, and SD's).

Mood Ratings

First, the six mood subscale scores of the no-pretest, violent condition were compared with the scores of the violent condition to ensure that there was no effect of the pretest questionnaires. A multivariate analysis of variance (MANOVA) with one between-subjects variable (Group: no pretest/ pretest) and two within-subjects variables (Time: pre/ post; Session: one/ two) revealed

Table 4Summary Table for Group X Session ANOVA on Slide Ratings

Source	<u>df</u>	<u>MS</u>	<u>F</u>
Group (G)	3	4524.25	96.05*
Subjects within Groups (SWG)	92	47.104	
Session (S)	1	0.592	0.41
S X G	3	2.204	1.52
S X SWG	92	1.453	

* $p < 0.1$.

Table 5Mean Slide Ratings

Group	<u>n</u>	<u>M</u>	<u>SD</u>	<u>MIN</u>	<u>MAX</u>
Violent	24	-10.60 _a	4.16	-19.40	-3.64
Non-violent	24	-1.62 _b	4.34	-10.60	6.38
Erotic	24	5.34 _c	6.41	-7.10	19.42
Control	24	12.09 _d	4.23	3.66	19.94

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

no significant differences on mood scores for the two conditions (see Table 6). A multivariate Group X Time X Session interaction emerged, however none of the univariate F 's reached the significance criterion of $p < .01$.

The effects of exposure to the sexually explicit stimuli on mood for all four pretested conditions were then analysed using a mixed MANOVA with one between-subjects variable (Group: violent/ non-violent/ erotic/ control) and two within-subjects variables (Session: one/ two; Time: pre/ post). The summary table is displayed in Table 7. Multivariate effects were considered to be statistically significant if the Roy's greatest characteristic root statistic (GCR), T^2 , and/or Wilk's Lamda (U) were significant at $p < .05$. Multivariate main effects were found for the group, session, and time variables. In addition, there were significant multivariate interactions between session and group and between time and group.

In examining the univariate F 's associated with the significant multivariate effects a significance level of $p < .01$ was adopted to minimize the Type I error rate. Statistically significant univariate F 's were subsequently analysed using Tukey's HSD post hoc procedure with alpha set at .05.

Table 6

Summary Table for Group (No Pretest/Pretest) X Time X Session
MANOVA on Mood

Source	df	F
Group (G)	6,27	1.37
Session (S)	6,27	0.91
S X G	6,27	2.18
Time (T)	6,27	7.22**
T X G	6,27	1.60
S X T	6,27	1.64
G X S X T	6,27	2.87*

**p<.01.

*p<.05.

Table 7Summary Table for Group X Session X Time MANOVA on Mood

Source	<u>T²</u>	<u>GCR</u>	<u>df</u>	<u>U</u>	<u>F</u>
Group (G)		.196*	18	.756	1.42
Session (S)	54.900		6		8.65**
S X G		.165	18	.702	1.82*
Time (T)	83.366		6		13.14**
T X G		.287**	18	.612	2.59**
S X T	10.709		6		1.69
S X T X G		.100	18	.857	0.77

* p<.05.

**p<.01.

Using our conservative significance criterion, Anger was the only subscale to show a statistically significant main effect for group (see Table 8). Tukey's HSD test indicated that subjects in the violent pornography condition rated their anger as significantly higher than subjects in the control or erotic conditions (see Table 9). The mean for the non-violent pornography condition fell midway between the others and failed to differ significantly from them. In addition, the control and erotic conditions did not differ. The group main effect was also marginally significant ($p < .05$) for the Tension and Confusion subscales. Means on these two subscales were ordered in a manner similar to that found for the Anger subscale, i.e., the largest mean occurred in the violent condition, followed by the non-violent condition, with the erotic and control conditions having the smallest means (see Table 9).

Anger, Vigor and Confusion, showed a significant time effect (see Table 10) with anger and confusion scores increasing and vigor scores decreasing from pre- to post-exposure (see Table 11 for M's and SD's). In addition, there were marginally significant ($p < .05$) time main effects for the Tension and Depression subscales (see Table 10). As for the other two negative mood scales,

Table 8Univariate F tests for Significant Group Effect on Mood

Source	<u>df</u>	<u>MS</u>	<u>F</u>
Tension	3	167.461	3.28*
Depression	3	142.844	1.32
Anger	3	448.392	4.37**
Vigor	3	183.225	1.42
Fatigue	3	2.809	0.04
Confusion	3	74.912	3.02*

* $p < .05$.

** $p < .01$.

Table 9Group Main Effects on Mood

Group	Anger		Tension		Confusion	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Violent	5.79 _a	10.20	2.79	5.15	1.35	4.39
Non-violent	3.93 _{ab}	8.10	2.25	6.37	1.26	3.53
Erotic	1.47 _b	2.75	0.28	3.42	-.16	2.44
Control	1.25 _b	2.07	0.25	3.39	-.28	2.37

Note. Means sharing the same subscripts do not differ significantly, $p < .05$.

Table 10Univariate F tests for Significant Time Effect on Mood

Source	<u>df</u>	<u>MS</u>	<u>F</u>
Tension	1	85.315	5.79*
Depression	1	71.760	4.23*
Anger	1	742.594	15.70**
Vigor	1	529.690	44.81**
Fatigue	1	6.510	1.34
Confusion	1	125.098	15.32**

* $p < .05$.

** $p < .01$.

Table 11Time Main Effects on Mood

Subscale	Pre-		Post-	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Anger	1.72	3.01	4.50	9.19
Confusion	-0.03	2.48	1.12	4.00
Vigor	15.04	7.24	12.69	7.29
Tension	0.92	4.24	1.86	5.39
Depression	2.58	4.59	3.45	7.20

tension and depression tended to increase from pre- to post-exposure (see Table 11).

The Time X Group interaction was significant for all mood subscales except Fatigue (see Table 12). Each of the five interactions have been graphed and will be discussed separately: (a) For Tension, Tukey's test revealed that in the violent and non-violent pornography conditions, tension increased significantly from pre- to post-exposure (see Figure 1). None of the means differed significantly on pretesting, however after exposure, the violent and non-violent pornography conditions were significantly higher than both the erotic and control conditions. The two pornographic conditions did not differ from each other and neither did the erotic and control conditions (see Table 1 in Appendix F for M's). (b) For the Depression subscale, the violent pornography condition increased significantly from pre- to post-exposure (see Figure 2). There were no significant changes in the other three conditions. In addition, there were no significant group differences on either the pretest or the posttest (see Table 2 in Appendix F for M's). (c) Anger/Hostility scores increased significantly from pre- to post-exposure in the violent pornography condition, but no other group showed a significant change following exposure (see Figure 3). Although there were no significant group differences

Table 12Univariate F tests for Significant Time X Group Interaction

Source	<u>df</u>	<u>MS</u>	<u>F</u>
Tension	3	128.718	8.74**
Depression	3	75.594	4.45**
Anger	3	332.128	7.02**
Vigor	3	66.016	5.58**
Fatigue	3	11.476	2.37
Confusion	3	41.419	5.08**

**p<.01.

Figure 1.

Tension: Time X Group Interaction

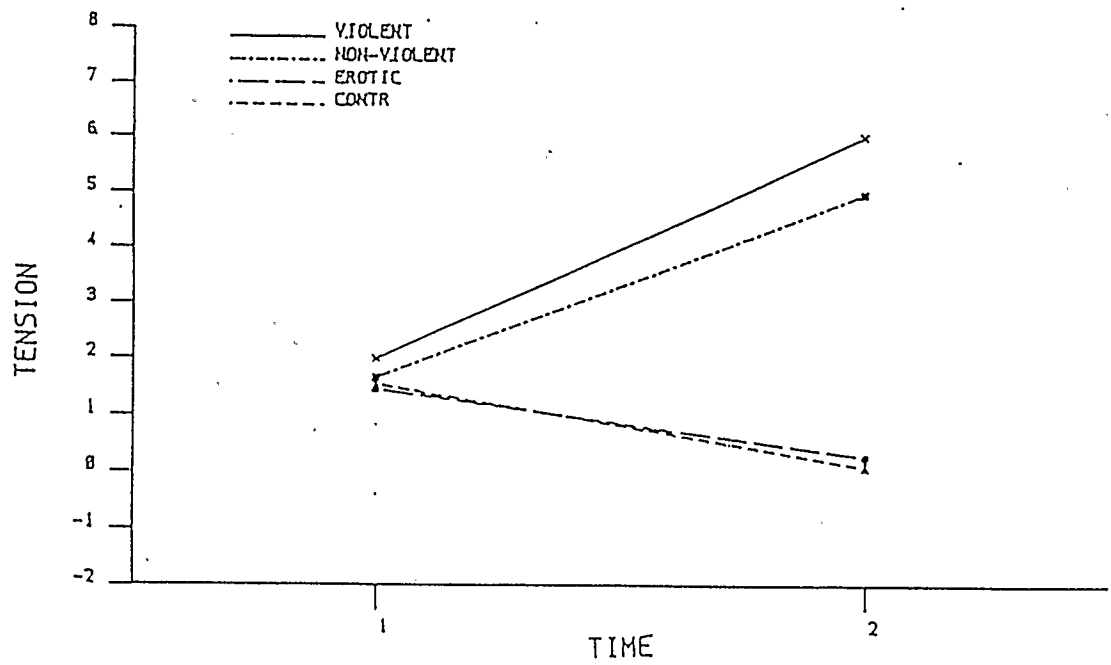


Figure 2

Depression: Time X Group Interaction

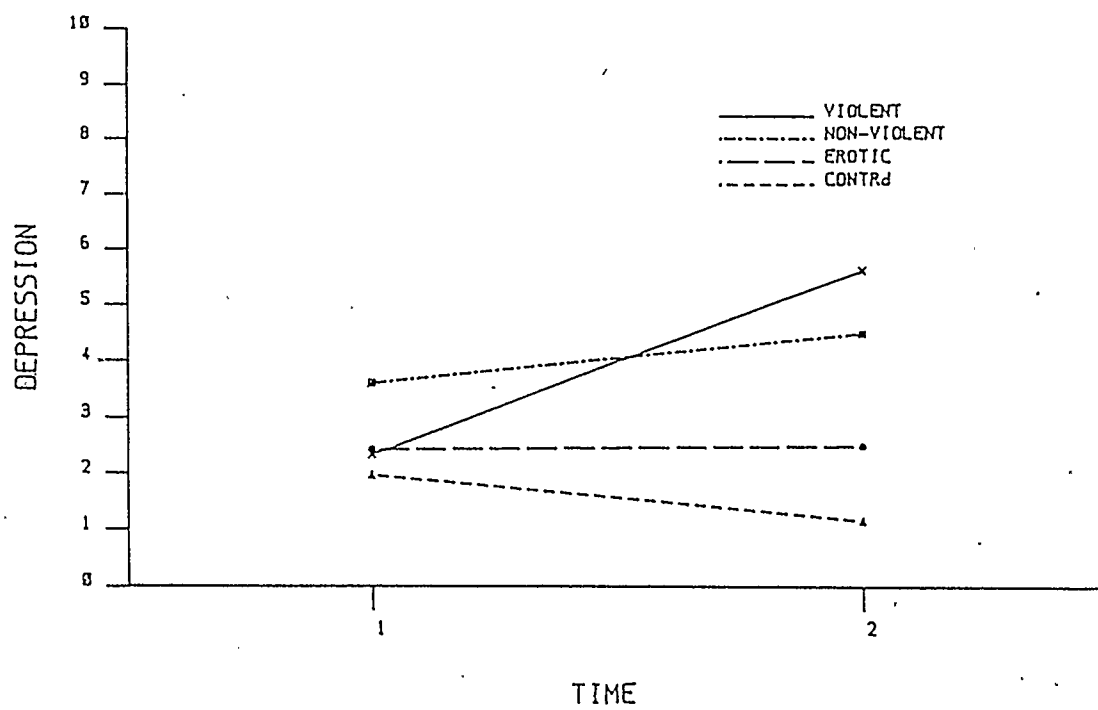
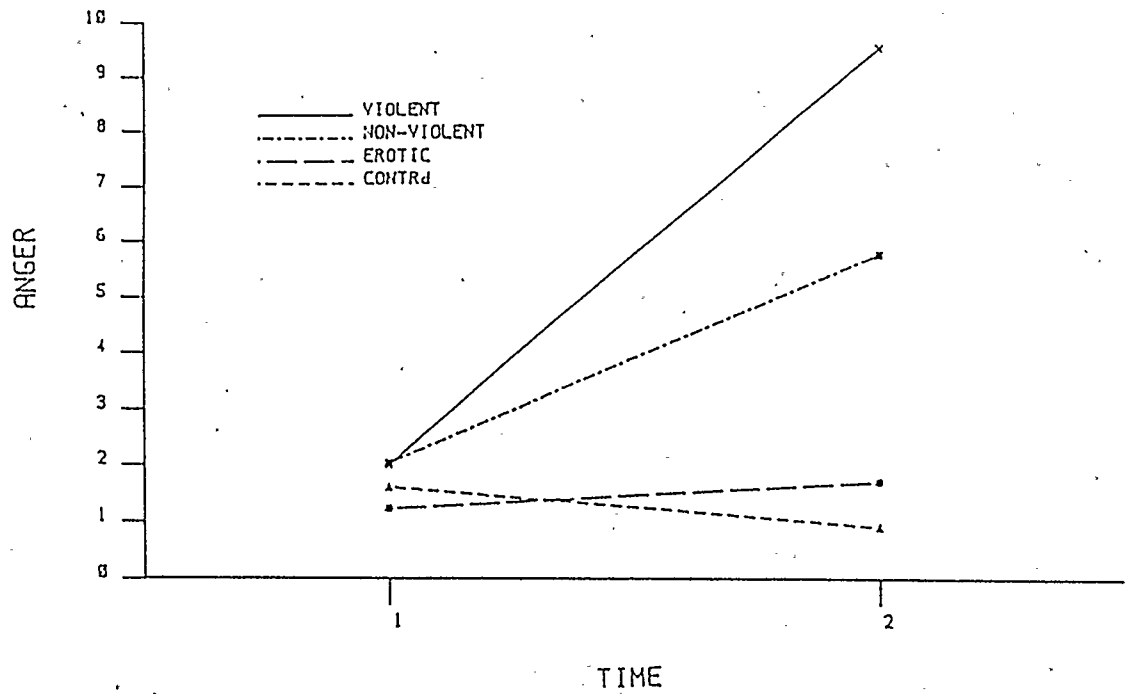


