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The Perception and Effect of Degradation  
and Violence in Commercially Released Videos

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Jack A. Glascock, Jr.

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THE PERCEPTION AND EFFECT OF DEGRADATION  
AND VIOLENCE IN COMMERCIALY RELEASED VIDEOS

By

Jack A. Glascock, Jr.

A DISSERTATION

Submitted to  
Michigan State University  
in partial fulfillment of the requirements  
for the degree of

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Department of Telecommunication

1996



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## ABSTRACT

### THE PERCEPTION AND EFFECT OF DEGRADATION AND VIOLENCE IN COMMERCIALY RELEASED VIDEOS

By

Jack A. Glascock, Jr.

This study examines the contributions of degradation and violence in videos on male viewers' subsequent verbal aggression. Stimuli were selected based on pre-test ratings in which video segments were rated on overall dimensions as well as male and female character attributes. Subjects were exposed to one of four film conditions in a fully crossed factorial design (degradation x violence). Verbal aggression was subsequently measured by assessing subjects' retaliatory behavior toward a female confederate. Subjects exposed to materials rated high in degradation were more likely to support a female confederate's reappointment as a research assistant while subjects exposed to portrayals rated high in violence tended to be more critical of the female confederate's performance. While subjects' responses in the high violent condition were in the predicted direction, subjects in the high degrading conditions seemed to respond contrary to expectations. A possible explanation is that these subjects may have felt the depicted degrading behavior was morally wrong or improper and therefore guarded against making an overly aggressive response.

## ACKNOWLEDGMENTS

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## INTRODUCTION

In the 1970s researchers became interested in the effect erotica might have on aggression. Some forms of "erotica," which at that time were defined solely by sexual explicitness with little regard for actual themes depicted (degrading, mutually consenting, etc.), were found to increase aggression by provoked males against other males. There was some indication that aggression against females might be even greater after exposure to certain nonviolent materials, however this line of research evolved into examining violent materials as opposed to nonviolent pornography. While attitudinal and perceptual effects of nonviolent materials have been studied, behavioral effects, specifically aggression of males against females, have largely been ignored.

Researchers have found that subjects exposed to nonviolent, but degrading pornographic materials have reported more sexually calloused and aggressive attitudes toward women (Check and Guloien, 1989; Zillmann and Bryant, 1982). These materials have been typically described as portraying women "as eager to accommodate any and every imaginable sexual urge of any man in the vicinity" (Zillmann & Bryant, 1982). More recently, feminist authors have identified various themes present in degrading materials, several of which they argue may have more detrimental impact on viewers' attitudes and behaviors than the "availability"

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It may be appropriate at this point to attempt to clarify what is meant by degrading pornography. Central to the feminist criticism of pornography has been the unequalness portrayed between the male and female characters (Steinem, 1980). In a recent study, Cowan and Dunn (1994) delineated eight degrading themes found in pornographic materials. These themes, based on a content analysis of X-rated videos, ranged from "availability" (the female is available to anyone) to "domination" (the female is insulted or commanded to perform sexual acts without regard to her wishes). Cowan and Dunn (1994) argue that common to all of these themes, with the possible exception of the availability theme, is the notion that the female participant is less of a person than the male. For example, another theme described by Cowan and Dunn (1994), "objectification," is characterized by the male treating the female as an object or plaything in sexual relations. Such treatment is seen as depriving the female participant of human character or identity (Check, 1985). As a result, the female's status as a person is lowered relative to the male's status.

Cowan and Dunn (1994) argue that the availability theme, which has been used by other researchers (i.e., Donnerstein et al., 1987; Zillmann, 1989) to describe degrading pornography, does not fully convey the inequality and subordination concepts that are integral to the other

degrading themes. The criticism is that women's display of "unbridled sexuality" (p. 12) is what is described as degrading as opposed to any perceived inequalities or subordination. However, such characterizations have been theorized to result in a loss of respect for women. Weaver (1987) argues that traditionally women perceived as sexually permissive have been accorded a lower level of respect than other women. In other words their status is lowered relative to other women. Whether or not their status is lowered compared to male participants similarly portrayed (available and promiscuous) has not been addressed in the research. Commonsensically, one might expect male promiscuity not to be perceived as degrading or resulting in a lowering of respect for males. Males perceived as promiscuous are often described as "studs," which, if anything, connotes an enhanced status. Such terminology is in stark contrast to the general perception of promiscuous females as whores. In addition, since pornography is primarily a form of male entertainment, one would have to assume, that, in general, the portrayal of the male participants, with whom males would identify, is not perceived as degrading.

In either case, one can reasonably make the argument that the status of the female is lowered, either relative to the male participant or relative to other women. This lowering of status is also characteristic of the degradation process which has been described as the lowering of the position, rank or standing of a person (Jarvie, 1991).

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Degrading pornography, then, can be defined as that which lowers the status of the female participant and may include availability as well as other degrading themes.

While depictions such as the ones described above can be considered degrading in and of themselves, it is their tacit endorsement in pornographic materials that feminists find morally objectionable. This endorsement, from the feminist perspective, is carried out by representing degrading behaviors as appropriate or as providing pleasure to the male and, even worse, female participants (Longino, 1980). As such, these depictions are seen as perpetuating false beliefs about women, i.e. they enjoy being humiliated or beaten; or they expect to be treated as sexual slaves (Hill, 1987; Longino, 1980). Such attitudes are hypothesized to lead to acts of sexual violence against women (Burt, 1980).

Sexually violent materials have been found to increase aggression against females (Donnerstein & Berkowitz, 1981). However, only a few studies have been published in this area and some of them have produced inconsistent (Malamuth & Ceniti, 1986) or alternative findings (Fisher & Grenier, 1994). An additional issue is raised by Donnerstein and his colleagues who argue that it is the violence, not the sex, that has been shown to cause antisocial attitudes and behaviors after exposure to sexually violent materials (Donnerstein, Linz & Penrod, 1987). However, no study in a refereed journal has attempted to compare sexually violent

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The intent of this study, then, is to attempt to disentangle the relative contributions of degradation and violence on aggression toward women. Given recent policy initiatives in the U.S. and, in Canada, the censoring of certain pornographic materials, research into this area seems particularly relevant. One procedure included in this study that hopefully will help sort out the various components is that the stimulus materials will be classified on the basis of a pretest in which subjects will rate the materials on the appropriate dimensions (violent, degrading, sexually arousing). Hence there will be verification that (1) the stimuli belong in their respective categories and (2) subjects can distinguish between the categories (Senn & Radtke, 1990).

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<sup>1</sup> Donnerstein (1984) reports a couple of studies in which aggressive and sexually aggressive representations are compared. In each study the sexually aggressive materials resulted in a higher increase in aggressiveness on the part of males subjects than the aggressive films. However since no levels of significance are reported these findings have to be considered somewhat tentative.

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## LITERATURE REVIEW

Usage, Content

It appears that a majority of adults have been exposed to pornographic materials at least once in their lives. For example, Bryant (Bryant & Brown, 1989) reported that over 90% of adults and high school students had looked at or read a sexually oriented soft-core magazine such as Playboy. In addition, 69% of adults, males and females, in the survey reported having seen an X-rated film. Similar percentages were reported in a survey for Time magazine with 84% of men and women reporting having seen nudity in a magazine and 62% having seen an X-rated movie ("Pornography," 1986).

In terms of frequency of pornography usage, a 1985 Newsweek-Gallup survey, cited by the Meese Commission, found 37% of adults sometimes bought or read magazines like Playboy. Similar percentages have been found in other surveys. In the Time poll 43% of adults reported having seen nudity in a magazine in the past year. In a survey of Canadian attitudes toward pornography about a third (32%) of adults surveyed reported reading or leafing through adult entertainment magazines (Peat, Marwick & Partners, 1984).

Percentages of yearly usage of X-rated videos have ranged from 7% to about 38%. One reason for these discrepancies may have to do with the rapid diffusion of the videocassette recorder (VCR) during the early and mid-1980s. The Newsweek survey reported 7% of adults had gone to an X-

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rated movie and 9% had bought or rented an X-rated movie or videocassette in the past year (Press et al., 1985). In a 1986 survey, almost 25% of adults reported having seen an X-rated movie in the past year (Smith, 1987). In a more recent survey of college students Stock (1991) found that 27% of males and 11.9% of females had seen an X-rated videotape in the past year. Stock's figures may be somewhat lower than the norm since her respondents were college-age students as opposed to adults. The Time survey found 38% of adults surveyed had seen an X-rated video in the past year ("Pornography," 1987).

It also appears men are more frequent consumers of pornographic materials than women. A recent survey reported that more men than women, in all age groups, sometimes had bought or read soft- and hard-core sexually explicit magazines and had bought or rented an X-rated videocassette in the previous year (U.S. Department of Justice, 1986). Mosher and MacIan (1994) also found that males reported reading more pornographic magazines than females. In a survey of Canadians, Check, Heapy and Iwanyshyn (1985) found that males reported more frequent viewing of adult videos than females. Stock (1991) found males used pornography on the average of once a month while most females (54.2%) reported never having used pornography. Not surprisingly, men reported gaining a greater amount of their sexual knowledge from pornography than females (Duncan and Nicholson, 1991).

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In addition, 25% of males reported trying or experimenting with some of the behaviors depicted in the materials they had seen in pornographic materials (Bryant and Brown, 1989). Such experimenting may be at the expense of the female counterpart. In Stock's (1991) sample, 27% of females reported having been upset by someone who tried to get them to do something they had seen in a pornographic medium. Finally, most males use pornography by themselves or in groups (Stock, 1991). Females, when they do use pornography, tend to use it in conjunction with a partner. These findings lend support to the notion that when females do expose themselves to pornography it may often be due to the urging of a male counterpart.

The less frequent exposure of females to pornography has been attributed to sociological factors as well as content characteristics. For example, Burt (1976) has argued that females are socialized to behave like "ladies" and to not show an active interest in such diverse forms of sexual stimulation as pornography. In addition women's access to pornography may be limited by social taboos against females going into adult bookstores. Examining adult magazines, Thomas (1986) suggests that one reason females may not find pornography oriented toward females exciting is that, compared to erotica provided for men, the models are neither as attractive nor as sexually or sensually suggestive. (They are rarely shown in states of partial undress or fondling their bodies.)

Perhaps even more to the point is that since most pornography is oriented toward male consumers, women do not buy or otherwise expose themselves to it because they do not like the messages presented. This is suggested by research by Senn (1993) who found most women to be critical of pornography and that the overall impact on their lives was negative in terms of harms perpetuated against them either physically or emotionally. The author also found evidence supporting the notion that women do not enjoy viewing pornography geared to males, but occasionally do so because materials that portray a more positive sexual imagery are generally not available to them. When exposed to X-rated materials intended for women, in contrast to materials intended for men, females have reported more sexual arousal and enjoyment, more identification and less negative affect (Mosher & MacIan, 1994).

In sum, it appears that a significant portion of the population have viewed pornographic materials and about a quarter to a third of the adult population is exposed to pornography on a somewhat frequent basis. It is also apparent that more men than women are users of pornography, primarily because most pornographic materials are intended for men as opposed to women.

In the past, most content analyses of pornographic materials focused on sexual violence. In an analysis of cartoons and pictorials in Playboy and Penthouse magazines, Malamuth and Spinner (1980) found sexual violence (rape,



sadomasochism or exploitive/coercive sexual relations) in 10% of the cartoons and 5% of the pictorials in both magazines in 1977. In addition the authors found that sexually violent pictorials, but not cartoons, had increased over a five year period, 1973-1977. However Scott and Cuvelier (1987) found the number of sexually violent cartoons and pictorials in Playboy to be extremely small, on the average of 2 per year for cartoons and 1 per year for pictorials. These authors also found that the number of sexually violent cartoons and pictorials had actually decreased during the five-year period following Malamuth and Spinner's study.

In an analysis of pornographic novels Smith (1976) reported a third of all episodes in adult paperbacks contained force or coercion by a male to encourage the female into unwanted sex. In a study of dial-a-porn services, Glascock and LaRose (1993) found 13% of the recordings contained sexually violent acts, most of these involved sadomasochistic behaviors such as spanking or slapping. However, more violent acts such as rape or bondage were not found in their sample.

Most recent studies have focused on X-rated videocassettes, perhaps because of their increased visibility and accessibility due to the VCR. Palys (1986) and Yang and Linz (1990) found sexual violence in about 5% of all scenes in X-rated videos. Cowan, Lee, Levy and Snyder (1988) found 23% of all sexually explicit scenes in X-rated

videos contained acts of physical aggression. The difference in these studies is due to the base unit of measure used, sexually explicit scenes versus all scenes. Yang and Linz (1990) found no significant trends, increases or decreases, in sexual violence in videos produced from 1971 to 1986. In all of these studies males were found to be primarily the perpetrators and females the recipients of aggressive behavior.

A more recent concern, expressed by feminist writers, has been the degrading portrayal of women in pornographic materials. Such depictions are objectionable to feminists in that they are seen to support an ideology of sexual inequity by presenting women as subservient to dominant males (Cowan et al., 1988). Such portrayals may be as common as violence in pornographic materials. In a survey of X-rated videocassettes Cowan et al. (1988) found that 26% of all sexually explicit scenes were characterized by exploitation, in which one participant was "clearly using [another] without consideration of the used person," while 28% were characterized by dominance, in which one person controlled the sex act using verbal or physical force. Most of the dominating and exploiting was found to have been perpetuated by males.