Figure 3Anger: Time X Group Interaction

on the pretest, the violent condition differed significantly from the erotic and control groups on the posttest. There were no other significant group differences on the posttest (see Table 3 in Appendix F for M's). (d) Vigor scores decreased significantly in all three sexually explicit conditions from pre- to post-exposure (see Figure 4). Nonetheless, there were no statistically significant group differences on either the pretest or the posttest (see Table 4 in Appendix F for M's). (e) Confusion scores increased significantly from pre- to post-exposure for the violent and non-violent pornography conditions (see Figure 5). Although there were no significant group differences on the pretest, the violent and non-violent pornography conditions had significantly higher posttest scores than the control condition. No other statistically significant differences were found (see Table 5 in Appendix F for M's).

To summarize, the effects of exposure on women in the violent condition were highly consistent. Subjects reported increased negative affect on four of the five negative mood subscales and decreased positive affect. In the non-violent pornography condition, subjects reported decreased positive affect and increased tension and confusion. Neither the erotic nor the control condition showed significant changes in negative affect.

Figure 4

Vigor: Time X Group Interaction

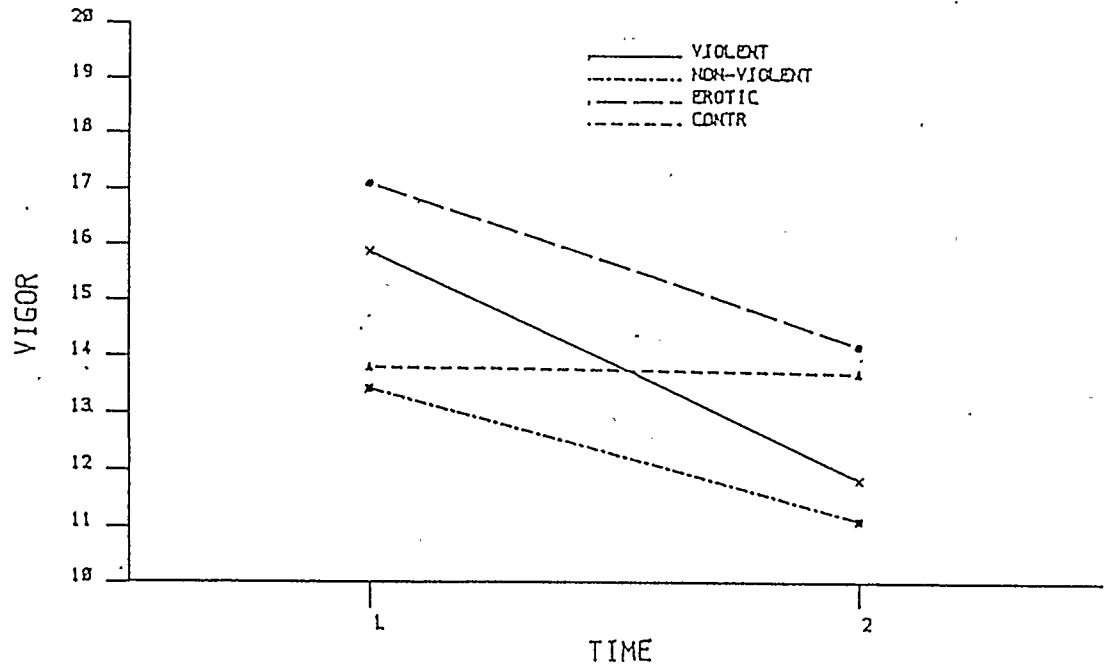
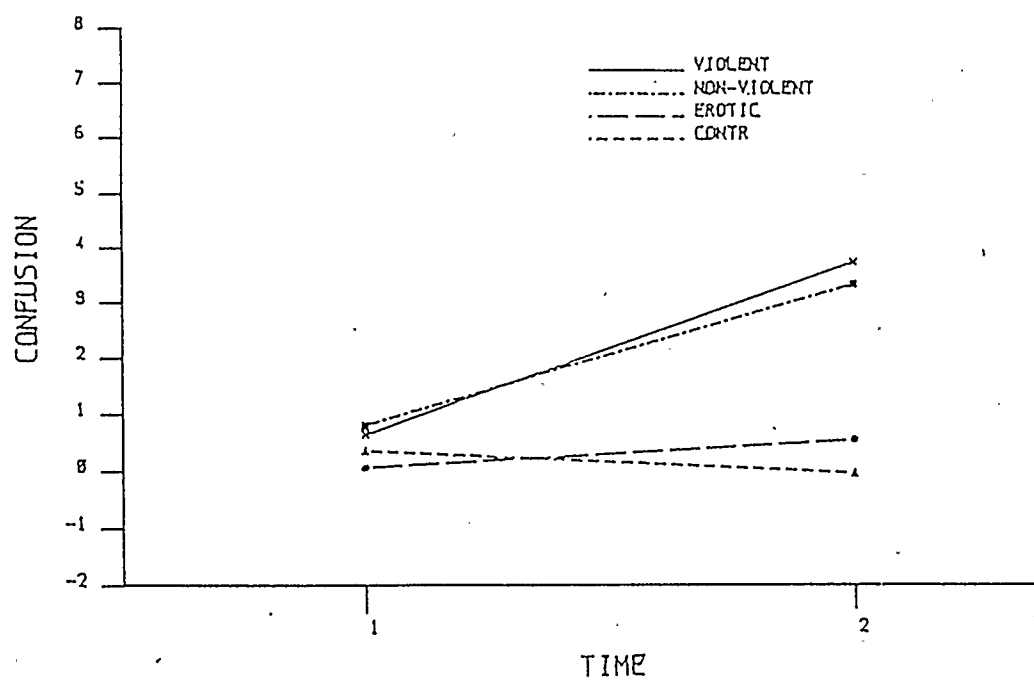


Figure 5

Confusion: Time X Group Interaction



Nevertheless, the erotic condition did show a decrease in positive affect. In addition, there were no significant group differences on the pretest. On the posttest however, the group means were ordered in a similar fashion for the four negative mood subscales even though significant differences did not always emerge. The mean for the violent group was consistently the highest, followed by the non-violent, the erotic, and the control conditions. On the single positive mood subscale, the erotic and control conditions had the higher means and the violent and non-violent conditions had the lower means. Overall, the violent and non-violent conditions reported similar levels of positive and negative affect as did the erotic and control conditions.

The Session main effect was present for the Tension, Depression, Anger, and Fatigue subscales (see Table 13). All four decreased significantly from Session 1 to Session 2 (see Table 14 for M's and SD's). In addition, the Session main effect was marginally significant ($p < .05$) for Confusion; as for the other negative mood scores, confusion tended to decrease across sessions (see Tables 13 and 14).

Anger was the only subscale to reach the univariate criterion for the Session x Group interaction (see Table 15 and Figure 6). Tukey's HSD test indicated that anger scores decreased significantly from Session 1 to Session 2

Table 13Univariate F tests for Significant Session Effect on Mood

Source	<u>df</u>	<u>MS</u>	<u>F</u>
Tension	1	223.565	20.18**
Depression	1	145.042	14.31**
Anger	1	155.042	19.28**
Vigor	1	23.503	0.43
Fatigue	1	142.594	8.45**
Confusion	1	25.523	4.69*

* $p < .05$.

** $p < .01$.

Table 14Session Main Effect on Mood

Subscale	Session 1		Session 2	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Tension	2.16	5.38	0.63	4.17
Depression	3.63	6.60	2.40	5.39
Anger	3.74	7.56	2.47	6.28
Fatigue	5.43	4.79	4.21	5.00
Confusion	0.80	3.53	0.29	3.19

Table 15Univariate F tests for Significant Session X Group Interaction

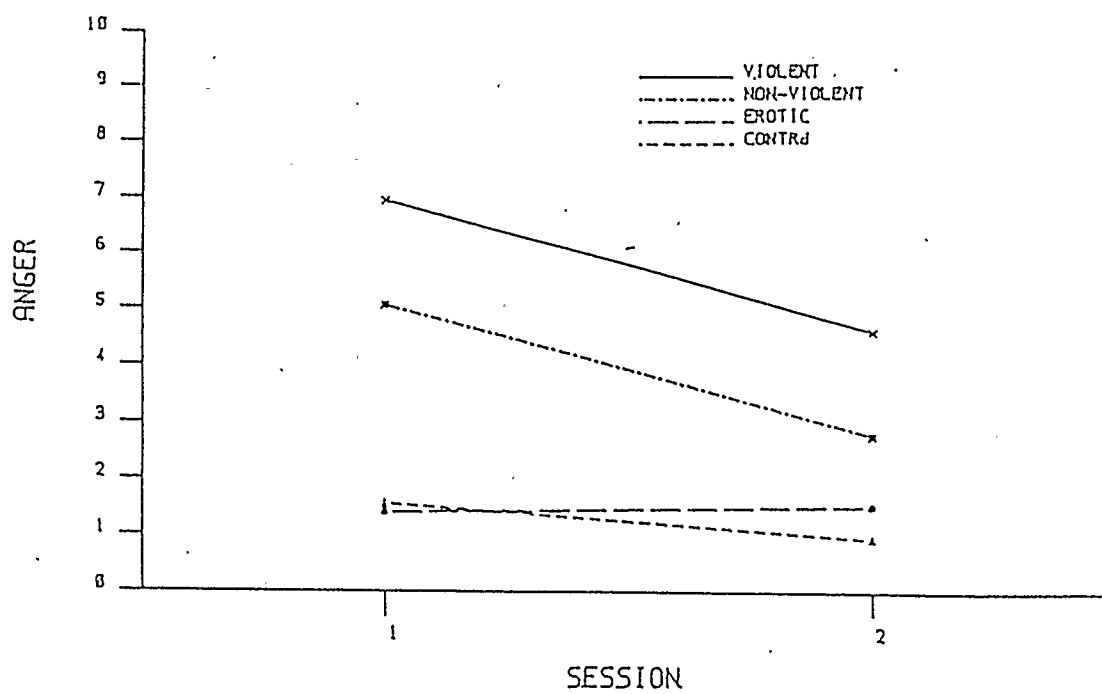
Source	<u>df</u>	<u>MS</u>	<u>F</u>
Tension	3	7.829	0.71
Depression	3	28.194	2.78*
Anger	3	36.424	4.53**
Vigor	3	59.662	1.10
Fatigue	3	3.406	0.20
Confusion	3	4.197	0.77

* $p < .05$.

** $p < .01$.

Figure 6

Anger: Session X Group Interaction



for the violent and non-violent pornography conditions but not for either the erotic or control conditions. In addition, in Session 1 the violent pornography condition differed significantly from both the erotic and control conditions (see Table 6 in Appendix F for M's). The non-violent pornography condition fell midway between the violent condition and the erotic and control conditions and did not differ significantly from them. There were no significant group differences in Session 2. The same interaction was marginally significant ($p < .05$) for the Depression subscale (see Table 15), and again, the pattern of the means resembled that obtained for Anger.