In dial-a-porn services, Glascock and LaRose (1993) found subservience to be one of the more frequent themes (38% of all sampled recordings). Subservience was defined as "when one party was actively encouraging or soliciting

sexual behaviors primarily for the satisfaction of others" (p. 317). Duncan (1991) also found more scenes (18.1% of all scenes) in a sample of adult videos contained acts of degradation (as defined by the Meese Commission<sup>2</sup>) than acts of violence (13.6% of all scenes).

In X-rated videos, it appears that degrading behaviors toward women, without violence, are as common as violent behaviors. It also appears that a significant portion of the adult population is exposed to these types of depictions, many on a somewhat frequent basis. The potential effect these portrayals may have on viewers, then, can be considered somewhat consequential in light of the substantial and somewhat frequent viewership of X-rated materials.

#### Policy considerations

In the United States and Canada, research into the effects of pornographic materials on attitudes and behavior has played a prominent role in policy initiatives as well as legal analysis. In the United States the Meese Commission was established during the administration of President Ronald Reagan and given the mandate to "explore possible

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<sup>2</sup> In its Final Report (Department of Justice, 1986) the commission defined nonviolent, degrading pornography as that which "depicts people, usually women, as existing solely for the sexual satisfaction of others, usually men, or that depicts people, usually women, in decidedly subordinate roles in their sexual relations to others, or that depicts people engaged in sexual practices that would to most people be considered degrading" (p. 331).

roles and initiatives the Department of Justice and agencies of local, state and federal government could pursue in controlling, consistent with constitutional guarantees, the production and distribution of pornography" (Department of Justice, 1986, p. 216). Relying heavily on findings from experimental studies, the commission concluded that exposure to violent and, somewhat more tentatively, nonviolent pornographic materials might lead to antisocial beliefs and/or increased sexual aggression against women.

As a means of "addressing the expansive scope... of the pornography problem" (p. 465), the commission published a list of 92 recommendations. One directive, using the Racketeer Influenced Corrupt Organization Act (RICO) to prosecute obscenity violators, was proposed because, it "could, in appropriate cases, virtually eliminate a large-scale pornography operation" (Department of Justice, 1986, p. 519). Under the RICO statutes, if a defendant is convicted of an obscenity violation, the forfeiture of any properties (bank accounts, inventories, buildings, yachts, etc.) involved in or derived from the business becomes mandatory (U.S. Code, 1988). Two cases illustrate the rather severe consequences of a RICO prosecution. In one case, after finding magazines and videotapes worth \$105.30 to be obscene, a federal court ordered the forfeiture of a business (three adult bookstores and eight videotape clubs) with total annual sales of \$2 million (U.S. v. Pryba, 1990). In another case a court ordered the forfeiture of a business

that included 13 adult bookstores and video stores as well as almost \$9 million in personal assets (Alexander v. Thornburgh, 1990). Such forfeiture judgements may have, as one defense lawyer asserted, "profoundly intimidat[ed] anyone who would test the waters of sexual expression of any sort" (Hansen, 1992, p. 28).

In R. v. Butler the Canadian Supreme Court became the first court worldwide to explicitly accept the argument that certain types of pornography harm women (Lewin, 1992). Under Canadian law, in order for a work to be found obscene it must clearly depict the "undue exploitation of sex" (Canadian Criminal Code, 1985). Central to the determination of what is undue exploitation is the "community standard of tolerance" test which, until recently, was primarily concerned with what Canadians would find not tolerable for other Canadians to be exposed to (R. v. Towne Cinema Theatre Ltd., 1985). In Butler Sopinka J., writing the majority decision, incorporated the idea of harm into the community standard test: "The courts must determine as best they can what the community would tolerate others being exposed to on the basis of the degree of harm that may flow from such exposure" (R. v. Butler, 1992, p. 484).

Sopinka J. divided pornography into three categories: (1) explicit sex with violence, (2) nonviolent, explicit sex that is degrading or dehumanizing and (3) explicit sex that is neither violent nor degrading. The court noted that "among other things, degrading or dehumanizing materials

place women (and sometimes men) in positions of subordination, servile submission or humiliation" (R. v. Butler, 1992, p. 479). Sopinka J. then concluded that the first category would almost always constitute the undue exploitation of sex, the second category would usually do so while the third category, explicit sex, would not. Citing the Meese Commission among others, Sopinka J. noted that there was a "substantial body of opinion that holds that the portrayal of persons being subjected to degrading or dehumanizing sexual treatment results in harm, particularly to women and therefore to society as a whole" (R. v. Butler, 1992, p. 479).

This linkage of pornographic materials, violent and nonviolent, with harmful effects has set a somewhat ominous precedent in Canada (Kramer, 1992). For example, in a case decided less than six months after Butler and relying on the court's rationale in Butler, a lower court upheld the government's confiscation of gay erotica as obscene. The court found these materials degrading and dehumanizing, describing them as encounters "without real meaningful human relationship" and not "compatible with the proper functioning of society" and as such, inferring harm (Glad Day Bookshop, 1992).

As noted, research into the potential effects of violent and degrading pornographic materials has had significant consequences for public policy in both the United States and Canada. In the United States this research

has been used to justify increased prosecution of the distributors of pornographic materials. In addition, the Draconian penalties exacted under the RICO statutes have reportedly served to "chill" sexually explicit expression. In Canada, these social science studies have been used to support an outright ban on sexually explicit expression that is deemed violent or degrading by the government.

### Behavioral Changes

#### Aggression.

Research on the effects of sexually explicit materials has evolved from an arousal model to a more cognitive one. Much of the early research was based on a model of excitation transfer proposed by Zillmann (1971). This model describes a situation in which two arousing conditions occur in sequence. Arousal to the first does not dissipate immediately and can be transferred to the second condition, thereby adding to the arousal caused by the latter. So, for example, if a male is provoked, then exposed to an arousing communication and then given a chance to retaliate against his provoker, the strength of his retaliation will vary in accordance with the arousal elicited by the communication. In this model it is the arousal as opposed to the content that predicts the resulting aggression. What is meant by aggression in this paper is "any form of behavior that is intended to injure someone physically or psychologically" (Berkowitz, 1993, p. 3).

The excitation-transfer model was supported by a number of subsequent studies using either films (Meyer, 1972; Zillmann, Hoyt & Day, 1974) or textual passages (Fisher & Harris, 1976) as stimuli. (For a summary of these studies and others discussed in this section please see Table 1.) Other experimenters, notably Baron (1974a, 1974b), reported contrary results--that subjects, first angered and then exposed to erotica, subsequently exhibited less aggressiveness toward a confederate. One discrepancy in these studies was the difference in stimuli used (Baron & Bell, 1977; Donnerstein, Donnerstein & Evans, 1975). All the studies in which aggression increased used films or text as stimuli while studies in which aggression decreased photos were used. Donnerstein et al. (1975) reasoned that exposure to photographic stimuli may have resulted in a lower level of sexual arousal than that of the films and text. These authors theorized that exposure to erotic materials could result in an "attentional shift" in which a previously provoked person's attention could be diverted, resulting in less aggressiveness. However if the level of arousal was great enough, this attentional shift could be overcome, resulting in increased subsequent aggression.

Several subsequent experiments were generally successful in finding reduced aggression to be the result of exposure to mildly erotic materials (Donnerstein et al., 1975; Baron & Bell, 1977). In a study involving females Baron (1979) found subjects exposed to more explicit sexual



Table 1

Aggressiveness and Exposure to Erotica

<u>Study</u>	<u>Stimuli</u>	<u>Subjects</u>	<u>Procedure</u>	<u>Results</u>
Zillmann (1971)	S's viewed aggressive (violent prize fight), erotic (precoital behavior with female nudity) or neutral (educational) 6-7 min. film segments; a pre-test for arousal showed the erotic film most arousing followed by aggressive, then neutral	63 male students	S's angered by receiving shocks from confederate, exposed to films, then given a chance to use shocks to punish the confederate	Erotic condition resulted in more intense shock responses than aggressive which resulted in more intense shock responses than neutral
Meyer (1972)	S's viewed violent (knife fight, which was justified by experimenter), erotic ("stag" movie), or neutral 4-min. film segment or were in no exposure condition	48 male students	S's angered by shocks from confederate, exposed to films, then given chance to use shocks against confederate	S's in violent condition delivered more shocks than those in erotic condition who delivered more shocks than those in neutral or no exposure conditions

**Study**

**Stimuli**

**Subjects**

**Procedure**

**Results**

<u>Study</u>	<u>Stimuli</u>	<u>Subjects</u>	<u>Procedure</u>	<u>Results</u>
Zillmann, Hoyt & Day, (1974)	S's exposed to neutral, aggressive, violent and erotic 6-min. film segments; Erotic film consisted of heterosexual foreplay and intercourse; all conditions were followed by clip from an educational film	60 male students	S's were provoked by receiving noxious noise, exposed to film segments, then given a chance to administer noise to confederate; measures of blood pressure and heart rate taken before provocation and after provocation, exposure and retaliation.	S's in erotic condition delivered more intense noise than subjects in other conditions. Arousal for erotic condition exceeded all other conditions
Fisher & Harris (1976)	S's read a neutral, aggressive or erotic (precoital and coital activities)	89 female and 61 male students	S's were provoked or not by an insulting cover sheet or an innocuous cover sheet, read one of three stories, then evaluated experiment as well as researcher	The erotic group was more aggressive (total score on evaluations) than subjects in neutral condition. No sex differences or differences between insulted or non-insulted S's were found
Baron (1974a)	S's looked at either 10 pictures of nude women taken from Playboy or neutral pictures of furniture, scenery, etc.	40 male students	S's were angered, or not, by negative evaluations and shocks, asked to look at the stimuli and then given a chance to deliver shocks to confederate	The erotic slides were rated as more arousing and resulted in lower levels of shock intensities among angered subjects compared to neutral slides; no differences were found among non-angered subjects

Study	Stimuli	Subjects	Procedure	Results
Baron (1974b)	S's looked at 10	36 male students	S's were angered, or	S's in cheesecake and

<b><u>Study</u></b>	<b><u>Stimuli</u></b>	<b><u>Subjects</u></b>	<b><u>Procedure</u></b>	<b><u>Results</u></b>
Baron (1974b)	S's looked at 10 neutral pictures of scenery, etc., "cheesecake" pictures taken from magazine advertisements or nude photos taken from <u>Playboy</u>	36 male students	S's were angered, or not, by negative evaluations, asked to look at the stimuli and then given a chance to deliver shocks to confederate	S's in cheesecake and nudes conditions less aggressive than neutral group; anger manipulation was found ineffective ( $p > .20$ )
Baron & Bell (1977)	S's looked at 10 neutral, "cheesecake," female nude photos or photos contained explicit sexual acts, or read 10 typed descriptions of sexual activity.	86 male students	S's were given negative evaluations, or not, given the stimuli and then allowed to aggress against the confederate by delivering shocks	All conditions were rated more arousing than the neutral condition; non-angry S's less aggressive in acts group compared to neutral group; angry S's less aggressive in cheesecake and acts groups than neutral group
Baron (1979)	S's looked at 10 photos of scenery, art, etc., men in bathing suits ("beefcake" photos), male nudes taken from <u>Playgirl</u> or couples engaged in heterosexual activities	45 female students	S's angered by female confederate's negative personality evaluations, or not angered, exposed to stimuli and then given chance to administer electric shocks to confederate	S's reported being more aroused after examining acts than neutral, beefcake or nude photos; S's also rated acts more disgusting than neutral or beefcake; angry S's aggression reduced after exposure to beefcake photos but enhanced after exposure to acts photos; no differences were found among non-angry S's

<u>Study</u>	<u>Stimuli</u>	<u>Subjects</u>	<u>Procedure</u>	<u>Results</u>
Donnerstein, Donnerstein & Evans (1975)	S's looked at neutral, female nude or female- male nude with implied sexual activity photos; a pretest indicated arousal followed expected pattern with female-male nudity > female nudity > neutral	81 male students	Subjects were insulted either before or after looking at photos or not insulted, then given a chance to deliver shocks to confederate	When subjects were insulted first, nude photos reduced aggression; when subjects were insulted after the exposure condition, aggression increased in the "highly arousing" (male-female nudes) condition
Zillmann & Sapolsky (1977)	S's viewed 10 photos of neutral materials, nude women or couples engaged in various sexual activities	66 male students	S's were angered by false accusations or not angered, exposed to stimuli and then asked to evaluate the confederate; then S's were asked to evaluate the slides	Angered S's exposed to photos of nudes and acts reported less annoyance to experiment; these two conditions were also perceived as more exciting and pleasing than neutral condition; non-angered S's evidenced no effects

**Study**

**Stimuli**

**Subjects**

**Results**

White (1979)

S's viewed one of four sets of 10 slides (1) positive response: mutual genital fondling, intercourse, fellatio, (2) ambivalent response: fellatio and cunnilingus, (3) negative response: male masturbation, cunnilingus, (4) neutral: clothed and partially clothed males and females; there was also a no exposure condition

S's were angered by negative personality evaluations, or not angered, exposed to stimuli which were rated along affective dimensions, or assigned to control group, then given a chance to shock confederate

Angered S's less aggressive after exposure to stimuli found to elicit high sexual arousal and low negative affect; no differences were found among non-angered S's

Sapolsky & Zillmann (1981)

S's were placed in one of five conditions: no exposure, non-erotic, nudity, petting, coitus with genitalia shown or coitus or oral sex with genitalia shown; the duration of each film was about 4 mins.