Relationships between Slide Ratings and Mood Subscales

Initial and final mood states were correlated with the slide evaluations to explore the relationship between affect and evaluation (see Table 16). These correlations were performed within each of the three sexually explicit exposure groups. For the erotic condition, only one statistically significant correlation emerged; pretest scores on the Vigor subscale for Session 2 were positively related to the slide ratings suggesting that a positive pretest mood state contributed to a positive evaluation of the slides. In the non-violent pornography condition, Session 1 pretest scores on the Confusion subscale were

Table 16

Correlations between Ratings and Pre- and Posttest Mood Scores

Subscale	Ratings Erotic	Ratings Non-violent	Ratings Violent
Session 1 - Pretest Mood			
Tension	.19	-.24	-.43*
Depression	.32	-.28	-.44*
Anger	.09	-.26	-.50*
Vigor	-.11	.04	.18
Fatigue	-.05	-.23	-.33
Confusion	-.01	-.44*	-.38*
Session 2 - Pretest Mood			
Tension	-.15	-.14	.13
Depression	-.16	-.18	-.36*
Anger	-.05	-.14	-.38*
Vigor	.38*	-.02	-.22
Fatigue	-.13	-.22	.12
Confusion	-.22	-.05	.01
Session 1 - Posttest Mood			
Tension	-.17	-.53*	-.19
Depression	-.05	-.35*	-.24
Anger	-.13	-.54*	-.31
Vigor	.30	.11	-.19
Fatigue	-.16	-.35*	.08
Confusion	-.20	-.59*	.00
Session 2 - Posttest Mood			
Tension	-.17	-.46*	-.32
Depression	-.10	-.26	-.42*
Anger	-.22	-.47*	-.38*
Vigor	.26	.10	-.21
Fatigue	-.20	-.46*	-.18
Confusion	-.21	-.40*	-.14

* $p < .05$.

negatively correlated with the slide ratings. Session 1 and 2 posttest scores on the Tension, Fatigue and Confusion subscales and Session 2 posttest scores on Anger were negatively correlated with the slide ratings. These results indicate that a negative mood state following exposure was associated with a negative evaluation of the slides in the non-violent condition. In the violent pornography condition, Session 1 and 2 pretest scores on the Depression and Anger subscales and Session 1 pretest scores on the Tension and Confusion subscales were negatively correlated with the slide ratings. Finally, Session 2 post-exposure scores on the Depression and Anger subscales were negatively correlated with the slide ratings. To be significant at the $p < .01$ level a correlation would have to be .46 or above. When this criterion was used to reduce the type I error rate, the correlation in the erotic condition disappeared, six correlations remained significant in the non-violent condition, and only one correlation was significant in the violent condition. The pattern of results was similar however. For the violent condition, then, pre-exposure negative mood was more consistent with subjects' evaluations of the slides than was post-exposure negative mood. This differs somewhat from the results for the other two conditions. In the erotic condition, only pre-exposure

positive mood was related to subjects' evaluations, and in the non-violent condition, post-exposure negative mood was more consistent with subjects' evaluations than was pre-exposure negative mood.

Next, ratings on the semantic differential were correlated with mood change scores (Posttest - Pretest) to establish the relationships between subjects' evaluation of the slides and the effect of the slides on mood (see Table 17). These correlations were performed within each sexually explicit condition and only for the subscales that changed significantly from pre- to post-exposure. Change on the negative subscales was indicated by a high positive change score because negative mood increased from pre- to post-exposure; mood change on the positive subscale, Vigor, was indicated by a high negative change score because positive mood decreased from pre- to post-exposure. In the erotic condition, Session 1 Vigor change scores were related to the slide ratings. Subjects who showed larger decreases on the Vigor subscale rated the slides relatively negatively compared to subjects showing smaller decreases in positive mood. Changes in Vigor and slide evaluations were not correlated for Session 2. For the non-violent pornography condition, increases on two negative mood subscales were related to the slide ratings in both sessions; Tension and Confusion. The greater the increase

Table 17Correlations between Slide Ratings and Mood Change Scores

Erotic Condition		
Subscale	Session 1	Session 2
Vigor	.52*	-.18
Non-violent Condition		
	Session 1	Session 2
Tension	-.41*	-.40*
Vigor	.08	.19
Confusion	-.40*	-.40*
Violent Condition		
	Session 1	Session 2
Tension	.11	-.46*
Depression	-.03	-.38*
Anger	-.18	-.36*
Vigor	-.45*	.03
Confusion	-.25	-.16

* $p < .05$

in Tension and Confusion the more negative were the slide evaluations. In the violent pornography condition, the relationships were less clearcut. The Session 1 results were most confusing with relatively small decreases in Vigor related to more negative evaluations. In Session 2, relatively large increases in Tension, Depression, and Anger were related to more negative slide evaluations. On the whole, these findings were consistent with the previous analysis. Judgements of the erotic slides were not related to negative affect in any way, judgements of the non-violent pornography were related to changes in tension and confusion and, judgements of the violent pornography were the results of changes in tension, depression and anger. In all cases, the larger the change in negative affect, the more negatively the slides were evaluated. It is not known what the Session 1 Vigor findings for the violent condition mean.

Background Questionnaires

Table 18 displays information regarding the women's previous sexual experience. Items 1 through 12 are the items of the Sexual Experiences Survey (Koss & Oros, 1982) whereas the final item refers to the coercive use of pornography (Russell, 1980). Items 11 and 12 deal with non-coercive sexual experience and indicate that the majority of subjects were sexually experienced. Only one

Table 18

Reported Sexual Experience (Coercive and Non-Coercive)

Item	%	F
1. Sex Play -arguments and pressure	47	(45)
2. Sex Play -authority	5	(5)
3. Sex Play -threatened or physical force	13	(12)
4. Attempted Sexual Intercourse -threatened or physical force	12	(11)
5. Attempted Sexual Intercourse -alcohol or drugs	14	(13)
6. Sex Acts -threatened or physical force	7	(7)
7. Sexual Intercourse -arguments and pressure	29	(28)
8. Sexual Intercourse -authority	2	(2)
9. Sexual Intercourse -alcohol or drugs	7	(7)
10. Sexual Intercourse -threatened or physical force	8	(8)
11. Willing Sex Play	99	(95)
12. Willing Sexual Intercourse	71	(68)
Upset by Coercive Use of Pornography	24	(23)

subject had never engaged in sex play and 68 of the 96 subjects had voluntarily engaged in sexual intercourse. On theoretical grounds it was believed that coercion, which involved physical force or threats of physical force, might be a more intrusive and devastating event for a woman than the milder forms of coercion involving continual arguments and pressure. For this reason, in the analysis of coercive sexual experiences, items were collapsed into two groups, those items which involved coercion without the use of physical force (items 1,2,5,7,8) and those which involved coercion with the use of threats or physical force (items 3,4,6,10). Fifty-one of the 96 subjects (53%) reported non-violent coercive sexual experiences due to the man's continual arguments and pressure (items 1 and 7; 73 reports), the administration of drugs or alcohol to induce compliance (items 5 and 9; 20 reports), or the abuse of authority (items 2 and 8; 7 reports). Eighteen subjects (19%) reported violent coercive sexual experiences. In addition, 23 women (24%) had experienced the coercive use of pornography.

Frequency of non-violent coercive sexual experience is displayed in Table 19. Of the women who reported such incidents, 47 (85%) had experienced more than one occurrence. Frequency of violent coercive sexual experience is displayed in Table 20, and again more than

Table 19Frequency of Non-violent Coercive Sexual Experience

No. of times Experience Occurred	No. of women Reporting (Frequency)
1	3
2	8
3	4
4	6
5	7
6	2
7	2
8	3
9	2
10	4
11	3
12	1
22	2
Total	51

Table 20Frequency of Violent Coercive Sexual Experiences

No. of times Experience Occurred	No. of women Reporting (Frequency)
1	7
2	6
3	5
4	1
8	1
9	1
11	1
Total	18

half of the women (i.e., 11 or 61%) who reported such incidents had experienced more than one occurrence. It should be noted that at least in some cases these frequency scores underestimate the actual number of coercive sexual experiences since for each question the highest possible score representing the number of occurrences was five.

Previous exposure to pornography is displayed in Table 21. The types of materials used as stimuli in this study were in fact the types of sexually explicit materials the women were likely to have seen in the past (i.e., Playboy, Penthouse, and Hustler). Ninety-nine percent of the women reported exposure to Playboy, 71% to Penthouse, and 43% to Hustler, with 54% reporting exposure to other men's magazines and 85% to films or videos. For the purpose of further statistical analysis, it was necessary to generate a single score to represent amount of previous exposure. Median splits were performed on each of the items displayed in Table 21. Each subject was given a score of "0", low exposure, or "1", high exposure, for each item and then these values were summed to obtain an exposure score between 0 and 5.

The intercorrelations among the background measures are presented in Table 22. All four were positively correlated to a statistically significant degree.

Table 21Previous Exposure to Pornography

Type	Percentage of Women Reporting*					
	Never	1-2X	3-5X	5-10X	10-20X	More than 20X
Playboy	1(1)	32(31)	24(23)	17(16)	14(13)	13(12)
Penthouse	29(28)	26(25)	20(19)	12(11)	8(8)	5(5)
Hustler	57(55)	26(25)	9(9)	4(4)	1(1)	2(2)
Other "Men's" Magazines	46(44)	34(33)	15(14)	2(2)	1(1)	2(2)
Videos or films	15(14)	52(50)	21(20)	8(8)	4(4)	0(0)

* Note. Frequencies are in parentheses.

Table 22Intercorrelations Among Background Measures

Measure	1	2	3	4
1. Coercive Use of Pornography	-	.22*	.44*	.40*
2. Frequency of Violent Coercion		-	.66*	.39*
3. Frequency of Non-violent Coercion			-	.34*
4. Exposure to Pornography				-

* $p < .05$.

Attitude and Belief Measures

The posttest questionnaire scores of the violent condition were compared with the no-pretest condition questionnaire scores to ensure that there was no effect of pretest questionnaires. T^2 revealed no significant differences on questionnaire scores for the two conditions, $T^2(1,16)=45.74$, $p=n.s.$ Therefore the no pretest condition was excluded from all other analyses.

The Rosenberg Self-Esteem scale was included to check on the validity of the Erwin Identity Scale (EIS) and was significantly correlated with the subscales of the self-esteem and body-image measures (see Table 23). Thus, it was possible to exclude the Rosenberg scale from further analyses and instead to focus on the EIS and body-esteem measure which were conceptually more similar to aspects of self-identity thought likely to be affected by the experimental manipulations. The subscales of the EIS were significantly inter-correlated as were the subscales of the body esteem measure. Moreover, correlations between the subscales of the two measures suggested a strong relationship between self-esteem and body-image with the exception of the physical condition subscale.

Correlations among the attitude measures are displayed in Table 24. Non-traditional views about the role of women in society were related to low adversarial sexual beliefs,

Table 23

<u>Intercorrelations</u>	<u>between Self-Identity and Body-Image</u>						
<u>Measures</u>							
Measure	1	2	3	4	5	6	7
1. Confidence (EIS)	-						
2. Sexual Identity (EIS)	.65*	-					
3. Body/Appearance (EIS)	.61*	.53*	-				
4. Sexual Attractiveness (Body Esteem)	.35*	.42*	.32*	-			
5. Weight Concern (Body Esteem)	.38*	.21*	.21*	.38*	-		
6. Physical Condition (Body Esteem)	.16	.10	.12	.30*	.36*	-	
7. Rosenberg's Self-Esteem	.65*	.60*	.43*	.46*	.42*	.41*	-

* $p < .05$.

Table 24

Intercorrelations Among Attitude Measures

Measures	1	2	3	4	5	6	7	8	9
1. Attitudes Toward Feminism	-								
2. Hostility Toward Men	.05	-							
3. Adversarial Sexual Beliefs	-.39*	.42*	-						
4. Acceptance of Interpersonal Violence	-.45*	.16	.40*	-					
5. Rape Myth Acceptance	-.56*	.25*	.39*	.52*	-				
6. Marriage/ Parenthood (ATM)	-.27*	-.55*	-.28*	.09	.13	-			
7. Sexuality (ATM)	.07	-.42*	-.39*	-.05	-.17*	.39*	-		
8. Work (ATM)	-.17*	.05	.07	.12	.16	.29*	-.08	-	
9. Physical/ Personality (ATM)	-.25*	-.12	.03	.05	.12	.27*	-.03	.39*	-

* $p < .05$.

low acceptance of violence in interpersonal relationships, fewer rape myth beliefs, more negative views about men's roles in marriage and parenthood and work situations, and more negative views of men's physical and personality characteristics. Higher adversarial sexual beliefs and rape myth acceptance were related to higher hostility toward men. In addition, high hostility toward men and high adversarial sexual beliefs were related to more negative views of men's sexuality and their marriage and parenthood roles. High rape myth acceptance was also related to negative views toward men in marriage and parenthood roles. Acceptance of interpersonal violence, adversarial sexual beliefs, and rape myth acceptance were all positively intercorrelated. Intercorrelations among the Attitudes Toward Men subscales indicated that the sexuality subscale was not related to the work or physical and personality subscales, however all other subscales were positively related. To summarize, with the exception of the Attitudes Toward Men Scale, the attitude variables were highly interrelated. Hostility Toward Men stood out from the clustering as it was not correlated with either Attitudes toward Feminism or Acceptance of Interpersonal Violence, however all other measures were related.

The intercorrelations between the attitude and self-esteem measures are displayed in Table 25. A pattern

Table 25

Intercorrelations between Attitude, Self-Esteem, and
Body-Image Measures

	Confidence (EIS)	Sexual Identity (EIS)	Body/Appearance (EIS)	Sexual Attractiveness (Body Esteem)	Weight Concern (Body Esteem)	Physical Condition (Body Esteem)
1. Attitudes Toward Feminism	.12	.17*	.18*	.08	-.07	.08
2. Hostility Toward Men	-.37*	-.58*	-.24*	-.15	-.09	-.03
3. Adversarial Sexual Beliefs	-.29*	-.46*	-.26*	-.24*	-.07	.04
4. Acceptance of Interpersonal Violence	-.17	-.15	-.10	-.13	-.05	-.02
5. Rape Myth Acceptance	-.33*	-.31*	-.25*	-.18*	-.00	.06
6. Marriage/ Parenthood (ATM)	.16	.36*	.03	.16	.12	.04
7. Sexuality (ATM)	.19*	.38*	.21*	.22*	.12	-.05
8. Work (ATM)	.04	-.00	-.13	.02	.05	-.04
9. Physical/ Personality (ATM)	-.06	.14	-.14	-.08	-.02	-.01

* $p < .05$.

emerged from these correlations with Attitudes Toward Feminism and Attitudes Toward Men being positively related to various self-esteem and body-image measures while other attitude and belief measures were all negatively correlated with the self-esteem and body-image measures. Attitudes toward Feminism was positively correlated with the identity and body appearance subscales of the EIS. Attitudes toward men on the marriage and parenthood subscale was positively correlated with the sexual identity subscale of the EIS and views about men's sexuality was positively correlated with all three subscales of the EIS and the sexual attractiveness subscale of the Body Esteem Scale.

Hostility toward Men, on the other hand, was negatively correlated with all three subscales of the EIS.

Adversarial Sexual Beliefs and Rape Myth Acceptance were negatively correlated with the three subscales of the EIS and the sexual attractiveness subscale on the Body Esteem scale. Acceptance of Interpersonal Violence, and the work and physical/personality subscales of the Attitudes Toward Men scale were unrelated to self-esteem.

Relationships between Background and Attitude Measures.

The attitude measures were also intercorrelated with the background measures (see Table 26). Although some were statistically significant, most of the correlations which

Table 26

Intercorrelations between Attitude and Belief and Background Measures

	Exposure to Pornography	Coercive Use of Pornography	Frequency Violent Coercion	Frequency Non-violent Coercion
1. Confidence	.11	-.05	.14	.08
2. Sexual Identity	-.02	-.22*	-.04	-.09
3. Body/ Appearance	.09	.08	.10	.16
4. Sexual Attractiveness	.12	-.11	.15	.15
5. Weight Concern	.18*	-.00	.05	.08
6. Physical Condition	-.08	-.20*	-.16	-.15
7. Attitude Toward Feminism	.28*	.03	.11	.18*
8. Hostility Toward Men	.13	.30*	.01	.16
9. Adversarial Sexual Beliefs	-.03	.02	.08	.05
10. Acceptance of Interpersonal Violence	-.18*	-.03	-.08	-.14
11. Rape Myth Acceptance	-.22*	.08	-.15	-.13
12. Marriage	-.24*	-.26*	-.22*	-.26*
13. Sexuality	.11	.02	-.02	.10
14. Work	-.08	-.04	-.14	-.13
15. Physical	-.10	-.15	-.20*	-.32*

* $p < .05$.

emerged were quite small. On the whole, there were few significant relationships with self-esteem. The coercive use of pornography was negatively correlated with sexual identity and physical condition, and exposure to pornography was positively correlated with weight concern. Correlations with the other attitude measures indicated that higher levels of previous exposure to pornography were related to less traditional views about the role of women in society, lower acceptance of interpersonal violence and rape myths, and more negative views about men in marriage/parenthood roles. The coercive use of pornography was related to higher hostility toward men, and more negative views about men in marriage and parenthood roles. Frequency of violent and non-violent coercion were also related to more negative views of men's marriage and parenthood contributions as well as their physical and personality characteristics. In addition, higher frequency of non-violent coercion was related to non-traditional views about the role of women in society.

Effects of Exposure on Self-Esteem, Body-Image, and Attitudes.

The effects of exposure to the experimental stimuli on self-esteem, body image, Adversarial Sexual Beliefs, Acceptance of Interpersonal Violence, and Rape Myth

Acceptance were assessed by a mixed MANOVA with one between-subjects variable (Group: violent/ non-violent/ erotic/ control) and one within-subjects variable (Time: pre/ post) (see Table 27). The Time main effect was significant, $F(2,89)=4.57$, $p<.05$, but there was no statistically significant group main effect or interaction. Examination of the univariate F tests revealed that Rape Myth Acceptance decreased ($M_{pre}=36.72, M_{post}=35.06$) and sexual identity increased ($M_{pre}=64.03, M_{post}=66.45$) significantly from pre- to post-exposure regardless of the exposure condition $F(1,90)=9.03$, $p<.01$ and $F(1,90)=14.03$, $p<.01$, respectively.

Relationships between Background and Attitude Measures and Slide Ratings

Multiple regression analyses were performed on the slide ratings within each condition with the background and attitude variables as predictors. For these analyses the total scores on Attitudes Toward Men was used instead of each of the subscale scores. The scale was developed so that subscale scores could be added to yield an overall attitude toward men (Iazzo, 1984). Since no session differences were found in the previous analysis of the slide ratings, they were averaged across sessions for this analysis. The regressions were nonsignificant for the

Table 27MANOVA Table: Effects on Questionnaire Measures

Source	<u>TSQ</u>	<u>U</u>	<u>GCR</u>	<u>df</u>	<u>F</u>
Group		.771	.164	27	.82
Time	26.810			9	2.71*
Time X Group		.722	.183	27	1.04

Univariate F's for Significant Time Main Effect

Source	<u>df</u>	<u>MS</u>	<u>F</u>
Confidence	1	32.454	1.28
Sexual Identity	1	270.049	14.03**
Body/Appearance	1	66.880	3.55
Sexual Attractiveness	1	31.691	3.18
Weight Concern	1	9.522	1.40
Physical Condition	1	5.114	0.51
Adversarial Sexual Beliefs	1	38.387	2.42
Acceptance of Interpersonal Violence	1	18.306	2.07
Rape Myth Acceptance	1	131.073	8.93**

* $p < .05$.

** $p < .01$.

violent pornography, non-violent pornography and control conditions (see Table 28). There was however a significant overall relationship (as indicated by a statistically significant R^2) between the predictors and slide ratings in the erotic condition. Examination of the zero-order correlations and standardized regression coefficients (β) revealed statistically significant positive relationships between the ratings and Adversarial Sexual Beliefs, frequency of non-violent coercive sexual experience, and confidence on the EIS while controlling for the other predictors (see Table 29). A significant negative relationship emerged between the ratings and the frequency of violent coercive sexual experience and Acceptance of Interpersonal Violence while controlling for the other predictors.

Relationships between Background and Attitude Measures and Mood Subscales

Within each of the three sexually explicit conditions, multiple regression analyses were performed on the mood change scores (Posttest - Pretest) for those subscales which showed a statistically significant change following exposure, i.e., Tension, Depression, Anger, Vigor, and Confusion (see Table 30). Except for Vigor, Session 1 and 2 change scores on the subscales were analysed separately

Table 28Regression of Background and Attitude Measures on Slide Ratings

Condition	<u>R</u> ²	<u>df</u>	<u>F</u>
Erotic	.96	16	9.30*
Non-Violent	.59	16	0.63
Violent	.62	16	0.73
Control	.81	16	1.82

* $p < .01$.

Table 29

Beta Weights for Regression on Slide Ratings: Erotic Condition*

Measure	Correlation with Ratings (DV)	β	t
Confidence	0.26	1.04	4.43**
Sexual Identity	-0.04	-0.53	-2.20
Body/ Appearance	0.16	-0.50	-1.95
Sexual Attractiveness	0.20	-0.29	-2.02
Weight Concern	0.17	-0.14	-0.76
Physical Condition	0.13	0.12	0.98
Exposure to Pornography	0.23	0.05	0.32
Frequency Non-violent Coercion	0.55**	2.64	7.98**
Frequency Violent Coercion	0.34*	-2.03	-4.53**
Coercive Use of Pornography	0.04	-0.31	-1.47
Attitudes Toward Men	-0.01	0.26	2.05
Adversarial Sexual Beliefs	-0.08	0.40	2.55*
Rape Myth Acceptance	0.03	0.16	1.22
Acceptance of Interpersonal Violence	-0.12	-0.48	-3.57**
Hostility Toward Men	0.10	-0.14	-0.88
Attitudes Toward Feminism	0.11	-0.02	-0.12

* $p < .05$.

** $p < .01$.

Table 30Regressions on Mood Subscales

Subscale	Condition	<u>R</u> ²	<u>df</u>	<u>F</u>
Session 1 and 2 Combined				
Vigor	Erotic	.769	16	1.248
	Non-violent	.616	16	0.703
	Violent	.578	16	0.599
Session 1				
Tension	Non-violent	.757	16	1.360
	Violent	.794	16	1.684
Depression	Violent	.859	16	2.670
Anger	Violent	.827	16	2.089
Confusion	Non-violent	.864	16	2.772
	Violent	.594	16	0.640
Session 2				
Tension	Non-violent	.763	16	1.408
	Violent	.758	16	1.375
Depression	Violent	.928	16	5.657*
Anger	Violent	.899	16	3.911*
Confusion	Non-violent	.858	16	2.652
	Violent	.813	16	1.902

* $p < .05$.

since they showed significant session effects. The regressions on the combined Vigor change scores were nonsignificant. Moreover, none of the regressions on Session 1 change scores achieved statistical significance. For Session 2, the R 's associated with the Depression, $F(16,7)=5.67$, $p<.05$, and Anger, $F(16,7)=3.91$, $p<.05$, subscales in the violent condition were significantly greater than zero. Three variables were consistently related to mood changes on the two subscales with all other variables held constant (see Tables 31 and 32). Hostility Toward Men and weight concern were positively related to increases in Depression and Anger, whereas physical condition was negatively related. Two other statistically significant predictors emerged for the Depression subscale; Attitudes Toward Men was positively related to increases in depression and emotional upset associated with the coercive use of pornography was negatively correlated.

Table 31Results of Regression for Violent Condition: Depression

Measure	Correlation with Mood Score (DV)	β	t
Confidence	-.13	0.24	0.52
Sexual Identity	-.18	-0.56	-1.06
Body/Appearance	-.15	-0.03	-0.17
Sexual Attractiveness	-.08	0.40	1.23
Weight Concern	.01	0.46	2.42*
Physical Condition	-.32	-0.84	-4.72*
Exposure to Pornography	.09	0.18	0.97
Frequency Violent Coercion	.23	-0.01	-0.03
Frequency Non-violent Coercion	.28	-0.13	-0.42
Coercive Use of Pornography	-.05	-0.61	-3.10*
Attitudes Toward Men	.21	0.69	3.02*
Interpersonal Violence	.15	-0.63	-2.28
Adversarial Sexual Beliefs	-.00	-0.09	-0.42
Hostility Toward Men	.31	1.06	3.91*
Rape Myth Acceptance	.22	0.52	1.86
Attitudes Toward Feminism	-.06	-0.31	-1.02

* p<.05.

Table 32Regression Results for Mood Subscales: Anger

Measure	Correlation with Mood Score(DV)	β	t
Confidence	-.22	0.56	1.01
Sexual Identity	-.33	-1.12	-1.52
Body/Appearance	-.09	-0.13	-0.66
Sexual Attractiveness	-.19	0.62	1.64
Weight Concern	-.01	0.57	2.57*
Physical Condition	-.39*	-0.85	-4.02*
Exposure to Pornography	.06	-.00	-0.01
Frequency Violent Coercion	.20	0.14	0.57
Frequency Non-violent Coercion	.26	-0.21	-0.57
Coercive Use of Pornography	.06	-0.26	-1.09
Attitudes Toward Men	-.07	0.57	2.09
Interpersonal Violence	.16	-.52	-1.57
Adversarial Sexual Beliefs	-.03	-0.06	-0.23
Hostility Toward Men	.51*	1.07	3.36*
Rape Myth Acceptance	.10	0.40	1.20
Attitudes Toward Feminism	.13	0.06	0.16

* p<.05.

Discussion

Effects of the Experimental Manipulation on Evaluations, Mood, Attitudes, Self-Esteem, and Body-Image

In this experiment the sexual explicitness of the stimuli was held constant while the presence of sexism and violence was manipulated. This manipulation affected both the women's evaluations of the images as well as their subsequent mood. The evaluations reliably differentiated between erotica and pornography, and between non-violent and violent pornography. This occurred even though the subjects were exposed to only one stimulus type and were not informed about the types of stimuli used in the other experimental conditions. On the whole, erotica was perceived positively, while pornography was evaluated negatively. Violent pornography received the most negative ratings. This finding clearly shows that women evaluate some types of sexually explicit materials positively and that their negative evaluations are reserved for materials which are sexist and/or violent in nature.

The use of labels, such as "pornographic" to describe the materials was carefully avoided in this study so that subjects' evaluations would not be biased. Using the scales of the Semantic Differential which load on the good-bad dimension, subjects' ratings distinguished between erotica and pornography. An important implication of these

results is that reliable and valid operational definitions of "pornography" and "erotica" are possible within an experimental context. Naturally, such useful definitions could also be employed in "real life" settings, for example, by the courts in making decisions about legal vs. illegal sexually explicit magazines.

The women's evaluations of the images remained constant across sessions suggesting that their perceptions of sexually explicit materials are consistent at least over a two or three-day period. This does not mean that evaluations would not change over longer periods of time, but does indicate that the women's evaluations were stable in the short term.