120 male subjects

S's were angered by false accusations or not angered, exposed to stimuli or not, then given chance to evaluate confederate; then subjects evaluated the affective qualities of the film viewed

Angered S's exposed to petting film evidenced increase in retaliatory behavior toward confederate; the petting film was only film judged disturbing and arousing; no effects were found for non-angered S's

<u>Study</u>	<u>Stimuli</u>	<u>Subjects</u>	<u>Procedure</u>	<u>Results</u>
Sapolsky & Zillmann (1981) (cont'd)	same as above	60 female subjects	same as above, except female confederates were used	Provoked S's evidenced greater retaliation after exposure to coitus with genitalia shown than S's in petting or control conditions; females perceived the coitus and petting films as equally disturbing, displeasing and more so than males; no effects were found for unprovoked S's
Zillmann, Bryant, Comisky & Medoff (1981)	S's were assigned to one of 8 film conditions or a control; 6-min. film segments were varied by affect (positive or negative), arousal (low or high) and sexual explicitness (erotic or non-erotic)	74 male students	S's were angered by written and verbal insults, exposed to the stimuli or placed in a no-exposure condition, then the subject was again insulted during a competitive game in which he could deliver noxious noise to the confederate, finally S's were asked to evaluate the films	Exposure to stimuli that combined high arousal and negative affect, whether erotic or non-erotic, produced higher levels of noise
Zillmann, Bryant & Carveth (1981)	S's viewed 15 photos of nude women, film segments involving bestiality or film segments depicting sadomasochism; the film segments were 6 minutes in duration	40 male students	S's were angered by overinflating blood pressure cuff, exposed or not exposed to stimuli and then given chance to overinflate confederate's cuff	S's exposed to bestiality and sadomasochism reported stimuli as more displeasing and evidenced more arousal to them; angered S's overinflated the blood pressure cuff the longest



<u>Study</u>	<u>Stimuli</u>	<u>Subjects</u>	<u>Procedure</u>	<u>Results</u>
✓ Cantor, Zillmann & Einsiedel (1978)	S's viewed a neutral, aggressive, (prizefight) or erotic, (couple engaged in intercourse) 6-7 minute film clip	60 female students	S's viewed stimuli, provoked by receiving a loud noise from confederate, or not provoked, and then given a chance to administer noise to confederate	Arousal to films followed the pattern of erotic > neutral > aggressive; provoked S's who had seen the erotic film delivered higher levels of noise than S's in other two conditions; no differences were found among non-provoked S's
Donnerstein & Barrett (1978)	S's viewed 4-min. clips of either a stag film depicting oral, anal intercourse as well as female homosexuality or a neutral film (wildlife documentary)	72 male students	S's were angered by written evaluations and shocks from a male or female confederate, or not angered, exposed to the stimuli and then given a chance to aggress against confederate	Angered subjects paired with female target had higher levels of arousal after exposure to stag film than those paired with male; angered subjects paired with male administered higher levels of shocks than those paired with females; angered subjects exposed to erotic films were more aggressive than those subjects exposed to neutral films

Study	Stimuli	Subjects	Procedure	Results
Donnerstein & Hallam (1978)	Subjects viewed 7 min. sex film clips	60 male students	S's were angered by	Aggressive and erotic

<u>Study</u>	<u>Stimuli</u>	<u>Subjects</u>	<u>Procedure</u>	<u>Results</u>
Donnerstein & Hallam (1978)	Subjects viewed 7 min. stag film clips featuring oral, anal sex and female homosexuality or aggressive film clips from "The Wild Bunch"	60 male students	S's were angered by written evaluations and shocks by male or female confederate, exposed to stimuli or assigned to control group, then given a chance to shock confederate both immediately after film viewing and 10 min. later	Aggressive and erotic films produced higher levels of shocks after both aggression opportunities; in the second aggression opportunity, exposure to the erotic film produced higher levels of shocks against female compared to male targets
Donnerstein (1980)	S's viewed an erotic film, neutral film or a sexually violent film; each film was about 4 mins. in duration	120 male students	S's were angered by written evaluations and shocks, or not angered, exposed to the stimuli and then given a chance to deliver shocks to a confederate (male or female)	Arousal to the erotic and sexually violent films was greater than that to neutral films; for S's paired with a male target, erotic and sexually violent film increased aggressive responses; for S's paired with female target, only sexually violent increased aggressiveness; a similar finding was made for non-angered S's-- exposure to sexually violent clip increased aggression against female target compared to erotic and neutral films

Study	Stimuli	Subjects	Procedure	Results
Donnerstein & Berkowitz (1981)	S's viewed a neutral film, erotic film,	80 male students	S's were angered by shocks and a poor	All three erotic films were rated as more arousing than the neutral film.

<u>Study</u>	<u>Stimuli</u>	<u>Subjects</u>	<u>Procedure</u>	<u>Results</u>
Donnerstein & Berkowitz (1981)	S's viewed a neutral film, erotic film, sexually violent film in which the women enjoys the attack or a sexually violent film in which the women finds the attack humiliating; each film was 5 minutes in length	80 male students	S's were angered by shocks and a poor evaluation by a male or female confederate, exposed to the stimuli, then given a chance to deliver a shock or reward the confederate	All three erotic films were rated as equally arousing; S's paired with female targets evidenced increased aggressiveness after exposure to both types of sexually violent films
Donnerstein & Berkowitz (cont'd)	same as above	80 male students	Same as above except that a non-angered condition was included and the target was always a female	The erotic and sexually violent films elicited more arousal than the neutral film; angered S's evidenced more aggressiveness after exposure to both types of sexually violent films; non-angered subjects evidenced more aggressiveness only after exposure to the sexually violent film in which the female is depicted as enjoying the attack
Malamuth & Ceniti (1986)	S's assigned to sexually violent, sexually nonviolent or no-exposure condition; S's in exposure conditions viewed six films over a three week period	42 males, all but one were undergraduate students	S's were exposed to stimuli, one week after last exposure S's were angered by negative evaluations from a female confederate and then given a chance to aggress against the confederate; Likelihood to Rape index	No significant effects

Study	Stimuli	Subjects	Procedure	Results
Fisher & Grenier (1994)	S's assigned to one condition, a five-	22 male students, 8 were eliminated due	S's were angered by a female	9 subjects chose to

<u>Study</u>	<u>Stimuli</u>	<u>Subjects</u>	<u>Procedure</u>	<u>Results</u>
Fisher & Grenier (1994)	S's assigned to one condition, a five-minute segment of violent pornography with a positive ending	22 male students, 8 were eliminated due to suspicion, resulting in a final sample of $n = 14$	S's were angered by a female confederate by electric shocks and a negative evaluation, exposed to the stimuli and given three options: deliver electric shocks, deliver a verbal evaluation or skip the evaluation altogether	9 subjects chose to skip the evaluation, 3 chose to speak with the confederate and 2 subjects chose to send electric shock

activity did evidence an increase in aggression. Subjects in this condition also reported more disgust after viewing the stimuli leading Baron to suggest that a person's affective reactions to erotica might mediate subsequent aggressive tendencies. Specifically, if arousal is labelled in a negative manner (disgust) later aggression will increase since a person's anger or annoyance should be enhanced; if arousal is labelled in a positive fashion, then subsequent aggression should be reduced. However, studies designed to support the arousal-affect model have yielded inconsistent results. Zillmann and Sapolsky (1977) found erotic photos, which were perceived as more exciting and pleasing than neutral stimuli, reduced reported annoyance with the experiment, but had no effect on retaliation against the experimenter. White (1979) found that sexually explicit slides rated low on negative affect decreased aggression, but erotic slides rated high on negative affect failed to increase aggression. Several subsequent studies have found increased aggression after exposure to arousing, disturbing erotica, but no effect on aggression for arousing, pleasant erotica (Sapolsky & Zillmann, 1981; Zillmann, Bryant & Carveth, 1981; Zillmann, Bryant, Comisky and Medoff, 1981). In some of these studies disturbing erotica was described as containing sexually violent (sadoomasochism) and/or degrading behaviors (bestiality) (Zillmann, Bryant & Carveth, 1981; Zillmann, Bryant, Comisky and Medoff, 1981), lending support to the notion that the message (violence or degradation) of



these types of materials may lead to increased aggression.

An alternative explanation for the findings discussed above is offered by Feshbach and his associates (Feshbach & Malamuth, 1978; Malamuth, Feshbach & Jaffe, 1977) who argue that subjects could have been disinhibited by exposure to materials commonly tabooed and hence this disinhibition carried over to aggressive behavior which is also tabooed. In effect sexual arousal does not lead to aggression; it is the reduction in sexual inhibition that does so. Support for Feshbach's arguments comes from a series of studies in which subjects, not provoked, exhibited an increase in aggressive behavior after exposure to erotic materials (Jaffe & Berger, 1977; Jaffe, Malamuth, Feingold & Feshbach, 1974). However, other researchers have not been able to duplicate these findings. Studies that have included a condition in which subjects were not provoked have reported null findings (Baron, 1974a; Baron, 1979; Cantor et al., 1978; Donnerstein & Barrett, 1978; Donnerstein et al., 1975; Sapolsky & Zillmann, 1981; White, 1979; Zillmann & Sapolsky, 1977) or, occasionally, less aggression after exposure to sexually explicit materials (Baron, 1974b, Baron & Bell, 1977).

To summarize the findings up to this point, it appears that exposure to erotica can increase aggression if subjects are provoked and experience negative affect. However, when provoked subjects experience positive affect during exposure to erotica, aggression is inhibited, typically resulting in null findings. In general, exposure to nonviolent erotic

materials, without prior provocation, has failed to produce aggressive urges. It should be noted here that erotica simply meant any form of sexual explicitness, which could range from nudity to intercourse to sadomasochistic acts. Films rated as disturbing, and shown to increase aggression, included those containing violence as well as degrading acts such as bestiality. In some cases, what was described as negative affect, then, was also violent and degrading.

Also up to this time, researchers had only examined same-sex (usually male-male) aggression. However, a more policy-oriented approach has proven to be whether exposure to pornography could result in increased male aggression toward females. Beginning in the late 1970s Donnerstein and his colleagues undertook a number of studies to determine the effect of pornography on aggression against women. In an initial study Donnerstein and Barrett (1978) found that while angered subjects paired with a female confederate reported more arousal after exposure to a stag film, they aggressed less than subjects paired with a male confederate. The authors theorized that perhaps social disapproval of aggressing against a female might have inhibited responses toward the female confederate. In a follow-up study, when male subjects (both angered and non-angered) were exposed to a stag film and given a second chance to aggress, aggressive responses toward the female target increased significantly in comparison to a male target (Donnerstein & Hallam, 1978). Even though the erotic films used in these two experiments

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contained only non-violent content such as anal intercourse, oral sex and female homosexuality, Donnerstein and Hallam (1978) reasoned that the depiction of women in submissive, passive roles might have contained "subtle aggressive cues" that in turn elicited increased aggression against women. Other researchers have suggested that sexual activities similar to those described in the non-violent condition above be characterized as degrading to women (Russell, 1980). Hence one could infer that nonviolent, degrading materials might lead to increased aggressive behavior.

Subsequent experiments have shown that even non-angered subjects, when exposed to sexually violent pornography, exhibit an increase in aggression toward a female target compared to a neutral or erotic film (Donnerstein, 1980; Donnerstein & Berkowitz, 1981). The rationale for these findings can be found in the work of Berkowitz (1974) who has shown that individuals can take on an "aggressive cue" value if they have been associated with observed acts of aggression. So, for example, showing a female as a victim of aggressive acts, should increase the aggression-eliciting properties of females in general. As a result, the viewing of such portrayals may increase subsequent aggression toward females. This seems to be especially true when the aggression portrayed is shown as having positive consequences. In Donnerstein and Berkowitz's (1981) study, when the rape victim was depicted as enjoying the sexual assault, even non-angry subjects later exhibited more

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aggressiveness towards a female target than subjects exposed to either neutral, erotic or negative ending films. Apparently the positive outcome ending (the female enjoys the sexual aggression) justified and reduced subjects' inhibitions about aggression. Among provoked subjects, both the positive ending and negative ending films increased aggression towards a female. Provoked subjects exposed to the negative ending video may have been predisposed to hurt someone and the association of the assault victim's pain with this disposition may have evoked a heightened aggressive response (Berkowitz & Donnerstein, 1981).

In a more recent study, Malamuth and Ceniti (1986) found no effects on aggression toward women after exposing subjects to violent and nonviolent pornography during a 4-week period. One reason for this might have been the length of time (1 week) between subjects' last exposure and the aggression evaluation. Previous experiments finding effects had assessed aggression immediately after exposure to stimuli (Donnerstein, 1980; Donnerstein & Berkowitz, 1981; Donnerstein & Hallam, 1978). Malamuth and Ceniti, citing Berkowitz (1974), note that exposure to mass media usually produces only short-term effects because its influence comes from the temporary activation in viewer's minds of cognitions that may intensify individual behavior tendencies. Before behavior can be again intensified in some future point in time, the message must be reactivated, i.e. certain "retrieval cues" must occur in the individual's

environment. In other words, subjects would need to be placed in situations similar to those depicted.

Fisher and Grenier (1994) designed an experiment to test the ecological validity of studies showing aggression against women after exposure to sexual violence. In this experiment, which was similar to Donnerstein and Berkowitz's study (1981), subjects were given three options at the end. They could evaluate the female confederate by delivering electric shocks (the method used by Donnerstein and Berkowitz); they could give a verbal evaluation; or they could skip the evaluation altogether. Given these alternatives, most subjects (86%) in the study chose the non-aggressive response. While the results of this study seem somewhat plausible, they do not lend themselves to easy interpretation. For example, subjects could have chosen to skip the evaluation simply to get out of the study early. While this may indicate a lack of aggression, it may also indicate these students had better things to do than to continue participating in an experiment once they had earned their credits.

Based on a relatively limited number of studies, it appears the effects of exposure to violent, sexually explicit materials on aggression may be somewhat transitory. For non-angered subjects, aggression may be increased after exposure to sexual violence depicting positive consequences. For provoked subjects, aggression may be increased regardless of ending. In any event, it appears that the

violence is the key ingredient, with the positive ending and/or provocation serving as further disinhibitors.

Aggression procedures.

The provocation-retaliation sequence used in the previous experiments utilized several different techniques to induce anger as well as measure retaliation. Most commonly, shocks or some other physical measure of aggression (loud noise) were used for both the provocation and retaliation phases (Baron, 1974a, 1974b; Donnerstein & Barrett, 1978; Donnerstein & Hallam, 1978; Meyer, 1972; Zillmann, 1971; Zillmann et al., 1974). Other studies used some form of verbal aggression for both the provocation and retaliation procedures (Fisher & Harris, 1976; Sapolsky & Zillmann, 1981; Zillmann & Sapolsky, 1977). Still others used a combination of the two (typically a negative evaluation, then shocks or noise; Baron, 1974b, 1979; Baron & Bell, 1977; Donnerstein et al., 1975; White, 1979; Zillmann et al., 1981).

There are advantages and disadvantages for each method. The advantage of using physical aggression is that it permits the most direct measure of physical assaults (Baron, 1977). However one problem with this technique, which usually requires the subject to give shocks to a confederate as part of a "learning" exercise, is the possibility that some subjects may select higher shocks, not out of a desire to inflict pain, but to help the confederate learn the



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materials rapidly in order to avoid future shocks (Baron, 1977). Another problem Baron points out is that of demand characteristics. Some subjects might think they are expected to deliver the same number of shocks as they received. In addition the use of physically aggressive measures to anger subjects has been reported to be a frequent objection, presumably of human subjects committees (Zillmann et al., 1974).

Baron (1977) notes several advantages to using verbal aggression measures. Since they involve only ratings or verbal comments there is usually no possibility of any serious harm to participants. Also, since verbal aggression is common in everyday life, these procedures provide subjects with an opportunity to aggress against the victim in a familiar manner. Finally, verbal aggression involves indirect rather than direct attacks against the victim, and as such is less prone to the influence of strong restraints or inhibitions. Of course, the drawback of verbal techniques is that they provide a less direct measure of physical aggression than do shocks or other physical assessments. However, verbal aggression measures do measure aggression, but in a different form. One requirement for interpreting verbal measures of aggression as actual aggression is that they have to include the possibility of some type of harm to occur to the victim (Baron, 1977).

Another procedure is the evaluation-shock method. Potential problems with this design were investigated by

McDaniel, O'Neal and Fox (1971) who found that mode of attack (shocks or ratings) made no significant difference in attacked subjects' negative evaluation of a confederate. However the attacked subjects evaluated the confederate more negatively if the mode of evaluation was the same for both subject and confederate. Thus, the authors argue, subjects are more aggressive, and less inhibited, when the opportunity for retaliation is less obvious, i.e., the same as that used for the anger instigation.

Verbal measures used in aggression studies have generally followed the procedure introduced by Berkowitz, Corwin and Heironimus (1963). These experimenters gave subjects a page from a multiple choice intelligence test and had them complete problems on the page as quickly as possible. In the provocation condition the confederate explained the test in an extremely condescending manner, in general insulting the intelligence of the students at the university. The confederate also badgered and insulted the subjects while they worked on the problems. Immediately after exposure to a film stimulus subjects were given a form with questions evaluating the experiment as well as the experimenters.

Zillmann and his colleagues have used a similar procedure in studying aggressive behavior. In one study subjects first interacted with a polite experimenter in doing a relatively easy task (Zillmann et al., 1975). Next subjects were treated rudely by a second experimenter while

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performing a more difficult task. Later subjects were asked to evaluate the experiment as well as rate the experimenters. Subjects were told the ratings of each experimenter were to be used in determining his future financial and academic support as a graduate student ("To aid the departments in determining stipends for research assistantships, we are including the following questions to be forwarded to the experimenter's major department."). Other aggression studies, not necessarily involving erotic materials, by Zillmann and his colleagues have employed the same general procedure but with slight variations on how subjects were verbally provoked by the rude experimenter (Bryant & Zillmann, 1979; Zillmann & Cantor, 1976).

The question of whether aggression found in the laboratory is indicative of real-world aggression has been addressed in a number of studies. Several studies have reported significant correlations between observed aggression in naturalistic settings and the deliverance of higher levels of shock via an aggression machine (Hartmann, 1969; Shemberg, Levanthal & Allman, 1968; Wolfe & Baron, 1971). For example, Wolfe and Baron (1971) found that male prisoners with a history of highly aggressive acts delivered higher levels of shocks than male college students. Shemberg et al. (1968) found that male and female teenagers, rated high in aggressiveness by their counselors in an "Upward Bound" program, chose to deliver significantly stronger shocks against a confederate than subjects rated low in

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aggressiveness. A more recent study by Malamuth (1983) found that subjects who held attitudes favorable toward aggression against women (high scores on Burt's (1980) Rape Myth Acceptance and Acceptance of Interpersonal Violence scales) exhibited higher levels of aggression toward a female confederate in a laboratory experiment. Construct validity of laboratory measures of aggression was demonstrated by Carlson, Marcus-Newhall and Miller (1990) who examined results of such measures reported in more than a hundred publications. Over all the studies examined, these authors found that variations in the experimental conditions consistently led to expected differences in the laboratory aggression measures used.

Regardless of the procedure used, it appears the provocation-retaliation sequence works most effectively when the same method is employed for both parts. That is, a verbal retaliation measure works best when the provocation procedure is also verbal. While there are advantages and disadvantages for using either measure, verbal and physical aggression are two quite different concepts. Verbal aggression measures verbal aggression and can not realistically be considered a measure of physical aggression. However both modalities are a form of aggression and each can have detrimental effects on recipients (See Kinney, 1994, for a discussion of the effects of verbal aggression on receivers).

## Attitude Changes

### Degrading materials.

In the 1980s the emphasis of research in pornography turned to examining the effect pornographic materials might have on attitudes and perceptions toward women. (For a summary of studies discussed in this section please see Table 2.) A catalyst for these studies were feminist writings contending pornographic materials were degrading to women and female sexuality (Zillmann & Bryant, 1982). In an initial study involving nonviolent pornography Zillmann and Bryant (1982) described these materials as portraying females as "anonymous, panting playthings that men liberally exploit for sexual gratification" and as "eager to accommodate any and every imaginable sexual urge of any man in the vicinity" (p. 12). These authors found that subjects massively exposed to this type of pornography, compared to those intermediately or not exposed, estimated various adult sexual practices to be more pronounced, considered pornography less offensive and objectionable, recommended a shorter prison sentence for a rapist (trivialized rape) and reported less support for the women's liberation movement. In addition, male subjects exposed to massive doses of pornography evidenced greater sexual callousness toward women than males in the other two conditions.

Zillmann and Bryant's study has been criticized on a number of methodological grounds, including experimental design (Gross, 1983), the use of unrealistic stimulus





Table 2

Pornography and Attitudes Toward Women

<u>Study</u>	<u>Stimuli</u>	<u>Subjects</u>	<u>Dependent Measures</u>	<u>Results</u>
Zillmann & Bryant (1982)	S's viewed films of heterosexual activities including fellatio, cunnilingus, intercourse and anal intercourse. Levels of exposure included massive (about 5 hours), intermediate (2 hours), intermediate (2 and ¼ hours) or no exposure (36 non-erotic films) over a six-week period	80 male and 80 female students	Estimation of percentage of adults practicing common and uncommon sexual behaviors; recommendation of a prison sentence for a rapist; support for women's liberation movement; Sexual Callousness Toward Women scale	S's massively exposed to pornography estimated higher percentage of adults practicing uncommon sexual activities, reported less support for women's liberation movement and recommended more lenient prison sentence for a rapist; in addition male S's massively exposed exhibited greater sexual callousness toward women
Zillmann & Bryant (1988)	S's were exposed to 6 hours of films over a 6 week period; in the control condition S's viewed TV situation comedies, in the pornography condition S's viewed X-rated videos featuring oral sex, anal intercourse and coition	160 male and female students and non-students	Inventory of Personal Happiness scale (17 items)	Items pertaining to happiness with one's sexual partner were reported in significantly lower levels by S's exposed to pornography

<u>Study</u>	<u>Stimuli</u>	<u>Subjects</u>	<u>Dependent Measures</u>	<u>Results</u>
Weaver (1987)	S's exposed to one of five short film segments (neutral, consensual sex, female-instigated-sex, male-coerced sex, sexual violence)	60 male and female students	S's given set of narrative exemplars, then asked to rate exemplars before exposure and set of post-exposure slides on a list of 24 adjectives; also after exposure S's read two legal trials (physical assault and rape) and recommended monetary damages and prison sentence for rapist	Male S's in female-instigated sex and consensual sex conditions perceived non-permissive female peers as more permissive than S's in neutral condition; compared to neutral materials, materials in all other conditions shifted perceptions of non-permissive female peers so that they were more like sexually promiscuous and sexually submissive pre-exposure exemplars; Female-instigated, male-coerced and eroticized violence subjects recommended a lower prison sentence for a rapist.
Leonard & Taylor (1983)	S's viewed neutral slides or erotic slides during which a female made permissive, non-permissive or no cues	40 male students	Intensity of shocks administered to a female confederate	S's in the permissive cues condition delivered higher levels of shocks than the other three groups (non-permissive cues, no cues and neutral) which did not differ from each other

<u>Study</u>	<u>Stimuli</u>	<u>Subjects</u>	<u>Dependent Measures</u>	<u>Results</u>
Wyer, Bodenhausen & Gorman (1985)	S's were exposed to one of several sets of slides including ones depicting women as sexual objects; other concepts primed included aggression and close personal relationships	35 male and 35 female students	S's given various versions of a rape incident and then asked to respond to a 9-item questionnaire	Exposure to sex object stimuli decreased male subjects' beliefs that the rape victim was telling the truth about the assault and increased their beliefs that she was telling the truth about the incident
McKenzie-Mohr & Zanna (1990)	S's viewed either a neutral or sexually explicit video including intercourse and oral sex	60 male students	S's were pre-tested on the Bem Sex Role Inventory; dependent measures included sexual motivation, interpersonal distance and recall and reaction time of recall of physical features of a female interviewer	Masculine sex-typed S's exposed to the pornographic video were judged to be more sexually motivated, tended to move their chairs closer to a female experimenter ( $p < .06$ ) and recalled more about the experimenter's physical features than subjects exposed to the neutral video or androgynous S's exposed to the pornographic video

<u>Study</u>	<u>Stimuli</u>	<u>Subjects</u>	<u>Dependent Measures</u>	<u>Results</u>
Check & Guloien (1989)	S's assigned to one of four conditions: sexually violent, nonviolent, dehumanizing, erotica and no exposure control	117 male students and 319 male non-students	Rape Myth Acceptance scale, Adversarial Sex Beliefs scale, five items from Acceptance of Interpersonal Violence scale, Likelihood of Rape/Force Sex Acts ratings (2 items), Sexual Callousness Scale	S's scoring high on psychoticism scale in violent and dehumanizing conditions reported greater likelihood of rape and forced sex acts; frequent pornography consumers exposed to dehumanizing pornography reported a greater likelihood of raping, evidenced higher levels of sexual callousness toward women and reported more sexually aggressive behavior than similar subjects not exposed
Malamuth & Check (1985)	S's listened to one of eight stories in a fully crossed factorial design (woman's consent vs. non-consent X woman's pain vs. no pain X woman's arousal vs. disgust)	145 male students	S's heard stories of rape or mutually consenting intercourse and asked to indicate their impressions of woman's experience; following this S's answered questionnaire concerning general beliefs in rape myths	S's who heard nonconsenting-arousal depictions perceived more victim pleasure in Phase 2 rape story than S's in nonconsenting-disgust condition; S's scoring high on Likelihood of Rape measure thought higher percentage of women would enjoy being raped or doing some sexual they did not want to do after exposure to nonconsenting-arousal than nonconsenting-disgust version

<u>Study</u>	<u>Stimuli</u>	<u>Subjects</u>	<u>Dependent Measures</u>	<u>Results</u>
Linz, Donnerstein & Penrod (1984), Linz (1989)	S's viewed one R-rated violent film a day for five days or saw no films	24 males students	After viewing each film, S's completed a mood checklist and rated the film on sex and violence dimensions and how degrading it was to women; after last film S's watched reenactment of a rape trial and answered questionnaire regarding perceptions of defendant and assailant	S's exposed to R-rated violent films judged rape victim less injured and less worthy
Linz, Donnerstein & Penrod (1988)	S's were assigned to one of four conditions: R-rated violent films, X-rated nonviolent films, "teenage sex" films or no exposure; S's viewed either two or five films, one every other day	156 male students	After exposure S's administered various scales including Rape Empathy, modified version of Myth Acceptance, belief in conservative sex roles, endorsement of force in sexual relations and tendency to view women as sexual objects; then S's watched rape trial video and answered questionnaire designed to measure judgements of victim and defendant	S's exposed to R-rated violent films reported lower scores on pre-trial rape empathy measure
Malamuth & Check (1981)	S's viewed two sexually violent films, <u>The Getaway</u> and <u>Sweet Away</u> or two nonviolent films, none of the films was X-rated	65 female and 50 male students	Acceptance of Interpersonal Violence, Rape Myth Acceptance and Adversarial Sexual Beliefs scales	Scores of male subjects exposed to sexually violent films significantly higher on AIV scale

<u>Study</u>	<u>Stimuli</u>	<u>Subjects</u>	<u>Dependent Measures</u>	<u>Results</u>
Padgett, Brislin-Slutz & Neal (1989)	S's viewed either nonviolent pornography or non-erotic films; S's viewed one film every day for one week	43 females and 32 males	Questionnaire including items from Attitudes Towards Women (Spence & Helmreich, 1978), Sex Role Stereotyping, Adversarial Sexual Beliefs, Rape Myth Acceptance, Acceptance of Interpersonal Violence (Burt, 1980) and Sexual Conservatism (Malamuth & Check, 1981) scales	No significant effects

materials (Linz & Donnerstein, 1988) and confounding measures (Brannigan & Goldenberg, 1987; Christensen, 1986) as well as for theoretically paradoxical results (Brannigan, 1987). Worth noting are the measurement issues raised by Christensen (1986). Of primary concern is the sexual callousness scale, which the Christensen criticizes as confounding. The scale contains a number of "Anglo-Saxon four-letter words" and, as Christensen argues, exposure to pornographic films could have reduced the shock value of these words, thereby resulting in more positive responses. The validity of this criticism was conceded by Zillmann and Bryant (1986) who later retracted this part of their study.