Given the results for the slide evaluations, one would predict a negative effect of the two pornography conditions on mood and a positive effect or no change in mood for the erotic and control conditions. In fact, the pattern of results emerging from the analysis of the seven mood subscales was more or less consistent with this prediction. Scores on four of the five negative mood subscales (Tension, Depression, Anger, and Confusion) were affected by exposure condition. On each of these, subjects in the violent pornography condition showed a significant increase following exposure. Subjects in the non-violent pornography condition increased on two of the four. In

addition, on three of the four subscales subjects in the violent condition reported significantly greater post-exposure negative affect compared to the control condition. On two of these, the non-violent condition also differed significantly from the control condition. In sum, exposure to pornography increased negative affect, but violent pornography had greater impact than non-violent pornography. On the other hand, there were no significant changes in negative mood from pre- to post-exposure for either the erotic or control conditions, their group means did not differ significantly, and their means were consistently lower than those of the pornography conditions on the post-exposure measures. Thus, exposure to sexually explicit stimuli that included neither sexism nor violence did not increase negative affect. A decrease in positive affect was found for all three sexually explicit conditions although there were no significant post-exposure group differences and the post-exposure mean for the erotic condition was higher than the means of the other three conditions. These apparently inconsistent results can be attributed to the varying sensitivity of the tests of effects in a mixed analysis of variance. The test of the repeated measure (pre- vs. post-exposure) is more sensitive than the test of the difference between conditions. Thus, replicating the experiment with a larger

sample size might yield cleaner results. Overall, the analysis of the women's mood scores indicated that exposure to pornography both increased negative affect and decreased positive affect. Erotica, on the other hand, reduced positive affect but did not increase negative affect.

There were decreases in Tension, Depression and Fatigue across sessions for all conditions, including the control group. This suggests that across sessions, subjects felt more comfortable with the experimental situation, thereby reducing negative affect overall. Alternatively, because some of the sexually explicit stimuli were repeated in the second session subjects' affective responses may have been attenuated. In the case of Anger, however, there was a significant decrease across sessions only in the pornography conditions. This is suggestive of a desensitization effect which was strongest in the violent pornography condition and is consistent with studies (e.g., Thomas et al., 1977) that have found decreased emotional responsiveness to "real-life" portrayals of violence following exposure to television violence.

The decrease in Anger occurred despite the absence of changes across sessions in the negative evaluations applied to the pornographic images. Such affective desensitization caused by repeated exposure to violent pornography could

numb women into inactivity rather than opposition to the messages which they know are untrue. Assuming that emotional arousal produces some of the impetus for social action, lower levels of anger might reduce the probability of social action. As Vivar (1982) has stated: "Violent pornography extols male dominance and female submission in a world where many women are trying to overcome these erroneous beliefs and practices. Brutal depictions, if allowed to flourish, may finally lead women to accept the idea that male-female relationships are premised on terror, violence, and cruelty" (p. 63).

In fact, the emotional effects of pornography may be more harmful than the results of this experiment would indicate. The experimenter attempted to create a supportive but non-pressured atmosphere by treating the women with respect, providing a private setting in which to view the images, and remaining unobtrusive during the exposure sessions. Thus, it is likely that the women felt free to express their views without fear of judgement. In a natural environment, women are likely to be exposed to pornography by people with relatively positive attitudes towards it, for example, male subscribers. As a result, there would be a certain amount of pressure on the woman to conform or at least to hide any negative feelings. This could result in internalization of the affect created by

the materials. The effects of internalization of anger in women have been well documented elsewhere (Miller, 1976) however, to summarize, for women suppression of anger is a common response which causes emotional difficulties in many areas of their lives. In relationships with men, women may suppress anger so as not to risk destroying the relationship. As the present results indicate, pornography creates anger in women. When put in the context of interpersonal relationships that encourage suppression of anger, serious emotional difficulties could arise.

The relationship between the slide evaluations and mood was examined to test the assertion that women's evaluations of sexually explicit materials are directly related to the amount of negative affect generated by the images (Byrne, Fisher, Lamberth, & Mitchell, 1974). In the Byrne et al. (1974) study identifying the images as "pornographic" constituted a negative evaluation. They found no relationship between pretest mood levels and subjects' evaluations. On the other hand, posttest negative affect was significantly related to the ratings. In the current study, the results for the non-violent pornography condition matched the findings of Byrne et al. (1974) most closely. Higher posttest negative moods were related to more negative ratings. Only one pretest negative mood score, Confusion, was related to the slide

ratings. In the violent pornography condition, pretest negative moods were more consistently correlated with the slide ratings than were the posttest scores and in the erotic condition only pretest positive mood was related to the slide ratings. Clearly, negative affect is related to women's evaluations of pornography, but it is not involved in their evaluations of erotica. In addition, initial mood state was associated with women's evaluations of violent pornography. Thus, the relationship between evaluation and affect is not straightforward and depends on the type of image that is being evaluated.

It was hypothesized that exposure to pornography would change certain attitudes and self-esteem. These effects were not found. Instead, rape myth acceptance decreased and self-identity increased significantly from pre- to post-exposure for all groups, suggesting a retesting artifact. This finding is important however because males' rape myth acceptance has been found to be higher in groups exposed to films including violent sexual content compared to those males who were exposed to films containing no sexual violence (Malamuth & Check, 1981a). These researchers did not find a significant difference in rape myth acceptance between females who were exposed to the same films, however they reported a non-significantly lower mean in the sexually violent exposure group. Stock (1983)

reported non-significant decreases in rape myth acceptance and non-significant increases in self-esteem for all groups (including a neutral control group) in her study which used a repeated-measures design. The results from this study indicate that there is a significant decrease in rape supportive attitudes and a significant increase of self-identity for females exposed to pornography, but that these effects are due to retesting and not to the stimuli.

Relationship of Evaluations and Mood with Attitudes and Experiences

Even though exposure to sexually explicit images did not affect women's attitudes, in some cases their pre-exposure attitudes and experiences were related to their evaluations of the images and to the effect of the images on their mood. Attitudes and experiences were related to the slide ratings in the erotic condition only. The most important variables contributing to this relationship were frequency of non-violent and violent coercive sexual experience, Adversarial Sexual Beliefs, Acceptance of Interpersonal Violence, and Confidence. When all of the other variables were held constant, higher confidence was associated with more positive evaluations of the erotic images. Women who are confident may be comfortable with their own sexuality and therefore evaluate sexually explicit depictions in a positive manner. When

the effects of all the other variables were controlled, Acceptance of Interpersonal Violence and frequency of violent coercive sexual experience were negatively related to the ratings. Women with a history of sexual abuse and women who believe that violence is an integral part of intimate relationships may have negative attitudes toward sex and therefore view erotica in a negative manner. Adversarial Sexual Beliefs and the frequency of non-violent coercive sexual experiences, on the other hand, were positively related to the ratings. Women who believe that male-female relationships are characterized by deceit and conflict and women who have experienced frequent non-violent sexual coercion may not judge such relationships in a positive light. Their experiences may not have been so negative however to produce an anti-sex attitude. Therefore, they may feel very positively about depictions which are non-coercive and positive.

The absence of a substantial relationship between attitudes and the slide ratings in the two pornography conditions can be attributed to the nature of the stimuli and the subsequent range of responses. In the violent condition, subjects' minimum and maximum scores were negative with a range of 15.76. In the non-violent condition scores ranged from a negative minimum to a slightly positive maximum value with a range of 16.98.

This contrasts sharply with the erotic condition in which the range of responses was greater (range=26.52) with a negative minimum value and a very high positive maximum value. In fact, the minimum value in the erotic condition differed from the minimum value in the non-violent pornography condition by only 3.5 points, while the maximum value in the erotic condition differed from the maximum value in the non-violent pornography by 13.04 points. Thus, in the two pornography conditions subjects were more consistent in their ratings than subjects in the erotic condition. This is not a restricted range problem in a statistical sense but rather in a conceptual sense. Stimuli in the erotic condition were sexually explicit but non-violent and non-sexist. Women who rated them negatively were therefore objecting to their sexual explicitness; women who rated them positively had no such objections and were indicating some appreciation for the images. Thus, subjects in this group could hypothetically be divided into two groups on the basis of their ratings. As a consequence, the relationships between the attitude and experience variables and the ratings may reflect a differentiation between anti-sex and pro-sex subjects. This differs from the two pornography conditions in which negative scores may be a reaction to the sexism, the violence, or the sexual explicitness of images, or some

combination of these characteristics. As a consequence, the attitude and experience variables were not systematically related to the ratings.

Attitudes were related to changes in negative mood in the violent condition for the second session only. The variables that contributed consistently were Hostility Toward Men and the Weight Concern and Physical Condition subscales of the body-image measure. While controlling for the effects of all other variables, women with a positive body image and women who considered themselves to be physically frail showed relatively large increases in depression and anger. The images in the violent condition portrayed women as vulnerable to physical abuse. Not surprisingly then, women who felt positively about their bodies reacted more negatively to images of the female body subjected to violence. On the other hand, women who felt physically frail may have reacted more negatively as a function of identifying with the powerless and vulnerable models. High hostility toward men was also associated with larger increases in negative mood. This can be attributed to the content of the images which probably served to reinforce the women's extremely negative attitudes toward men.

Two additional variables, Attitudes toward Men and emotional upset related to the coercive use of pornography,

were correlated with changes in Depression alone. Women who had positive views about men did not become more angry than other women, but they did become more depressed. Viewing violent pornography forces women to confront issues that may be inconsistent with their attitudes. For women who view men in a positive light, this confrontation may be more difficult, resulting in greater increases in depression. While controlling for the other variables, women who had been upset by the coercive use of pornography were as angry as the other women but became less depressed. Having experienced coercion in their own lives, they may have been less shocked by the coercive nature of the violent pornographic images.

Caution must be exercised in inferring that previous experiences and attitudes will predict mood changes following exposure to sexually explicit materials. A significant relationship between mood changes and experiences and attitudes was found only for the violent condition and only for Session 2, even though the non-violent pornography condition also showed increases in negative mood.

Relationships Among Experience Variables

As one might expect from the prevalence of pornographic materials, most of the women in the sample had been exposed to some form of pornography. Of those

exposed, all had previously seen Playboy, almost three-quarters had been exposed to Penthouse and almost half had seen Hustler. In addition, over half of the women had seen other, less commonly available men's magazines and 85% had been exposed to pornographic films and videos. Obviously then, research dealing with the direct effects of pornography on women is relevant.

The sexual experience data revealed that the majority of the women in the study were sexually experienced. Consistent with the assertion that coercion in sexual relationships is commonplace (Clark & Lewis, 1977), over half of the women had been coerced by a male in a sexual context. These experiences ranged from continual arguments and pressure to participate in sexual acts to severe sexual harassment, the use of drugs and alcohol to induce compliance, attempted rape and violent sexual assaults of various descriptions. Most of the women who had experienced non-violent coercion reported more than one such incident. In addition, over half of the women who had been violently assaulted had been assaulted more than once. This finding is consistent with another study in which women who reported that they had experienced violent sexual acts had each experienced an average of 5.1 incidents (Kanin & Parcell (1977). This phenomenon is referred to by Russell (1984) and others as revictimization. Russell

(1984) found that 50% of the rape victims in her sample had been raped more than once. The high incidence of sexual coercion reported in this random sample of university undergraduate females deserves comment. Coercion in the form of "arguments and pressure" may be related to the culturally defined stereotype of men's and women's roles with respect to sexual activity (Lips, 1981). These sexual scripts require that the woman protect her virtue until marriage whereas the man is free to engage in sexual activity before marriage and is indeed encouraged "to sow his wild oats". This contradiction in purposes requires that the man must somehow "convince" the woman that she ought to engage in sexual activity and thus could account for the high incidence of the "continual arguments and pressure". The same process taken to an extreme could account for the repetition of violent coercive sexual experiences.

In addition to sexual coercion, the women were asked specifically about the coercive use of pornography. One out of every four women in the current sample had experienced emotional upset when their partners wanted them to model some act from a pornographic depiction. This is somewhat higher than the 10% figure obtained by Russell (1980) in her interviews with 930 women. Russell's (1980) study was based on a random sample of women in the San

Francisco Bay area, and so differences could be due to the University undergraduate sample used in the present study. Nonetheless, there is no reason to expect that university women would be at higher risk for this type of coercion. The availability of violent pornography however appears to be increasing (Malamuth & Spinner, 1980). Therefore, there may today be an increased likelihood of men asking their partners to perform offensive acts compared to when Russell conducted her study. The important point however is that pornography is used in harmful ways.

Very interesting findings emerged from the correlations among the background variables. The higher a woman's previous exposure to pornography, the more likely she was to have been upset by the coercive use of pornography, to have been coerced non-violently into sexual activity, and to have been the victim of at least one violent sexual attack. This relationship suggests that pornography may be tied into women's coercive sexual histories in an important way. The majority of consumers of pornography are male, and therefore it is likely that women who are exposed to pornography have been exposed to it by males. Some exposure may occur accidentally, such as viewing magazines in cornerstores when buying other products, or finding the magazines of a male roommate. Nonetheless, if as Mosher (1971) reports as many as 16% of

men attempt to obtain intercourse by showing a woman pornography or taking her to a "sexy" movie, then it is likely that many women have been exposed deliberately by male partners. And, this exposure either may have been directly linked to sex-related coercion or may have served as a precursor to sex-related coercion. The research on male aggression showing increased aggression toward a female confederate after viewing sexually violent stimuli (Donnerstein & Berkowitz, 1981) further supports this connection.