One further criticism of Zillmann and Bryant's study of note is the theoretical paradox noted by Brannigan (1987). In an account of their experiment published elsewhere Zillmann & Bryant (1984) reported that subjects became less aggressive toward their targets after exposure to massive amounts of pornography. This decrease in aggression corresponded to a reduction in negative affect and increase in enjoyment to the pornographic stimuli, lending support to the arousal-affect model. However, if male subjects were becoming more sexually calloused toward women, why didn't they behave more aggressively toward them? The answer to this may lie in the fact that the aggression examined in Zillmann and Bryant's experiment was between subjects and targets of the same gender, not male toward female as Brannigan apparently assumes. Males, having developed



certain anti-social attitudes toward women as a result of exposure to pornography, might have aggressed more against females than other males, as did male subjects in Donnerstein and Hallam's study (1978).

A number of other studies have reported results lending support to Zillmann and Bryant's findings. The potential of exposure to pornography to lead to increased expectations of or dissatisfaction with one's sexual partner, was supported more directly by a subsequent experiment (Zillmann & Bryant, 1988) in which subjects massively exposed to pornography reported more sexual dissatisfaction with their current sexual partner. This finding is significant because, as the authors theorize, such disappointment could lead to conflict, and ultimately violence against one's sexual partner. The rape trivialization finding was replicated in a follow-up study by Weaver (1987) in which subjects were exposed to materials characterized as "female-instigated sex" in which women were portrayed as "eagerly and indiscriminately seeking and participating in sexual endeavors" (p. 47).

Exactly what cognitions might be primed by exposure to nonviolent materials have been examined in other studies. This priming process occurs when exposure to a communication makes certain cognitions more easily available in memory (Malamuth & Check, 1985). In turn, these recently activated cognitions will have a stronger influence than alternative cognitions on ensuing judgements. In a study designed to

prime the concept of "women as sex objects," Wyer, Bodenhausen and Gorman (1985) found slide portrayals of women depicted as sex objects decreased male perceptions of a rape victim's credibility and increased their beliefs that she was responsible for the assault. In Weaver's (1987) study, exposure to mutually-consenting and female-instigated film depictions, compared to the neutral stimuli, prompted male subjects' to perceive sexually discriminating female peers ("nice girls") as more permissive. Additionally, exposure to various types of R-rated films, including those in which the sexual activity was female-instigated, male-coerced or the violence was eroticized, shifted subjects' perceptions of a non-permissive female peer closer to that of a sexually promiscuous and a submissive prototype. The greater this shift in perception of women as permissive and submissive, the more lenient subjects were toward a rapist in terms of recommending a prison sentence. Of note here is that other research has shown that priming cognitions of female permissiveness may lead to increased inter-gender aggression (Leonard and Taylor, 1983).

In a study somewhat analogous to the sex-object priming demonstrated by Wyer et al. (1985), McKenzie-Mohr and Zanna (1990) hypothesized that exposure to pornographic stimuli would prime a "heterosexuality subschema" in male subjects. According to Bem (1981) such a subschema leads individuals to "code all cross-sex interactions in sexual terms and all members of the other sex in terms of sexual attractiveness"

(p. 361). In this latter study, subjects scoring above the median on the masculine scale of the Bem Sex Role Inventory (Bem, 1974) and below the median on the feminine scale were classified as masculine sex typed. The authors found that masculine sex-typed male subjects tended to be more sexist when interacting with a female after exposure to a sexually explicit video than when exposed to a neutral video. Similar results were reported by Check and Guloien (1989) who found that subjects who were "somewhat sexually aggressive" to begin with reported a greater likelihood of engaging in forced sexual activities including rape after exposure to violent and degrading pornography.

In sum, it appears that exposure to nonviolent, degrading pornography can prime certain cognitions in males that may lead to increases in anti-woman attitudes. These cognitions might best be described as viewing women in sexist terms, primarily as sex objects. Theoretically, the effect such cognitions might have on aggression comes from the literature on dehumanization, a process which strongly parallels that of degradation. In fact, the terms appear to be used interchangeably in the literature (Check & Guloien, 1989). Common to both is the loss of personhood by an individual, i.e., being treated as less than a human being or having no personal identity (Hill, 1987; Kelman, 1973; Zimbardo, 1969). Treating a woman as a sex object would fall into this category. Her personal identity and human qualities become secondary to her physical attributes. This

process of dehumanization has been theorized to lead to increased aggression toward those dehumanized.

Placed into a social learning perspective, dehumanizing others is seen as a means of reducing self-reproach (a form of disinhibition) for using aggressive or cruel actions against others (Bandura, Underwood & Fromson, 1975). Once a person is dehumanized, he or she becomes a more inviting target for aggressive actions. As noted by Bandura et al. (1975) "inflicting harm upon individuals who are regarded as subhuman or debased is less apt to arouse self-reproof than if they are seen as human beings with dignifying qualities." Considering the above, exposure to degrading materials should make cognitions of females as having subhuman qualities more easily accessible in viewers' memory. In turn, these recently activated cognitions should increase subsequent aggressive tendencies toward women by reducing self-reproach or certain inhibitions among viewers.

#### Sexually violent materials.

The attitudinal effects of portrayals of aggression against women in the mass media have been examined by Donnerstein and his colleagues. (See Table 2 also for a summary of studies discussed in this section). In a study repeatedly exposing subjects to R-rated violent films, Linz, Donnerstein and Penrod (1984) found that, compared to a no-exposure control group, these subjects judged a rape victim to be less injured and less worthy. In a subsequent account

of this study, Linz (1989) reported similar results for subjects exposed to the X-rated nonviolent and X-rated violent films. In a more recent study, Linz, Donnerstein and Penrod (1988) found subjects exposed repeatedly to R-rated violent films over a two-week period compared to subjects in all other conditions (X-rated nonviolent, R-rated nonviolent, no-exposure) reported significantly less empathy for victims of rape. However none of the exposure conditions was significant when compared to a no-exposure, control group. One possible explanation for the lack of significant findings in this study is that subjects rated each film immediately after viewing on various sex and violence dimensions as well as how degrading the films were to women. Such evaluations could have created an awareness of the experimental objectives and subjects may have guarded against being influenced by the stimuli (Zillmann & Weaver, 1989). Extending this direction of inquiry to a natural setting, Malamuth and Check (1981) found that subjects who had seen sexually violent, but not X-rated, films as part of a campus film program reported more acceptance of interpersonal violence against women.

The R-rated films used by Donnerstein and his colleagues fit into a genre of movies known as "slasher films." The sex depicted in these movies is typically suggestive, not explicit. The violence is quite graphic and usually directed at women (Donnerstein, Linz & Penrod, 1987). However, most often scenes containing sex are

juxtaposed with scenes of violence that is not sexual in nature. (In a content analysis of slasher films, Weaver (1991) reports a negligible number (0.5%) of scenes depicting sexual violence). One example of this genre, described by Linz et al. (1984), is that of a woman who is shown masturbating in the bath when she is suddenly and brutally attacked.

Donnerstein and his colleagues have argued that it is the violence as opposed to the sex in media portrayals that contributes to people's attitudes about women and rape (Donnerstein & Linz, 1986). These authors report two experiments, in which the sexual and violent components were systematically manipulated, to bolster their claim (Donnerstein et al., 1987). In the first study males exposed to a sexually violent film exhibited more aggression against a female confederate than subjects exposed to an aggression-only film, which, in turn, produced more aggressive behavior than a X-rated, sex-only film or a neutral film. In the second experiment, the greatest acceptance of rape myths and the largest percentage of subjects indicating a likelihood of rape or using force were found in the aggression-only condition. Subjects in the X-rated, sex-only condition scored lowest on these two measures while subjects exposed to sexual violence scored somewhere in between. In addition, subjects in the sexually violent condition evidenced higher levels of aggression than subjects in a sex-only condition. Subjects in the aggression-only condition also exhibited

higher levels of aggression than sex-only subjects but only under certain conditions (They were given a name association cue or were previously angered). However since these studies do not report significance levels, judgements about their validity are not possible. In addition, the findings seem at odds with Donnerstein and Linz's assertion since the sexually violent materials seemed to produce greater aggressive behavior than the violent materials.

Theoretically, if the sex did not matter, one would expect them to produce equivalent amounts of aggression. At the very least, replication of these results seems warranted.

An interesting point is raised by Fisher and Grenier (1994) who note a number of studies, including their own, in which sexually violent materials have failed to produce anti-woman thoughts and acts. These authors argue that certain methodological limitations such as subject awareness, selective attrition and chance findings may have contributed to the inconsistencies among studies in this area. Similar concerns regarding chance findings have been expressed by other authors (Agreed, 1988; Linz, 1989; Mould, 1988) who refer to a number of studies in which many dependent variables are used while a relatively small number of significant results are reported. This being the case the impact of sexually violent materials on anti-social attitudes and behaviors could have been exaggerated by previous researchers (Fisher & Grenier, 1994).

### Summary and Hypotheses

Understanding the potential effects of violent and/or degrading materials on viewers is important for two reasons. One, a large portion of adults have been exposed to these types of materials at least once, and many adults report repeated usage. Since most pornographic materials are geared primarily toward males, not surprisingly males are more frequent users than females. These materials, which frequently portray degrading and violent sexual activities, at the very least could foster vastly disparate expectations of sexual relationships between viewers and nonviewers. Secondly, research into the potential effects of violent and degrading materials has been used to shape public policy and restrict, or chill, expression in Canada and the United States. However many questions remain. For example, does viewing females as sexual objects lead to anti-social behavior? Is it sexual violence or violence alone that produces anti-social attitudes and behaviors. Only until these questions are addressed more directly in the research can we begin to more fully understand the process whereby certain media depictions lead to anti-social attitudes and behaviors and thus make more informed policy decisions.

While exposure to pleasing "erotica" has not been shown to produce aggression, exposure to erotica that is disturbing has been shown to increase aggression. There is some indication that materials that have increased aggression have contained violent and/or degrading images.



In fact, research has shown that subjects exposed to sexually violent materials (Donnerstein, 1980; Donnerstein & Berkowitz, 1981) exhibit more aggressiveness, especially toward a female target. What has not been demonstrated is whether degrading materials may have a similar effect.

Research has also shown that nonviolent, degrading materials can have a detrimental effect on peoples' attitudes and perceptions toward women (Check & Guloien, 1989; Linz, 1989; McKenzie-Mohr & Zanna, 1990; Wyer, Bodenhausen & Gorman, 1985; Zillmann & Bryant, 1982, 1988). If these types of materials can foster or, at least reinforce, sexually aggressive or calloused attitudes toward women shouldn't they also encourage males to act more aggressively toward women? A link between aggression and degrading portrayals comes from the literature on dehumanization, in which individuals have been theorized to aggress more against persons who have been dehumanized (Bandura, Underwood & Fromson, 1975; Check & Malamuth, 1986; Kelman, 1973; Zimbardo, 1969). Dehumanizing others is seen as a means of reducing inhibitions against aggressive actions (Bandura et al., 1975). Depictions that dehumanize women may thus lead to greater subsequent aggressive behavior toward women in general.

A similar type of disinhibition process may take place in violent media portrayals. According to Berkowitz (1993), portrayals of violence can activate aggressive thoughts in viewers. If the violence is depicted as having positive

consequences, for example, if the perpetrator is rewarded, then some people may become more aggressive because their existing inhibitions against aggression have been lowered (Berkowitz, 1993).

Recently feminist researchers have argued that degrading materials used by Zillmann and Donnerstein and their colleagues have focused primarily on women's display of sexuality as opposed to themes that have been the focus of feminist criticism of pornography such as "dominance" and "objectification" (Cowan & Dunn, 1994). Until the attitudinal and behavioral effects of these types of themes have been examined, these authors argue, a true test of the effects of degrading pornography has not been demonstrated (Cowan & Dunn, 1994). This study, then, will attempt to use materials whose theme falls into one of the more degrading categories described by Cowan and Dunn (1994).

An additional issue that will be addressed in this study is that raised by Donnerstein et al. (1987) concerning the relative contributions of the sexual and violent components of sexually violent materials in affecting attitudes and behaviors. In the experiments reported by Donnerstein et al. (1987) sexually violent materials appeared to have greater affect on aggression than violent-only or sex-only materials. This suggests the possibility that materials combining both degrading sex and violence may have more powerful effects than materials with only one of these components.

The intent of this study then is to test the relative contributions of degradation and violence on male aggression toward females. In order to do this stimuli were selected and rated on violent and degrading dimensions so that a fully crossed factorial design could be used in the main experiment. As a result there were four experimental conditions: High Violence, High Degrading (sexually violent materials); High Violence, Low Degrading (violent materials); Low Violent, High Degrading (degrading materials) and Low Violent, Low Degrading (erotic materials). Due to the ethical considerations of using physical aggression against subjects, verbal aggression procedures and measures were used in the study. This is consistent with previous research recommending consistency between the two and indicating no significant differences between modes (verbal or physical) in evaluation of a confederate (McDaniel, O'Neal and Fox; 1971). Based on the preceding discussion, the following hypotheses were tested.

- H1: Provoked male subjects will exhibit significantly ( $p < .05$ ) greater verbal aggressiveness toward a female confederate after exposure to materials rated high in violence toward women than provoked subjects exposed to materials rated low in violence toward women.
- H2: Provoked male subjects will exhibit significantly ( $p < .05$ ) greater verbal aggressiveness toward a female confederate after exposure to materials rated high in degradation toward women than provoked subjects exposed to materials rated low in degradation toward women.
- H3: Provoked male subjects will exhibit significantly ( $p < .05$ ) greater verbal aggressiveness toward a

female confederate after exposure to materials rated high in degradation toward women and high in violence toward women than subjects exposed to materials rated high in degradation toward women and low in violence toward women or high in violence toward women and low in degradation toward women or low in both violence and degradation toward women.

The purpose of the pre-test film evaluations was to achieve objective ratings of the segments. Since previous research has shown some sex differences in the perception of degrading behaviors with males rating some materials less degrading than females (Cowan & Dunn, 1994), it was decided to use male and female subjects for the film evaluations. One of the documented effects of exposure to pornographic materials has been that of desensitization to violent and degrading behaviors (Linz et al., 1988). Since males have reported more frequent exposure to pornographic materials than females, one might expect that even if males and females originally had similar perceptions, they might be expected to differ following their life experiences. Specifically, males may report less violence and degradation than females, who might be less desensitized to such portrayals. Using all male subjects to evaluate the films might increase the likelihood that low violence and/or low degrading materials could be selected that would be perceived much differently by females. As such the generalizability of the study might be perceived by some as somewhat limited. In an attempt to avoid this potential criticism, both genders were used to evaluate the films.

In addition, subjects' affective reactions to the experimental stimuli were measured in order to assess the possibility that either arousal or negative affect may have contributed to subjects' verbally aggressive responses. Since the above hypotheses rely on a cognitive model, a null relationship between arousal or negative affect and the experimenter or experiment evaluation variables was expected.

## METHOD

Pre-test of Stimuli Materials

Evaluations of and reactions to the film stimuli in terms of violence, degradation, sexual arousal and several other variables were determined in a pre-test. Male and female students were recruited from introductory psychology courses at a publicly funded Canadian university. A total of 70 students participated in this phase of the study. Students received extra credit toward their final grade for their participation. All subjects consented to participating in an experiment that might involve exposure to sexually explicit and/or violent materials.

Four experimental conditions were evaluated: sexually violent (HV-HD), violent (HV-LD), nonviolent degrading (LV-HD) and erotic (LV-LD). Male and female subjects, in separate groups of 6 to 9 participants, viewed and rated film segments in one of the conditions. Each condition consisted of 3 to 5 film segments, each about 5 to 10 minutes in length. Segments were selected for each of the film conditions based upon the following definitions. LV-LD (erotica): mutually pleasurable, sexual activity that includes affection, warmth and/or sensuality between participants (Steinem, 1980). LV-HD (nonviolent, degrading): sexual activity in which the male is dominant and commands the female to do what he wants without regard for her desires (dominance) or the female is treated as a sexual

object or "plaything" to be used at the whim of the male participant (objectification) or the activity revolves around the worship of the penis (penis worship). These themes were found to be among the most degrading in a sampling of X-rated videos by Cowan and Dunn (1994). HV-HD (sexually violent): portrayals in which violence is depicted as a part of the sexual activity. Violence is defined as an "overt expression of physical force against self or other, compelling action against one's will on pain of being hurt or killed" (Gerbner & Gross, 1980). This definition includes the intention to cause harm and is limited to physical aggression. Because in Canada X-rated violence is banned, R-rated materials were used in this category. HV-LD (violent): activities in which physical force of a nonsexual nature is used against females by males. Titles and film lengths for all of the films pre-tested can be found in Table 3.

Each stimulus was evaluated immediately after exposure. Subjects were administered a questionnaire in which the degradation (degraded, humiliated), dominance (dominant, submissive (reversed), aggressive), and willingness (willing, promiscuous) of the male and female characters were assessed on a 7-point Likert scale ("not at all" to "very much"). Overall film ratings of violence (violence, brutal) and arousal (sexually arousing, exciting, stimulating) were assessed in the same manner. Other items on the questionnaire such as affectionate, tranquil and disgusting were used as filler items.

Table 3

Film Clips Evaluated

Category/ Number	Title	Length
LV-LD (erotica)		
1	"Femme-TV Idol"	8:06
2*	"Femme-The Dressing Room"	6:54
3*	"Urban Heat" (Disco)	7:15
4	"Urban Heat" (Morning)	6:32
LV-HD (degrading)		
1	"Damiano's Hot Fuckers" (Love To Eat Cum)	5:28
2*	"Amanda by Night"	6:25
3	"Damiano's Hot Fuckers" (Wide World of Spurts)	6:40
4	"Nothing to Hide"	6:47
5	"Insatiable"	6:52
6*	"Barbara Broadcast"	6:12
7	"Talk Dirty to Me"	10:40
8	"Debbie Does Dallas"	8:38
HV-HD (sexual violence)		
1*	"Blue Velvet"	5:17
2	"Looking for Mr. Goodbar"	6:07
3	"Swept Away"	8:26
4*	"Last Tango in Paris"	4:32
5	"I Spit on Your Grave"	5:15
HV-LD (violence against women)		
1	"Body Double"	5:27
2	"Savage Attraction"	7:41
3	"Raging Bull"	5:40
4*	"Dressed to Kill"	6:40
5*	"Halloween"	3:40

Note: Asterisks indicate those films selected for the main experiment.



After the film evaluations were completed subjects were debriefed about the experiment. (Female subjects were debriefed by a female experimenter.) The experimenter explained the purpose of the experiment and discussed relevant research findings from exposure to violent or pornographic materials. The experimenter also offered assistance to anyone who might have been upset by the sexually explicit or violent materials by referring them to the university psychology services center. In addition, participants were given a "Personal Safety Card" issued by the campus Sexual Harassment Office on which phone numbers for various local resources were listed.

Each set of attributes (overall, male and female characters) was factor analyzed. Since all of the scales used in the study can be thought of as interval scales (the intervals on the scales are equal), permissible mathematical operations include analysis of variance and factor analysis (Nunnally, 1978). Factors were extracted using principal components analysis and varimax rotation. Cronbach's alpha was used as an estimate of reliability. Factor loadings above .40 were considered significant while variables with overlapping factor loadings were discarded (Nunnally, 1978). The cut-off point for reliability estimates was .70 (Nunnally, 1978). Table 4 presents the varimax-rotated matrix resulting from the factor analysis. Two factors were extracted for the overall film ratings, Violence (Factor 1), Cronbach's alpha = .93, and Arousal (Factor 2), Cronbach's



Table 4

Factor Matrixes for the Film Evaluation Questionnaire

Overall ratings			
Item	Factor 1 (Arousal)	Factor 2 (Violence)	
Entertaining	<u>.92</u>	-.15	
Sexually arousing	<u>.91</u>	-.28	
Exciting	<u>.96</u>	-.08	
Stimulating	<u>.95</u>	-.22	
Violent	-.11	<u>.94</u>	
Brutal	-.13	<u>.91</u>	
Eigenvalue	3.94	1.57	
Percent of variance	65.8	26.2	

  

Male Character			
Item	Factor 1 (Degraded)	Factor 2 (Dominant)	Factor 3 (Willingness)
Humiliated	<u>.91</u>	-.17	.10
Willing	-.49	.44	<u>.61</u>
Submissive	-.13	.17	<u>-.84</u>
Promiscuous	.27	.24	<u>.78</u>
Dominant	-.13	<u>.85</u>	.00
Degraded	<u>.92</u>	-.02	.19
Aggressive	-.05	<u>.86</u>	.08
Eigenvalue	1.98	1.82	1.51
Percent of variance	28.3	26.0	21.5

  

Female Character			
Item	Factor 1 (Degraded)	Factor 2 (Dominant)	Factor 3 (Willingness)
Humiliated	<u>.88</u>	.07	.01
Willing	-.63	-.09	<u>.57</u>
Submissive	-.36	.24	<u>-.65</u>
Promiscuous	.01	.32	<u>.81</u>
Dominant	-.08	<u>.90</u>	.16
Degraded	<u>.77</u>	-.07	.33
Aggressive	.11	<u>.91</u>	-.10
Eigenvalue	2.41	2.07	1.08
Percent of variance	34.5	29.7	15.4

**Note:** Underlined factor loadings indicate items used in calculating reliabilities for the factors. N = 70.

alpha = .96. Ratings for the female character(s) indicated factors for Female-degrading (Factor 1), Cronbach's alpha = .88, and Female-dominant (Factor 2), Cronbach's alpha = .68. Ratings for the male character(s) indicated factors for Male-degrading (Factor 1), Cronbach's alpha = .69, and Male-dominance (Factor 2), Cronbach's alpha=.82. The reliabilities for the Female-dominant and Male-degrading factors were deemed close enough to the cut-off point to include in the analysis. Another factor, Willingness (Factor 3), was extracted for both the female and male character evaluations. However, because of the dispersed factor loadings of the willing item for both characters and the low reliabilities of the Willingness factor for both males (alpha = .47) and females (alpha = .65), it was decided to use the willing item individually as an indicator of female willingness. This particular item was of interest because previous research has shown that portrayals of the female as the "willing victim" of sexual violence may increase aggression (Donnerstein & Berkowitz, 1981). The willing item was considered the most direct measure of this attribute.

One distinction between the LV-LD (erotic) and LV-HD (degrading) films is the unequal roles of the male and female. It was expected that males would be rated relatively high on dominance in all conditions, including the LV-HD (degrading) condition, compared to the LV-LD (erotic) segments. Females were expected to be rated relatively low on the dominance item in all conditions except the LV-LD

(erotic) condition.

Analyses of variance were performed for each film segment to help narrow the choice of films to use in the main experiment, the objective being to select 2 or 3 clips that best represented each condition. Results from these analyses are presented in Table 5. The only significant gender difference found was that males were more aroused than females by portrayals that are degrading to women and to a lesser extent by depictions of sexual violence against women. Interestingly, two of the clips in the LV-HD (degrading) condition were rated relatively high on violence. These two segments, taken from "Nothing to Hide" (film No. 4) and "Insatiable" (film No. 5), were the same as those used by Cowan and Dunn (1994) to represent objectification and dominance, but had been edited to exclude overt physical acts of violence. Further testing revealed that what subjects were actually coding as violence in these segments was primarily the verbal abuse directed toward the female character by the male character, as opposed to overt acts of physical violence.