Relationship of Experience to Attitudes, Self-Esteem, and Body-Image

One might expect that women who have experienced coercion in their sexual relationships would have a lower self-image, particularly with regard to their sexuality, than other women who have not had these experiences. In addition, women who have been involved in sexual relationships with a coercive male partner might view intimate relationships with men less positively than women who have not had these experiences. These hypotheses received some support; women who had been upset by the coercive use of pornography had lower sexual identity, more negative views about their physical condition, scored higher on Hostility Toward Men, and had a more negative attitude about men in marriage/ parenthood roles than women

who had not had such experiences. Women with high frequency of coercive sexual experiences also had a negative attitude toward men, in terms of both their marriage/parenthood roles and their physical/personality characteristics.

Previous exposure to pornography was related to Attitudes Toward Feminism, Acceptance of Interpersonal Violence, Rape Myth Acceptance, and Attitudes Toward Men with respect to their marriage/parenthood roles. There are two possible explanations for this pattern of correlations. Women with a liberal, feminist orientation may be more willing to expose themselves, or to be exposed, to sexually explicit materials. Alternatively, extensive exposure to pornography may sensitize women to issues surrounding women's roles in society and violence against women. As a consequence, they may also develop a more negative attitude toward men as partners in intimate relationships. Another finding that is consistent with the latter explanation was the positive relationship between the frequency of non-violent coercive sexual experiences and Attitudes Toward Feminism. This again may be a situation where experience sensitizes women to issues of inequality.

Relationships Among the Attitude Measures

Intercorrelations among the attitude measures revealed few surprising findings. Adversarial Sexual Beliefs,

Acceptance of Interpersonal Violence and Rape Myth

Acceptance were positively correlated, replicating Stock (1983), Burt (1980), and Malamuth and Check (1981a). These three measures were also negatively correlated with Attitudes Toward Feminism. In addition, relatively high scores on Adversarial Sexual Beliefs and Rape Myth Acceptance were accompanied by relatively high scores on the Hostility Toward Men scale. This general clustering of variables seems to indicate that women who believe that relationships between men and women are characterized by deceit and conflict, who accept that these relationships are often violent, and who hold women responsible for rape tend to have more negative attitudes toward both men and women. Such women might also be expected to have low opinions of themselves, and this is in fact what emerged. Women who held these views had lower self-image in all respects and lower body-image in terms of their sexuality. On the other hand, women with non-traditional views and positive attitudes toward men had relatively high self-esteem and a positive perspective on their sexual attractiveness. Although the actual correlations tended to be small, they were statistically significant and point to interesting links between attitudes about the self and attitudes about women and men and their respective societal roles.

Strengths and Weaknesses

The present experiment is one of the first in which sexually explicit materials were classified according to characteristics other than sexual content. Also, it appears to be the first to employ reliable operational definitions to classify these materials and to show within an experimental context that these are reliably differentiated categories. This, of course, does not mean that all sexually explicit materials could be easily classified. There may be some ambiguous cases but, on the whole, these definitions worked well for the legally-available pornography used in this experiment. The categorization of materials as erotic vs. pornographic permitted the exposure effects to be clearly interpreted in terms of the contribution of sexual explicitness vs. sexism and/or violence.

This study was designed primarily to examine women's perceptions of sexually explicit materials and the subsequent effect of exposure on these evaluations as well as mood. For this reason, the findings pertaining to the relationships between previous experience and attitudes and the women's reactions to the slides are best treated as tentative. To reliably establish the relationships between the attitude and experience variables and reactions to pornography, a substantially larger sample size within each

condition would be necessary. In addition, one of the attitude measures, Attitudes Toward Men, was less reliable than anticipated. Although the test developers reported that all 4 subscales were significantly correlated, in the present study Sexuality did not correlate with all of the other subscales. This variable appeared to be an important factor in predicting women's reactions to the slides. Greater confidence could be placed in these findings however if the scale had been found to be reliable.

The slide rating measure, the evaluative dimension of the Semantic Differential, was found to be an excellent measure for determining reactions to the images. It is unidimensional and thus avoids the need for factor analysis. In addition, the women used the entire range of responses, ensuring that there was variability.

Directions for Future Research

The sexual experience variables were related to the women's previous exposure to pornography, and this rather interesting connection clearly deserves further in depth study. Future research could examine the number of partners involved in the coercive sexual experiences as well as the frequency of such coercion. There could be substantial individual differences between two women who have both had five coercive experiences but one has experienced them all within a single abusive relationship

while the other has had negative experiences with five different men. In addition, examining the conditions under which women are exposed to pornography, as well as the frequency of exposure may help to determine the reasons for the link between sexual coercion and exposure to pornography. Similarly, a more detailed investigation into the nature of incidents involving the coercive use of pornography would assist in this endeavour.

Further research should also include non-university women. A larger age range would permit the assessment of possible age differences. In addition, exposure levels could be quite different in a non-university sample.

Extensions of this research to different forms of pornography such as films and videos could yield some interesting findings. Most women in the current sample reported exposure to these types of portrayals and the effects might be different than those created by pictorial stimuli.

Long-term exposure studies would also be fruitful however a note of caution is warranted. Negative effects were found in this study over short-term exposure to the mildest variety of legally-available magazines. Any research which exposes women over longer periods of time, or to more violent materials, must seriously consider the ethical issues involved.

Summary and Implications

This experiment was designed to test five hypotheses. The findings suggested a complicated pattern of effects of pornography on women that confirmed three of the hypotheses. The women evaluated the violent pornography negatively and exposure to it increased their negative affect. While there was a decrease in the effects on negative mood by the second session, negative evaluations of the slides continued, suggesting a desensitization effect. The women also evaluated non-violent pornography negatively but not to the same degree as for the violent images. Exposure to these images also had a negative effect on women's moods, but again not to the same degree as for the violent images. Pornography need not be violent to have negative effects on women; the unequal power and the implicit coercion and force can in some cases affect women as much as the more blatant images. Non-violent pornography is the most common legally-available type of pornography. Assuming that repeated exposure to such images has a desensitizing effect on both mood and evaluations, one would expect a less extreme reaction compared to the violent, less common images. The important point however is that the non-violent pornographic images had a negative effect whereas the erotic images did not.

The women rated the erotic slides positively, with no subsequent negative effects of exposure except for a decrease in Vigor. Because the images were as sexually explicit as the photographs in the other conditions, any effects of the pornography were due to content other than the sexual nature of the slides. Pornography is not harmful because it represents sexuality, it is harmful because of what is added (i.e., violence, inequality, coercion and sexism) and what is subtracted (i.e., warmth, caring, consent, etc.).

Thus, pornography, both violent and non-violent, was rated less positively on the Semantic Differential than erotica or the control slides. Exposure to sexism and violence in the sexually explicit images negatively affected the women's mood state. Finally, exposure to erotica had generally no negative effects.

It was also hypothesized that Rape Myth Acceptance and Acceptance of Interpersonal Violence would decrease following exposure to pornography. Rape Myth Acceptance decreased but this was attributed to a retest artifact. There was no significant change in Acceptance of Interpersonal Violence.

Finally, it was expected that previous exposure to pornography and previous coercive sexual experience would

predict how the women viewed the pornographic images. This hypothesis was not confirmed.

A point which arises out of these findings is that for women, pornography is not fantasy. The coercion and violence which it portrays are in fact realities in many women's lives. Over half of the women sampled reported at least one experience with non-violent sexual coercion and one fifth reported at least one experience with violent coercion. Brown (1980) puts it this way, "the objectification of women in the images is the objectification that women experience and men enjoy" (p. 9). Miner (1980) is more blunt, saying "One man's fantasy, is every woman's nightmare" (p. 9). With such a high incidence of coercion in sexual relationships, pornography may be harmful because it forces women to confront their own victimization, resulting in tension, depression, anger, and confusion. Pornography is also used in directly harmful ways; one quarter of the women in this study had been emotionally upset by the coercive use of pornography. In addition, exposure to pornography was related to the amount of coercive sexual experience in a woman's life, suggesting yet another link between pornography and the sexual abuse of women.

This study affirms feminist views that it is not only the worst types of pornography which have harmful effects

on women. Increased tension, anger, depression and confusion were found for materials found in cornerstores and newstands throughout Canada. Much of the discussion of censorship in the feminist community (e.g., Burstyn, 1985) has revolved around two questions. First, is pornography harmful? Second, is it possible to clearly distinguish between types of sexually explicit materials so that it is guaranteed that erotica will not also be censored? In response to the first question, this study has demonstrated, using controlled experimental methodology, that pornography, both violent and non-violent, affects women's moods negatively, leaving them tense, angry, depressed, and confused. This contradicts the notion that pornography serves to liberate those who are sexually inhibited. In addition, exposure to pornography appears to be linked to sexual victimization. While attempts should be made to replicate these findings, no positive effects of pornography were found. In response to the second question, this study demonstrated that it is possible to come up with definitions so that both trained raters and untrained participants can differentiate between types of sexually explicit materials with high reliability. This suggests that erotica need not be sacrificed when pornography is censored. Although censorship remains a controversial issue, the data presented in this thesis

indicate that pornography can have harmful effects on women and therefore point to a need for some form of social action.

References

- Abel, G.G., Barlow, D.H., Blanchard, E., & Guild, D. (1977). The components of rapists' sexual arousal. Archives of General Psychiatry, 34, 895-903.
- Abel, G.G., Becker, J., Murphy, W., & Flanagan, B. (1979). Identifying dangerous child molesters. Paper presented at the 11th Banff International Conference on Behavior Modification, Banff, Canada, 1979.
- Amoroso, D.M. & Brown, M. (1973). Problems in studying the effects of erotic material. Journal of Sex Research, 9, 187-195.
- Barbaree, H.E., Marshall, W.L., & Lanthier, R.D. (1979). Deviant sexual arousal in rapists. Behavior Research and Therapy, 17, 215-222.
- Baron, R.A. (1974). The aggression-inhibiting influence of heightened sexual arousal. Journal of Personality and Social Psychology, 30, 318-322.
- Baron, R.A. (1979). Heightened sexual arousal and physical aggression: An extension to females. Journal of Research in Personality, 13, 91-102.
- Baron, R.A. & Bell, P.A. (1977). Sexual arousal and aggression by males: Effects of type of erotic stimuli and prior provocation. Journal of Personality and Social Psychology, 35, 79-87.
- Baron, R.A. & Byrne, D. (1977). Social Psychology: Understanding human interaction. Boston, Mass: Allyn & Bacon.
- Bat-Ada, J. (1980). Playboy isn't playing: An interview with Judith Bat-Ada. In L. Lederer (Ed.) Take Back the Night: Women on pornography. New York: William Morrow and Company, Inc., 121-133.
- Blachford, G. (1978/79). Looking at pornography. Screen Education, 29, 21-28.
- Bridgell, D., Rimm, D., Caddy, G., Krawitz, G., Sholis, D., & Wunderlin, R. (1978). Effects of alcohol and cognitive set on sexual arousal to deviant stimuli. Journal of Abnormal Psychology, 87, 418-430.

- Briere, J., Corne, S., Runtz, M., & Malamuth, N.M. (1984). The Rape Arousal Inventory: Predicting actual and potential sexual aggression in a University population. Paper presented at the annual meeting of the American Psychological Association, Toronto, 1984.
- Brown, B. (1981). A feminist interest in pornography - Some modest proposals. M/F, 5-6, 5-18.
- Burstyn, V. (Ed.) (1985). Women Against Pornography. Vancouver: Douglas & McIntyre.
- Burt, M.R. (1980). Cultural myths and support for rape. Journal of Personality and Social Psychology, 38, 217-230.
- Byrne, D., Fisher, J.D., Lamberth, J., & Mitchell, H.E. (1974). Evaluations of erotica: Facts or feelings? Journal of Personality and Social Psychology, 29, 111-116.
- Byrne, D., & Lamberth, J. (1971). The effect of erotic stimuli on sex arousal, evaluative responses, and subsequent behavior. In, Technical Report of the Commission on Obscenity and Pornography, 8. Washington, D.C.: U.S. Government Printing Office.
- Cairns, R.B., Paul, J.C.N., & Wishner, J. (1962). Sex censorship: The assumptions of anti obscenity laws and the empirical evidence. Minnesota Law Review, 46, 1009-1041.
- Canadian Coalition Against Media Pornography (1983). Position Paper - Federal Initiatives. (Available from Canadian Coalition Against Media Pornography, P.O. Box 1075, Station B, Ottawa, Ontario, K1P 5R1.
- Canter, J.R., Zillmann, R., & Einsiedel, E.F. (1978). Female responses to provocation after exposure to aggressive and erotic films. Communication Research, 5(4), 395-413.
- Clark, L. & Lewis, D. (1977). Rape: The Price of Coercive Sexuality. Toronto: Women's Educational Press.
- Cline, V.B. (1974). Another view: Pornography effects, the state of the art. In V.B. Cline (Ed.) Where do you draw the line?: An exploration into media

violence, pornography and censorship. Provo, Utah: Brigham Young University Press.