Based on these evaluations the following procedures were followed: (1) the two LV-HD (degrading) films rated high on violence, "Nothing to Hide" and "Insatiable," were set aside and not used in this study since they differed from the rest of the films in this category, which were rated relatively low on violence; and (2) two clips were selected from each of the four categories to be used in the



Table 5

Mean Scores for Film Evaluations - All Conditions

	AROUS	VIOL	DEG-F	DEG-M	DOM-F	DOM-M	WIL-F	WIL-M
LV-LD (erotic; $n=13$ , females=6, males=7)								
"Femme-TV Idol"								
(f)	3.45	1.00	1.67	1.50	2.83	4.25	6.83	6.83
(m)	4.25	1.07	1.14	1.14	3.00	3.50	7.00	7.00
(t)	3.92	1.04	1.38	1.31	2.92	3.85	6.92	6.92
"Femme-The Dressing Room"*								
(f)	3.80	1.08	1.83	1.50	2.17	4.42	6.83	6.50
(m)	3.70	1.64	1.21	1.14	2.43	5.64	6.57	7.00
(t)	3.75	1.38	1.50	1.30	2.31	5.08	6.69	6.76
"Urban Heat" (Disco scene)*								
(f)	3.42	1.00	1.00	1.50	3.50	4.17	6.67	6.67
(m)	3.89	1.50	1.35	1.00	3.43	5.00	6.86	6.42
(t)	3.67	1.27	1.19	1.23	3.46	4.62	6.76	6.54
"Urban Heat" (Morning scene)								
(f)	2.86	1.00	1.50	2.00	2.50	3.59	6.50	6.83
(m)	4.07	1.00	1.50	1.00	2.57	4.71	6.43	7.00
(t)	3.51	1.00	1.50	1.46	2.54	4.19	6.46	6.92
LV-HD (degrading; $n=15$ , females=9, males=6)								
"Damiano's Hot Fuckers" (Love to Eat Cum)								
(f)	1.75 <sup>a</sup>	1.56	3.22	2.55	5.38	2.11	6.78	6.44
(m)	5.13 <sup>b</sup>	1.17	2.92	1.17	5.67	2.00	6.67	6.00
(t)	3.10	1.40	3.10	2.00	5.50	2.01	6.73	6.26
"Amanda by Night"*								
(f)	2.19 <sup>a</sup>	2.33	5.06	2.28	1.33	6.27	4.67	6.78
(m)	5.67 <sup>b</sup>	2.00	5.08	2.08	1.67	6.00	4.33	6.50
(t)	3.58	2.20	5.07	2.20	1.47	6.17	4.53	6.67
"Damiano's Hot Fuckers" (Wide World of Spurts)								
(f)	1.44 <sup>a</sup>	1.50	3.94	2.11	3.75	1.56	6.89	6.44
(m)	5.04 <sup>b</sup>	1.42	3.25	2.00	5.00	1.17	6.16	6.33
(t)	2.88	1.47	3.67	2.07	4.29	1.40	6.60	6.40
"Nothing to Hide"								
(f)	1.67 <sup>a</sup>	5.11	5.44	2.39	1.78	6.72	6.44	5.33
(m)	4.33 <sup>b</sup>	4.58	6.16	1.58	1.67	7.00	7.00	5.00
(t)	2.73	4.90	5.70	2.06	1.73	6.83	6.67	5.20

	AROUS	VIOL	DEG-F	DEG-M	DOM-F	DOM-M	WIL-F	WIL-M
<b>"Insatiable"</b>								
(f)	1.67 <sup>a</sup>	4.22	5.28	2.27	2.11	6.78	6.22	5.89
(m)	6.08 <sup>b</sup>	3.08	5.25	1.25	1.67	7.00	6.67	5.83
(t)	3.45	3.77	5.27	1.87	1.93	6.87	6.40	5.87
<b>"Barbara Broadcast"*</b>								
(f)	2.17 <sup>A</sup>	1.89	5.22	2.56	3.22	5.00 <sup>a</sup>	6.67	7.00 <sup>a</sup>
(m)	4.21 <sup>B</sup>	2.08	5.00	3.92	3.50	3.17 <sup>b</sup>	6.00	5.83 <sup>b</sup>
(t)	2.98	1.97	5.13	3.10	3.33	4.30	6.40	6.53
<b>"Talk Dirty to Me"</b>								
(f)	2.61 <sup>A</sup>	2.33	4.00	1.55	1.56 <sup>a</sup>	6.33	5.56	7.00
(m)	5.17 <sup>B</sup>	2.50	5.25	2.75	2.67 <sup>b</sup>	5.92	4.83	6.33
(t)	3.63	2.40	4.50	2.03	2.00	6.17	5.27	6.73
<b>"Debbie Does Dallas"</b>								
(f)	2.56 <sup>A</sup>	1.83	4.11	1.33	1.44	6.50	6.72	7.00
(m)	4.53 <sup>B</sup>	2.36	3.86	3.21	2.43	6.21	5.57	6.43
(t)	3.42	2.06	4.00	2.16	1.88	6.37	5.94	6.75
<hr/>								
HV-LD (violent; <u>n</u> =13, females=6, males=7)								
<b>"Body Double"</b>								
(f)	1.92	5.83	4.83	1.42	1.33	6.67	1.00	6.17
(m)	2.50	5.07	4.21	1.79	1.14	6.71	2.14	4.14
(t)	2.23	5.42	4.50	1.61	1.23	6.70	1.61	5.08
<b>"Savage Attraction"</b>								
(f)	1.21	4.08	6.00	1.16	1.50	7.00	1.67	5.67
(m)	2.07	3.42	6.14	1.14	1.14	6.78	1.86	4.28
(t)	1.67	3.73	6.07	1.15	1.31	6.88	1.77	4.92
<b>"Raging Bull"</b>								
(f)	2.29	6.00	4.16	3.50	4.33	6.75	3.17	4.67
(m)	3.25	5.07	4.14	4.50	2.57	6.43	2.86	4.14
(t)	2.80	5.50	4.15	4.03	3.38	6.58	3.00	4.38
<b>"Dressed to Kill"*</b>								
(f)	1.65	6.58	4.58	1.16	2.50	3.75	3.00	3.50
(m)	2.50	4.92	3.93	1.75	2.00	5.00	3.86	4.86
(t)	2.10	5.69	4.23	1.45	2.23	4.38	3.46	4.23
<b>"Halloween"*</b>								
(f)	1.04	5.00	2.92	1.42	1.50	5.25	5.17	5.67
(m)	2.82	4.07	2.57	1.64	1.71	6.86	4.14	4.71
(t)	2.00	4.50	2.73	1.54	1.65	5.58	4.62	5.15



	AROUS	VIOL	DEG-F	DEG-M	DOM-F	DOM-M	WIL-F	WIL-M
HV-HD (sexually violent; $n=14$ , females=8, males=6)								
"Blue Velvet"*								
(f)	1.81 <sup>A</sup>	6.31	5.86	2.88	1.38	6.94	4.75	6.00
(m)	3.08 <sup>B</sup>	5.83	6.17	2.33	1.00	7.00	5.33	5.83
(t)	2.35	6.11	6.00	2.64	1.21	6.96	5.00	5.92
"Looking for Mr. Goodbar"								
(f)	1.78	6.87	4.19	3.31	3.13	6.87	4.25	5.00
(m)	3.12	6.58	4.42	3.75	2.50	6.33	3.50	5.50
(t)	2.36	6.75	4.29	3.50	2.86	6.64	3.92	5.21
"Swept Away"								
(f)	2.50	3.88	4.88	2.25	2.38	6.25	5.00	5.63
(m)	3.37	4.25	4.42	2.00	2.00	6.00	4.67	4.83
(t)	2.88	4.04	4.68	2.14	2.21	6.14	4.86	5.28
"Last Tango in Paris"*								
(f)	1.91	4.19	5.81	2.00	1.75	6.75	2.87	5.83
(m)	3.42	3.75	5.08	2.08	1.50	6.33	3.33	5.87
(t)	2.55	4.00	5.50	2.04	1.64	6.57	3.07	5.86
"I Spit on Your Grave"								
(f)	1.25 <sup>A</sup>	6.25	6.56	1.50	1.13	6.75	1.00	6.33
(m)	2.50 <sup>B</sup>	5.58	6.91	1.58	1.50	6.94	1.00	7.00
(t)	1.78	5.96	6.71	1.54	1.29	6.86	1.00	6.71

AROUS=arousing; VIOL=violent; DEG-F=degrading-female character; DEG-M=degrading-male character; DOM-F=dominance-female character; DOM-M=dominance-male character; WIL-F=willing-female character; WIL-M=willing-male character; f=females; m=male; t=total.

Note: Asterisks indicate those films selected for the main experiment. Within each film segment and column, means with different subscripts differ at the .05 (uppercase) and .01 (lowercase) levels of significance. A second session was used to rate the films numbered 6 through 8 in the LV-HD (degrading) condition,  $n=15$ , females=9 and males=6.

main experiment. These clips were selected on the basis of how they were rated on the appropriate attributes (primarily violence and degradation). For example, the films in the HV-LD (violent) condition were selected because of their relatively low ratings on female degradation. In addition some consideration was given to the total time subjects would be exposed to the film segments, the objective being to equalize exposure times across conditions as much as possible. Descriptions of the selected film segments can be found in Appendix A. The two film segments selected for the LV-HD (degrading) category might best be characterized by themes of objectification ("Amanda by Night") and penis worship ("Barbara Broadcast"). As mentioned previously, these two themes were rated among the most degrading in a sample of X-rated materials (Cowan & Dunn, 1994). As such, these segments were selected to provide as strong a test as possible for the effect of nonviolent, degrading materials on aggression. Total film length for each category ranged from just under 10 minutes to about 14 minutes.

A 2 X 4 (Sex X Film Type) analysis was used to analyze the data from the selected segments. Since the number of subjects was not equal among treatment groups, an analysis of unweighted means was used (Keppel, 1982). The primary reason for the unequal sample sizes is that two groups of male and female subjects were used to rate films in the LV-HD (degrading) condition. Since one film was selected from each group, each film, then, was rated by a different

subject. In the other conditions, both films were rated by the same subject.

An interaction between sex and group was found for the Arousal scale. Compared to the one condition devoid of sexual activity (violent), males were more aroused by the degrading portrayals (HD-LV) while females were more aroused by the erotic depictions (LD-LV). In general, males ( $M = 3.87$ ) reported more arousal to the films than females ( $M = 2.20$ ),  $F(1, 69) = 28.18$ ,  $p < .001$ . There were no other significant differences between males and females in the ratings.

Main effects for the other dependent variables are shown in Table 6. As expected films selected for their violent content were rated high on violence. The LV-HD (degrading) and HV-HD (sexually violent) films were rated high and the LV-LD (erotic) films low on female degradation. The HV-LD (violent) segments were rated moderately degrading, not significantly different from either the high or low degrading ratings for the other segments. It appears that violence is considered somewhat degrading regardless of the context. In fact, the correlation between violence and female-degradation over all conditions proved to be highly significant (See Table 7). As mentioned previously, the films selected for the violent condition were those that subjects had rated as the least degrading to the female character(s). As expected, male characters were rated relatively low on degradation in all of the conditions.

Table 6

Analysis of Variance for Film Ratings Using Only Film  
Segments Selected for Main Experiment

Attribute	LV-LD (erotic)	LV-HD (degrading)	HV-LD (violent)	HV-HD (sexually violent)	F
<u>n</u>	13	30 <sup>1</sup>	13	14	
Arousal (females)	3.62 <sup>b</sup>	2.18 <sup>a,b</sup>	1.31 <sup>a</sup>	1.86 <sup>a,b</sup>	3.43*
(males)	3.79 <sup>a, b</sup>	4.94 <sup>b</sup>	2.66 <sup>a</sup>	3.25 <sup>a,b</sup>	4.62**
Violence	1.33 <sup>a</sup>	2.08 <sup>a</sup>	5.10 <sup>b</sup>	5.05 <sup>b</sup>	54.20**
Female- degrading	1.35 <sup>a</sup>	5.10 <sup>b</sup>	3.48 <sup>a,b</sup>	5.66 <sup>b</sup>	39.91**
Male- degrading	1.35 <sup>a</sup>	2.65 <sup>b</sup>	1.50 <sup>a,b</sup>	2.34 <sup>a,b</sup>	3.71*
Female- dominant	3.25 <sup>b</sup>	2.93 <sup>b</sup>	1.94 <sup>a,b</sup>	1.50 <sup>a</sup>	5.32**
Male- dominant	4.85 <sup>a</sup>	5.23 <sup>a</sup>	5.06 <sup>a</sup>	6.77 <sup>b</sup>	5.11**
Female- willing	6.73 <sup>b</sup>	5.47 <sup>b</sup>	4.04 <sup>a</sup>	4.04 <sup>a</sup>	10.30**
Male- willing	6.65 <sup>b</sup>	6.60 <sup>b</sup>	4.69 <sup>a</sup>	5.89 <sup>a,b</sup>	8.16**

\*\*  $p < .01$ ; \*  $p < .05$

Note: Within each row, means having no letter in their superscripts in common differ at  $p < .05$  by Tukey's test for comparisons between pairs of cell means. Scales were 7-point Likert scales with 1 = "not at all" and 7 = "very much."

<sup>1</sup> The larger than average cell size for the degrading category is due to the circumstance that each film used in this category was rated by a different group of subjects. In the other categories each film selected was rated by the same group of subjects.

Table 7

Pearson Product-moment Correlations for Factors and Items on Film Evaluation Questionnaire

	AROU		VIOL	DOM-M	DEG-M	DOM-F	DEG-F	M-WIL
	(m)	(f)						
AROU								
VIOL	-.39*	-.39*						
DOM-M	-.44*	-.15	.63**					
DEG-M	-.38	-.35	.19	.01				
DOM-F	.51**	-.07	-.36**	-.33**	.26*			
DEG-F	-.09	-.46*	.64**	.46**	.41**	-.19		
M-WIL	.33	.09	-.31**	-.06	-.30*	.16	-.13	
F-WIL	.50*	.31	-.80**	-.44**	-.17	.46**	-.36**	.47**

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

AROU = Arousal; VIOL = Violent; DOM-M = Male dominance; DEG-M = Degrading to the male; DOM-F = Female dominance; DEG-F = Degrading to the female; M-WILL = Male willing; F-WILL = Female willing; m = males; f = females.

Note:  $N = 70$  except for Arousal in which  $n = 38$  for females and  $n = 32$  for males.

Females were not very dominant in any of the videos, but most dominant in the LV-LD (erotic) and LV-HD (degrading) conditions. Male characters, on the other hand, were rated relatively high on dominance in all the videos, especially in the HV-HD (sexually violent) videos. As predicted, the most equal relationship appeared to be in the LV-LD (erotic) films. Female characters were perceived as most willing in the LV-LD (erotic) and LV-HD (degrading) videos; however female willingness was rated as at least moderate over all conditions. The films in the HV-HD (sexually violent) condition were selected, in part, based on their relatively high rating, compared to other films rated in this category, on the female-willingness item. This

parallels a common theme found in violent pornography of the willing victim, mentioned previously. A similar rating on the female-willingness item was evident in the HV-LD (violent) condition. One explanation for this might be that sexual relations were implied in both films before the violent acts were carried out. The fact the female character was apparently agreeable in this regard may have lead subjects to rate her somewhat higher on this item than anticipated.