Cowie, E. (1977). Women, representation and the image. Screen Education, 23, 15-23.

Ceniti, J. & Malamuth, N.M. (1984). Effects of repeated exposure to sexually violent or non-violent stimuli on sexual arousal to rape and nonrape depictions. Behavior Research and Therapy, 22(5), 535-548.

Check, J.V.P. (1984). Public presentation at Pornography Conference held at Red Deer College, May, 1984.

Check, J.V.P., Elias, B., & Barton, S.A. (in press). Hostility toward men and sexual victimization. In G.W. Russell (Ed.), Violence in Intimate Adult Relationships. New York: Spectrum.

Davis, K.E. & Braucht, G.N. (1971). Exposure to pornography, character and sexual deviance: A retrospective survey. Technical reports of the Commission on Obscenity and Pornography, 7. Washington, D.C.: U.S. Government Printing Office.

Donnerstein, E. (1980). Aggressive-erotica and violence against women. Journal of Personality and Social Psychology, 39, 269-277.

Donnerstein, E. (1983). Erotica and human aggression. In R. Geen and E. Donnerstein (Eds.), Aggression: Theoretical and Empirical Reviews. New York: Academic Press.

Donnerstein, E. & Barrett, G. (1978). The effects of erotic stimuli on male aggression towards females. Journal of Personality and Social Psychology, 36, 180-188.

Donnerstein, E. & Berkowitz, L. (1981). Victim reactions in aggressive erotic films as a factor in violence against women. Journal of Personality and Social Psychology, 41, 710-724.

Donnerstein, E., Donnerstein, M., & Evans, R. (1975). Erotic stimuli and aggression: Facilitation or inhibition. Journal of Personality and Social Psychology, 32, 237-244.

- Diamond, I. (1980). Pornography and repression: A reconsideration. Journal of Women in Culture and Society, 5, 686-701.
- Dworkin, A. (1981). Pornography: Men Possessing Women. New York: G.P. Putnam's Sons; Perigee Books.
- Erwin, T.D. (1979). The validation of the Erwin Identity Scale. Doctoral dissertation. University of Iowa. Dissertation Abstracts International, 39, 4818A-4819A. (University Microfilms no. 7902899).
- Erwin, T.D. & Schmidt, M.R. (1981). The convergent validity of the Erwin Identity Scale. Education and Psychological Measurement, 41, 1307-1310.
- Fisher, W.A. & Byrne, D. (1978). Individual differences in affective, evaluative and behavioral responses to an erotic film. Journal of Applied Social Psychology, 8, 355-365.
- Franzoi, S.L., & Shields, S.A. (1984). The body esteem scale: Multidimensional structure and sex difference in a college population. Journal of Personality Assessment, 48, 173-178.
- Garcia, L.T., Brennan, K., DeCarlo, M., McGlennon, R., & Tait, S. (1984). Sex differences in sexual arousal to different erotic stories. Journal of Sex Research, 20(4), 391-402.
- Griffin, S. (1981). Pornography and Silence: Cultures Revenge Against Nature. Harper & Row, Publishers, New York.
- Griffitt, W. (1973). Response to erotica and the projection of response to erotica in the opposite sex. Journal of Experimental Research in Personality, 6, 330-338.
- Herrman, M.S. & Bordner, D.C. (1983). Attitudes toward pornography in a southern community. Criminology, 21(3), 349-374.
- Iazzo, A.N. (1983). The construction and validation of Attitudes Toward Men Scale. Psychological Records, 33, 371-378.
- Jaffe, Y., Malamuth, N., Feingold, J., & Feshbach, S. (1974). Sexual arousal and behavioral aggression.

Journal of Personality and Social Psychology, 30,
759-764.

Kanin, E.J. & Parcell, S.R. (1977). Sexual aggression: A second look at the offended female. Archives of Sexual Behavior, 6, 67-76

Kinsey, A.C., Pomeroy, W.B., Martin, C.E., & Gebhart, P.H. (1953). Sexual Behavior in the Human Female. Philadelphia: Saunders.

Koss, M.P. & Oros, C.J. (1982). Sexual Experiences Survey: A research instrument investigating sexual aggression and victimization. Journal of Consulting and Clinical Psychology, 50, 455-457.

Longino, H.E. (1980). Pornography, oppression and freedom: A closer look. In L. Lederer (Ed.) Take Back the Night: Women on Pornography. New York: William Morrow and Company, Inc., 40-54.

Lourde, A. (1978). Uses of the Erotic: The Erotic as Power. Out and Out Books.

Malamuth, N.M. (1981a). Rape proclivity among males. Journal of Social Issues, 37(4), 138-157.

Malamuth, N.M. (1981b). Rape fantasies as a function of exposure to violent-sexual stimuli. Archives of Sexual Behavior, 10, 33-47.

Malamuth, N. & Check, J.V.P. (1980a). Penile tumescence and perceptual responses to rape as a function of victim's perceived reactions. Journal of Applied Social Psychology, 10, 528-547.

Malamuth, N. & Check, J.V.P. (1980b). Sexual arousal to rape and consenting depictions: The importance of the woman's arousal. Journal of Abnormal Psychology, 89, 763-766.

Malamuth, N.M. & Check, J.V.P. (1981a). The effects of mass media exposure on acceptance of violence against women: A field experiment. Journal of Research in Personality, 15, 436-446.

Malamuth, N. & Check, J.V.P. (1981b). The effects of exposure to aggressive-pornography: Rape proclivity, sexual arousal and belief in rape myths. Paper

- presented at the annual convention of the American Psychological Association, Los Angeles, August, 1981.
- Malamuth, N. & Check, J.V.P. (1982). Factors related to aggression against women. Paper presented at the annual convention of the Canadian Psychological Association, Montreal, June 1982.
- Malamuth, N.M. & Donnerstein, E. (1982). The effects of aggressive-pornographic mass media stimuli. In L. Berkowitz (Ed.) Advances in Experimental Social Psychology. New York: Academic Press.
- Malamuth, N.M., Haber, O., & Feshbach, S. (1980a). Testing hypotheses regarding rape, exposure to sexual violence, sex differences, and the "normality" of rapists. Journal of Research in Personality, 14, 121-137.
- Malamuth, N.M., Heim, M., & Feshbach, S. (1980b). The sexual responsiveness of college students to rape depictions: Inhibitory and disinhibitory effects. Journal of Personality and Social Psychology, 38, 399-408.
- Malamuth, N.M. & Spinner, B. (1980). A longitudinal content analysis of sexual violence in the best-selling erotic magazines. Journal of Sex Research, 16(3), 226-237.
- McCormack, T. (1980). Machismo in media research: A critical review of research on violence and pornography. Mass Communication Review Yearbook, 1, 575-585.
- McDonald, W.K., Perkins, K.B., Sheehan, R.R., & Curtis, J.H. (1977). The pornography controversy: A study of attitudes in a south Georgian community. Journal of Humanics, 5(1), 64-78.
- McNair, D.M., Lorr, M., & Droppleman, L.F. (1971). ETTS Manual for the Profile of Mood States, Educational and Industrial Testing Service, San Diego.
- Messe, M.R. (1984). Effects of content variables on women's responses to rape depictions. Dissertation Abstracts International, 44(12-B), 3938. ISSN: 04194209.

- Meyer, T.P. (1972). The effects of sexually arousing and violent films on aggressive behavior. Journal of Sex Research, 8, 324-333.
- Millar, J.B. (1976). Toward a New Psychology of Women. Boston: Beacon Press.
- Miner, V. (1981). Fantasies and nightmares: The red-blooded media. JumpCut, 26, 48-50.
- Mosher, D.L. (1971). Sex callousness toward women Technical Report of the Commission on Obscenity and Pornography, 8, Washington, D.C.: US Government Printing Office.
- Osgood, C.E., Suci, G.J., & Tannenbaum, P.H. (1957). The Measurement of Meaning. Urbana: University of Illinois Press.
- Parker, R. & Pollock, G. (1981). Old Mistresses: Women, Art and Ideology. Routledge & Kegan Paul Ltd., London.
- Quinsey, V.L., Chaplin, T.C., & Carrigan, W.F. (1980). Biofeedback and signaled punishment in the modification of inappropriate sexual age preferences. Behavior Therapy, 11, 567-576.
- Renchovsky Ashley, B. & Ashley, D. (1984). Sex as violence: The body against intimacy. International Journal of Women's Studies, 7(4), 352-371.
- Riddington, J. (1983). Freedom From Harm or Freedom of Speech?: A feminist perspective on the regulation of pornography. Ottawa: National Association of Women and the Law.
- Rosenberg, M. (1965). Society and the Adolescent Self-Image. Princeton, N.J.: Princeton University Press.
- Rosenthal, R. (1984). Meta-Analytic Procedures for Social Research. Beverly Hills, CA: Sage Publications, Inc.
- Russell, D.E.H. (1980). Pornography and violence: What does the new research say? In L. Lederer (Ed.), Take Back the Night: Women on Pornography. New York: William Morrow and Company, Inc., 218-238.

- Russell, D.E.H. (1984). Sexual Exploitation: Rape, Child Sexual Abuse, and Workplace Harassment. Beverly Hills, Calif.: Sage Publications Inc.
- Schmidt, G. (1975). Male-female differences in sexual arousal and behavior. Archives of Sexual Behavior, 4, 353-364.
- Smith, D. (1976). Sexual aggression in American pornography: The stereotype of rape. Unpublished paper presented at the American Sociological Association, N.Y.C., August, 1976.
- Smith, D. (1977). The social content of pornography. Journal of Communication, 26, 16-33.
- Smith, E.R., Ferree, M.M., & Miller, F.D. (1975). A short scale of attitudes towards feminism. Representative Research in Social Psychology, 6, 51-56.
- Sontag, S. (1977). On Photography. New York: Farrar, Straus and Giroux.
- Stauffer, J. & Frost, R. (1976). Male and female interest in sexually-oriented magazines. Journal of Communication, 26, 25-30.
- Steinem, G. (1980). Erotica and pornography: A clear and present difference. In L. Lederer (Ed.) Take Back the Night: Women on Pornography. New York: William Morrow and Company, Inc., 35-39.
- Stock, W. (1983). The effects of violent pornography on the sexual responsiveness and attitudes of women. Unpublished doctoral dissertation, State University of New York at Stony Brook.
- Tannenbaum, P.H. & Zillmann, D. (1975). Emotional arousal in the facilitation of aggression through communication. In L. Berkowitz (Ed.), Advances in Experimental Social Psychology, 8. New York: Academic Press.
- Thomas, M.H., Horton, R.W., Lippincott, E.C. & Drabman, R.S. (1977). Desensitization to portrayals of real-life aggression as a function of exposure to television violence. Journal of Personality and Social Psychology, 35, 450-458.

- Vivar, M.A. (1982). The new anti-female violent pornography: Is moral condemnation the only justifiable response? Law and Psychology Review 7, 53-70
- Zillmann, D. (1971). Excitation transfer in communication-mediated aggressive behavior. Journal of Experimental Social Psychology, 7, 419-434.
- Zillmann, D. & Bryant, J. (1982). Pornography, sexual callousness, and the trivialization of rape. Journal of Communication, 32(4), 10-21.
- Zillmann, D., Bryant, J., & Carveth, R. (1981). The effect of erotica featuring sadomasochism and bestiality on motivated intermale aggression. Personality and Social Psychology Bulletin, 7, 153-159.
- Zillmann, D., Bryant, J., Comisky, P.W., & Medoff, N.J. (1981). Excitation and hedonic valence in the effect of erotica on motivated intermale aggression. European Journal of Social Psychology, 11, 233-252.

APPENDIX A

Slide Categorization

All descriptions refer to highly sexually explicit materials with common content of nude or partially clothed male and/or female models, detailed drawings or photographs of genitalia and detailed drawings or photographs of sexual acts between individuals. These categories are not distinguished on the basis of the nature of the sexual act. It is assumed that all forms of sexuality could occur in any/all of the categories.

The three categories into which you are to place the slides are as follows:

1. Erotica - Non-sexist and non-violent - These images have as their focus the depiction of "mutually pleasurable, sexual expression between people who have enough power to be there by positive choice". They have no sexist or violent connotations and are hinged on equal power dynamics between individuals as well as between the model(s) and the camera or photographer.
2. Sexist and dehumanizing non-violent pornography - These images have no explicitly violent content but may imply acts of submission or violence by the positioning of models (e.g., male standing, female prone or kneeling) or the use of props (e.g., gun, whips, chains in the background). They may also imply unequal power relationships by differential dress (e.g., male fully dressed, female naked), costuming (e.g., dressing adult models to look like children, model dressed in clothing which implies violence), positioning (e.g., behind bars, in position of vulnerability), or by setting up the viewer as a voyeur (e.g., catching the model bathing, grooming, dressing, etc.).
3. Sexist and dehumanizing violent pornography - These images portray explicitly violent acts of varying degrees perpetrated against one individual by another (e.g., hair pulling, slapping, whipping, etc.). This category also includes images which portray self-abuse or self-mutilation. Also included are images where no actual violence is occurring, however the model appears to be suffering

from the aftermath of abuse (e.g., black eyes, welts, etc.).

All slides must be put into one of the three categories. No slide may belong to more than one category, so if there is some doubt, please place it in the category which best fits the slide.

APPENDIX B

QuestionnairesBACKGROUND QUESTIONNAIRE

Identification Number: _____ Date: _____

Age _____

Level of Education _____ Major _____

Occupational status _____

Please check which of the following best describes your current living situation:

Living at home with parents	_____	Living independently of parents	_____
		Married - living with husband	_____
		Married - separated	_____
		Common-law - living with partner	_____
		Living with roommate	_____
		Living alone	_____
		Living with relatives (other than parents)	_____
		Divorced or widowed	_____
		Other (specify)	_____
		_____	_____

PREVIOUS EXPOSURE TO SEXUALLY EXPLICIT MATERIALS

I.D. Number _____

For each item, please circle the number that corresponds to how often you have encountered the following materials in the past. For the written materials this includes reading them, flipping through them, or simply being shown them.

Playboy

0	1	2	3	4	5
never	1-2X	3-5X	5-10X	10-20X	more than 20X

Playgirl

0	1	2	3	4	5
never	1-2X	3-5X	5-10X	10-20X	more than 20X

Penthouse

0	1	2	3	4	5
never	1-2X	3-5X	5-10X	10-20X	more than 20X

Hustler

0	1	2	3	4	5
never	1-2X	3-5X	5-10X	10-20X	more than 20X

Other "men's" magazines not mentioned above

0	1	2	3	4	5
never	1-2X	3-5X	5-10X	10-20X	more than 20X

Sexually explicit videos or films in which sex is the most important feature

0	1	2	3	4	5
never	1-2X	3-5X	5-10X	10-20X	more than 20X

Sexually explicit materials used for educational purposes (e.g. sex education courses, human sexuality, etc.)

0	1	2	3	4	5
never	1-2X	3-5X	5-10X	10-20X	more than 20X

(2)

Please check each of the following portrayals which you have encountered in the past in sexually explicit materials:

Intercourse between husband and wife _____	The use of artificial devices _____
Masturbation _____	Passionate kissing between women _____
Beatings and spankings for the purpose of sexual stimulation _____	Rape _____
Intercourse between unmarried men and women _____	Orgies or group sex _____
Cleaning the house in the nude _____	Partial nudity of women (waist up) _____
Bestiality (sex acts with animals) _____	Frontal nudity (exhibits the genitals) _____
Passionate kissing between men _____	Sex between men _____
Oral-genital contact _____	Sex between women _____
Child molestation _____	
Total nudity _____	

How often do you believe violence occurs in sexually explicit films and/or videos?

1	2	3	4	5
never	rarely	occasionally	often	always

How often do you believe violence occurs in sexually explicit magazines and/or books?

1	2	3	4	5
never	rarely	occasionally	often	always

Have you ever been upset by anyone trying to get you to do what they'd seen in pornographic pictures, movies, or books?

Yes _____ No _____

APPENDIX C

CONSENT FORM

I, _____, am volunteering to participate in a Psychology experiment conducted by Charlene Senn, a MSc. student at the University of Calgary, under the supervision of Dr. Lorraine Radtke. I am aware that the experiment involves rating the characteristics of slides, some of which may be sexually explicit and/or violent in content. I am aware that this material may be upsetting or objectionable to some people. I am also aware that I will be asked to fill out questionnaires on my opinions, attitudes and background, some of which are of a highly personal nature. I have been informed that I may withdraw from the experiment at any time, without forfeiting payment for participation. I have been assured that my participation in this experiment is completely confidential as are all responses I may give to the questionnaires.

Signature _____

Date _____

APPENDIX C

Instructions to Subjects

This experiment involves rating the characteristics of slides, some of which may be sexually explicit and/or violent in content. It also involves filling out questionnaires on your attitudes and beliefs about a variety of topics. In addition you will fill out background questionnaires, which are of a personal nature.

Several safeguards are built in to the experiment to protect your confidentiality. First, you have in front of you a number with which you will identify all questionnaires. None of the questionnaires will have your name on them. I currently have a master list of names and numbers in case you lose your number however when you have completed the experiment, this list will be destroyed. This way no one would be able to trace you back to your answers or vice versa. Second, I am the only one who scores the questionnaires.

You may leave the experiment at any time without forfeiting payment. To ensure that you are comfortable with the procedure I will show you five test slides at the beginning of the slide session. The test slides will be similar in content to the rest of the slides you will be seeing. After you have practiced on those slides I will ask you if you wish to continue. Please feel free to leave at this time if you do not wish to continue with the experiment.

In the first session you will be filling out questionnaires. The second and third sessions you will rate slides according to how you feel about them as well as filling out a short questionnaire before and after you see the slides. In the fourth session, you will fill out a shorter questionnaire package and then I will explain the entire experiment to you, answering any questions you might have. Do you have any questions?

Please do not talk to any other female undergraduates about details of this experiment. Other women in your classes may be participating and especially once you are aware of the experimental hypotheses, it could bias the experiment if you were to discuss it with other subjects. Thank you.

Slide #1:

good	___:___:___:___:___:___:___	bad
cruel	___:___:___:___:___:___:___	kind
dirty	___:___:___:___:___:___:___	clean
pleasurable	___:___:___:___:___:___:___	painful
ugly	___:___:___:___:___:___:___	beautiful
healthy	___:___:___:___:___:___:___	sick
negative	___:___:___:___:___:___:___	positive

Slide #2:

good	___:___:___:___:___:___:___	bad
cruel	___:___:___:___:___:___:___	kind
dirty	___:___:___:___:___:___:___	clean
pleasurable	___:___:___:___:___:___:___	painful
ugly	___:___:___:___:___:___:___	beautiful
healthy	___:___:___:___:___:___:___	sick
negative	___:___:___:___:___:___:___	positive

Slide #3:

good	___:___:___:___:___:___:___	bad
cruel	___:___:___:___:___:___:___	kind
dirty	___:___:___:___:___:___:___	clean
pleasurable	___:___:___:___:___:___:___	painful
ugly	___:___:___:___:___:___:___	beautiful
healthy	___:___:___:___:___:___:___	sick
negative	___:___:___:___:___:___:___	positive

Slide #4:

good	___:___:___:___:___:___:___	bad
cruel	___:___:___:___:___:___:___	kind
dirty	___:___:___:___:___:___:___	clean
pleasurable	___:___:___:___:___:___:___	painful
ugly	___:___:___:___:___:___:___	beautiful
healthy	___:___:___:___:___:___:___	sick
negative	___:___:___:___:___:___:___	positive

Slide #5:

good	___:___:___:___:___:___:___	bad
cruel	___:___:___:___:___:___:___	kind
dirty	___:___:___:___:___:___:___	clean
pleasurable	___:___:___:___:___:___:___	painful
ugly	___:___:___:___:___:___:___	beautiful
healthy	___:___:___:___:___:___:___	sick
negative	___:___:___:___:___:___:___	positive

APPENDIX E

DEBRIEFING

Although rape, battering and torture are crimes, these themes are currently found in pornographic magazines. In these magazines, sexual violence (e.g., rape) is often presented with other highly explicit and arousing material. Many researchers are pointing to this pairing of sex and violence as being potentially harmful. Research has shown that repeated exposure to violence alone, can cause desensitization, that is, people no longer react to it as they would have originally. The violence no longer shocks them, it does not seem as negative. When violence becomes connected with sexuality this desensitization could become extremely detrimental to healthy expression of one's sexuality.

In this experiment, three kinds of sexually explicit materials were used, each of you would have seen only one of these categories. I would like to show you some examples of the stimuli used in each category and define them for you in the way they were used in this experiment.

1. EROTICA - NON-SEXIST AND NON-VIOLENT - These images have as their focus the depiction of "mutually pleasurable, sexual expression between people who have enough power to be there by positive choice." (Steinem, 1980, p. 37) They have no sexist or violent connotations and are hinged on equal power dynamics between individuals as well as between the model(s) and the camera/ photographer (Sontag, 1977).
2. PORNOGRAPHY - A. SEXIST OR DEHUMANIZING PORNOGRAPHY - NON-VIOLENT - These images have no explicitly violent content but may imply acts of submission or violence by the positioning of models or the use of props. They may also imply unequal power relationships by differential dress, costuming, positioning, (Steinem, 1980) or by setting up the viewer as voyeur (Parker & Pollock, 1981).
3. PORNOGRAPHY - B. VIOLENT PORNOGRAPHY - SEXIST AND VIOLENT - These images portray explicitly violent acts of varying degrees perpetrated against one individual by another. This category also includes images which portray self- abuse or self-mutilation (Longino, 1980). Also included are images where no actual violence is occurring, however the model appears to be suffering from the aftermath of abuse.

This research is based on the premise that it is not the sexually explicit nature of pornography which is harmful. It is the violent and sexist aspects of the photographs which affect women. If we look at the underlying messages conveyed by each of the stimulus categories, we can better understand what effects each might have.

Erotica suggests that sexuality is a normal, healthy and pleasurable experience which occurs between people who have mutual respect for each other. Both individuals are willingly participating and enjoying the experience. Some people might question the role that erotica should play in our daily lives, but these questions are a matter of personal values and do not reflect negative effects per se.

Sexist pornography implies that sexual relationships between men and women are inherently unequal. It stresses that the male role is one of dominance and the female role one of submission. This effectively eliminates the sharing aspects and the importance of equality of choice for both partners. Sexist pornography also idealizes the female form by techniques such as airbrushing and the use of only thin and beautiful models. When we look at our own or our friends' bodies, we realize that we have no chance of living up to the expectations of men who use pornography as a standard for what women should look like. Thus we may find that our views about our bodies and also our self-esteem are altered by these images.

Violent pornography is probably even more harmful because it lies about our collective experience as women. These images suggest that women enjoy being raped, tortured, bound, and gagged. This is not the reality that victims of rape and battering know to be true. Mona Vivar, a writer and researcher in the area of pornography said, "Violent pornography extols male dominance and female submission in a world where many women are trying to overcome these erroneous beliefs and practices. Brutal depictions, if allowed to flourish, may finally lead women to accept the idea that male-female relationships are premised on terror, violence, and cruelty." (p. 63) This study was designed to see how you felt about these images and how this affected your attitudes on a variety of topics.

In summary, the research on pornography to date does not find that pornography is harmless. Research on men has shown that after viewing violent pornography, men are more likely to: aggress against a female in the laboratory, to say they would rape if could be assured that they would not be caught, believe that rape victims encouraged, enjoyed or provoked their rape and to score high on hostility toward women.

There is far less research on the effects on women but since women are being exposed to more pornography through their partners and the general proliferation of such material in cornerstores, for example, these questions will become even more important.

My final experimental hypothesis was that those of you who saw the sexist and violent pornography may feel very angry, especially toward men as a result of seeing those images. It is very hard to look at pornographic images of ourselves and not feel some sense of injustice. However, just the fact that we know what is available to men gives us back a sense of power. If we know there is a problem, then at least we can make decisions in our own lives when we come in contact with pornography. For many years, women did not see the images that their men were seeing and so they could not discuss the issue with them or other women. In more recent times, public discussions are being held regularly, documentaries are being shown and people are talking about the issue. It is important to realize that it is not an individual man or group of men, who are making these images available, nor is it one man who is buying it. The pornography industry is profit-oriented and is doing very well. The industry makes more than the commercial movie industry and record industry together. What we must ask ourselves is "what are the societal attitudes that support such an industry?"

I would like to thank you all very much for participating in this study which required a considerable amount of your time. I will now answer any questions you might have about this study, past research or on pornography in general. I would also invite you to ask me questions privately if that is more comfortable. There will be small discussion groups held for anyone who is interested in talking about the issue or your concerns in greater detail. Please see me afterwards for the times and places.

Although I have not as yet analyzed the results, you may obtain a summary when it is completed. If you are interested, please put your name and address on the sheet in the anteroom, and I will be glad to forward the summary to you.

APPENDIX FMood Subscales: Means of InteractionsTable 1Tension by Pre/Post

Condition	Pre	Post
Erotic	0.750	-0.187
Non-violent	0.916	3.584
Violent	1.188	4.396
Control	0.834	-0.333

Table 2Depression by Pre/Post

Condition	Pre	Post
Erotic	2.437	2.500
Non-violent	3.604	4.500
Violent	2.333	5.646
Control	1.958	1.146

Mood Subscales: Means of Interactions ContinuedTable 3Anger by Pre/Post

Condition	Pre	Post
Erotic	1.230	1.708
Non-violent	2.042	5.812
Violent	2.000	9.585
Control	1.604	0.896

Table 4Vigor by Pre/Post

Condition	Pre	Post
Erotic	17.050	14.170
Non-violent	13.415	11.105
Violent	15.855	11.815
Control	13.790	13.685

Mood Subscales: Means of Interactions ContinuedTable 5Confusion by Pre/Post

Condition	Pre	Post
Erotic	-0.354	-0.042
Non-violent	0.250	2.271
Violent	0.125	2.584
Control	-0.125	-0.438

Table 6Anger by Session

Condition	Session 1	Session 2
Erotic	1.396	1.542
Non-Violent	5.062	2.972
Violent	6.960	4.625
Control	1.562	0.938