#### Pre-test of Provocation

Male students were recruited from an introductory psychology course. Students received extra credit toward their final grade for their participation. All subjects consented to participating in an experiment that would involve a problem solving exercise in which they would have a certain amount of time to complete each problem set.

Subjects were contacted by telephone and told to report to a room on campus where the study was to take place. The provocation treatment was based on a procedure used by Zillmann and his colleagues (Bryant & Zillmann, 1979; Sapolsky & Zillmann, 1981; Zillmann, Bryant, Cantor & Day, 1975; Zillmann, et al., 1981; Zillmann & Cantor, 1976; Zillmann & Sapolsky, 1977). However one difference was that students were not insulted or criticized in the present experiment. This was due to ethics committee concerns about students' self-esteem. It was felt that criticizing

students' ability to follow instructions (Sapolsky & Zillmann, 1981; Zillmann & Cantor, 1976; Zillmann & Sapolsky, 1977; Zillmann et al., 1981) or insulting their intelligence (Bryant & Zillmann, 1979; Zillmann et al., 1975) would lower their self-esteem. Even though this condition was proposed as being only temporary, it was nonetheless deemed an unacceptable risk by the ethics committee.

In the provocation condition, the female experimenter arrived 10 minutes after the scheduled time for the study to begin. Then the experimenter rummaged through her files and folders, announced that she had forgotten the consent forms and would be back in a couple of minutes. Upon returning, the experimenter passed around the consent forms and then administered the problem-solving exercise which consisted of a timed questionnaire made up of sample items taken from various aptitude tests such as the Graduate Record Exam (See Appendix B). The questionnaire consisted of three parts and was designed so that subjects would not have time to finish each part during the allotted time. During each part the experimenter urged the subjects to work faster, for example, "OK, you're going to have to work faster on this part because we don't have a lot of time left. We've only got a half an hour for this study, you know." Throughout the exercise the experimenter acted in an abrupt manner. In the non-provocation condition the experimenter arrived promptly, passed out the consent forms shortly after arriving and did

not make any comments during the study other than to instruct subjects as to when to start and stop working on the exercises. In addition the questionnaire was modified so that each part could be completed during the allotted time.

After the last exercise was completed, the experimenter collected the tests and left the room to get Experimenter 2, the "research coordinator," who administered the experimental evaluation forms. The evaluation forms were similar to those used by Zillmann and his colleagues, but also included a mood assessment scale (angry, irritated, calm, etc.) based on a "Feelings" scale developed by Byrne and Sheffield (1965). (See Appendix B for a copy of the evaluation form.) The evaluation form contained three items assessing Experimenter 1. Item 1: "How well did the above named research assistant perform in her/his role as an experimenter?" Responses were based on a scale with 20-point increments ranging from -100 ("poorly") to 100 ("excellently"). The remaining two items were based on similar scales with -100 being the most negative response and 100 the most positive. Item 2: "How would you rate his/her manner of interacting with others?" Item 3: "In your opinion, should this student be reappointed as a research assistant?" In addition three items were used to rate the experiment in general. Item 4: "Were you in any way mistreated by the experimenter in the experiment?" The scale for this question ranged from 0 ("not mistreated at all") to 100 ("mistreated a great deal") with 10-point increments.



The remaining items were based on similar scales (0 the most positive response, 100 the most negative). Item 5: "Did you think the demands made upon you in this experiment were excessive?" Item 6: "Are you in any way dissatisfied by the way you were treated in any aspect of the experiment?" In general, Items 1-3 have been used as a measure of retaliation against the first experimenter, while items 4-6 have been used to assess subjects' annoyance with the experiment (Sapolsky & Zillmann, 1981; Zillmann et al., 1975; Zillmann & Cantor, 1976; Zillmann & Sapolsky, 1977). However, no reliability estimates have been reported for either of the evaluation scales.

Before passing out the forms, Experimenter 2 explained that it was the faculty advisor's policy in experiments like this to assess subjects' opinions of the experiment and the way they had been treated by the research assistant conducting the experiment. Experimenter 2 also explained that the experimenter evaluation form was to be used by the faculty advisor in evaluating research assistants in terms of offering financial support for the upcoming semester. Ratings of the experiment were said to be used as a check on the experiment procedures. After the evaluation forms were filled out and collected, Experimenter 2 debriefed the subjects about the true purpose of the experiment and explained why deception had been used in the study.

Comparisons between the provocation and non-provocation means were performed for items on the

Table 8

Factor Matrixes for the Provocation Scales

Evaluations			
Item	Factor 1 (Retaliation)	Factor 2 (Annoyance)	
Performance	<u>.89</u>	-.22	
Interaction	<u>.90</u>	-.08	
Reappointment	<u>.92</u>	-.16	
Mistreated	<u>.76</u>	.45	
Excessive demands	-.12	<u>.88</u>	
Dissatisfied	<u>.81</u>	.44	
Eigenvalue	3.72	1.26	
Percent of variance	62.1	21.0	

  

Mood Assessment			
Item	Factor 1 (Relaxed)	Factor 2 (Irritable)	Factor 3 (Anger)
Relaxed	<u>.92</u>	-.12	-.12
Angry	-.07	-.10	<u>.89</u>
Anxious	-.02	<u>.86</u>	-.34
Pleased	<u>.70</u>	-.19	-.45
Irritated	-.25	<u>.76</u>	.48
Calm	<u>.98</u>	-.01	.06
Eigenvalue	2.75	1.29	1.06
Percent of variance	45.9	21.6	17.7

**Note:** Underlined factor loadings indicate items used in calculating reliabilities for the individual factors. N = 13.

experiment/experimenter evaluation form and the mood assessment scale. Factors were extracted using principal components analysis and varimax rotation. Cronbach's alpha was used as an estimate of reliability. Table 8 presents the varimax-rotated matrix resulting from the factor analyses. The items from the experimenter/experiment form were converted to z-scores in order to compare the two scales. In addition the items for the experimenter rating scale were reverse coded so that the higher the score on all items, the greater the indication of verbal aggression. Two factors were extracted for the experiment/experimenter ratings. Factor 1 (Retaliation) had a reliability estimate of .91. Factor 2 (Annoyance) included only one item, excessive demands. Three factors were extracted for the mood assessment scale. Factor 1 (Relaxed) had a Cronbach's alpha = .87. Factor 2 (Irritable) had a Cronbach's alpha = .55. Factor 3 (Anger) consisted of only the angry item. Because of the low reliability found for the Irritable factor, it was decided to use the item measuring irritation individually.

Results for the t-test comparisons are presented in Table 9. Differences between the provoked and non-provoked groups were significant for Retaliation factor as well as the individual items making up the factor. In addition, subjects in the provoked condition indicated significantly more irritation than subjects in the non-provoked condition ( $p < .01$ ). A similar trend was found for the anger item

Table 9

T-tests for Provocation Pre-test

Measure	Provocation		Non-Provocation		t
	Mean	SD	Mean	SD	
n	8		5		
Experimenter /Experiment Scale					
Retaliation	.50	.71	-.80	.13	3.98***
Performance	.54	.90	-.86	.22	3.37***
Interaction	.67	.56	-1.08	.21	6.58***
Reappointment	.52	.92	-.84	.22	3.18***
Mistreatment	.35	1.16	-.56	.00	1.73
Dissatisfied	.41	1.09	-.67	.00	2.20*
Annoyance					
Excessive Demands	-.20	.90	.32	1.17	.92
Mood Assessment					
Relaxed	4.54	1.70	5.27	1.86	.72
Angry	1.63	.74	1.00	.00	1.85*
Irritated	3.63	2.07	1.00	.00	2.79**

\*p < .10, \*\*p < .05, \*\*\*p < .01

Note. Higher z-scores for items on the Experimenter/Experiment Evaluation scale indicate greater verbal aggression. Ratings for the Mood Assessment scale were based on a 7-point Likert scale with 1 = "not at all" and 7 = "very much."

although the significance level was only marginal ( $p = .09$ ). It should be noted that the tests for homogeneity of variance (Cochran's C and Bartlett-Box F) were significant for the Retaliation factor as well as for Items 1-3 evaluating the first experimenter. As can be seen in Table 9, the variances for these items were much greater in the provocation condition than in the non-provocation group. However, as Keppel (1982) points out, even flagrant violations of the homogeneity assumption do not appear to seriously distort the F distribution.

Correlations between the factors and evaluation items on the provocation questionnaire are presented in Table 10. As can be seen, significant correlations were found between the irritated item and the Retaliation factor as well as the

Table 10

Pearson Product-moment Correlations for Factors and Items for Provocation Pre-test

	RETAL	PERF	INTER	REAP	MISTR	EXCES	DISS	REL	IRRI
RETAL									
PERF	.86**								
INTER	.89**	.73*							
REAP	.90**	.96**	.79**						
MISTR	.81**	.51	.62	.51					
EXCES	-.04	-.18	-.18	-.12	.15				
DISS	.85**	.56	.69*	.61	.85**	.17			
REL	-.11	-.21	-.10	-.19	-.02	.12	.03		
IRRI	.78**	.81**	.67*	.75*	.64*	.02	.49	-.41	
ANGR	.32	.48	.17	.32	.15	-.31	.27	-.21	.24

RETAL = Retaliation; PERF = Performance; INTER = Interaction; REAP = Reappointment; MISTR = Mistreatment; EXCES = Excessive demands; DISS = Dissatisfied; REL = Relaxed; IRRI = Irritated; ANGR = Angry.  $N = 13$ .

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

individual items assessing the experimenter. No significant correlations were found between the angry item and any of the items on the experimenter/experiment evaluation form. It appears that subjects, while not significantly angered by the provocation treatment, were at least irritated by it. It also appears their irritation was directed specifically at the first experimenter as opposed to the experimental conditions in general (i.e. excessive demands, dissatisfaction with the experiment)

#### Main experiment

Subjects were 73 male undergraduate students enrolled in an introductory psychology course who participated in the experiment in order to earn extra credit toward their final grade in the course. All subjects had been informed during recruitment that there would be two separate experiments available to participate in, one of which might involve exposure to sexually explicit and/or violent materials and the other would involve a problem-solving exercise.

Subjects were recruited in class and telephoned to arrange a time to participate in the study. Subjects participated in small groups of about 6 persons. The first phase of the experiment was administered by Experimenter 1, who arrived and administered the problem-solving exercise following the procedure described previously in the provocation pre-test section. At the end of the last exercise, Experimenter 1 collected the tests and left the

room. Experimenter 2 entered the room, passed out the consent forms and briefly explained the purpose of the second experiment. After collecting the consent forms, Experimenter 2 turned on the VCR containing the film segments and then left the room. After the last film segment was shown, Experimenter 2 reentered the room and informed the subjects that the evaluation forms for the first experiment had not been passed out and that now would be a convenient time to do so, before going on to the next phase of the present experiment. Experimenter 2 then explained the advisor's policy as described in the previous section.

After subjects completed these forms, they were given the feelings questionnaire, similar to the one administered in the pre-test and consisting of 15 items assessing subjects' mood (See Appendix B). Experimenter 2 then collected the questionnaire and evaluation forms, administered the suspicion check and debriefed the subjects. In the debriefing the experimenter explained the purpose of both phases of the experiment, including why deception had been used and the relevant research findings from studies exposing subjects to sexually degrading and/or violent materials. A male experimenter was used for the second part of the experiment to show the films because using a female experimenter might have primed cognitions of female permissiveness, which in turn could have led to increased inter-gender aggression. Such was the case in the experiment conducted by Leonard and Taylor (1983). Having a female

experimenter show male subjects sexually violent or sexually degrading depictions might have given subjects the idea that she, and perhaps females in general, approved of such behavior. Such approval, or permissiveness, might therefore lead to increased aggressiveness in these conditions.



## RESULTS

The data were collected during two different time periods. Subjects participated in the experiment in small groups of about 6 persons. During the first session ( $n=48$ ), subjects were tested on four consecutive week days. This session included two groups for each experimental condition. The next session took place about two weeks later and one group for each condition was tested ( $n=25$ ).

During the second session it became evident to the experimenters that subjects appeared, in general, more knowledgeable about the study. During the first session, subjects had frequently knocked on an adjoining door in the experimental room about 7 or 8 minutes into the study, presumably wondering where the first experimenter was. This did not happen during the second session. Also, subjects appeared less concerned with their performance on the problem-solving test and made comments, beforehand, about certain procedures used in the study ("Don't we have to do a couple of questionnaires before the film clips?"). During the coding of the questionnaires, there was also a noticeable difference in the experimenter evaluation scores between the two sessions with ratings in the second session appearing much more negative than in the first session. This was supported by statistical analysis in which differences between subjects in the first and second session reached the  $p < .001$  level for each of the items specifically rating the

experimenter (performance, interaction and reappointment), with the ratings being much more negative in the second session.

Because of a possible confound brought about by the passage of time between the first and second sessions (Students had talked to each other.), the sub-sample ( $n=48$ ) of subjects in the first session was used to analyze the data. A factor analysis was performed on the data, following the same methodology described above, for the experimental evaluation and film questionnaires.

Factor matrixes for both forms are presented in Table 11. For the experimental evaluation forms two factors were extracted. Factor 1 was labeled Retaliation (performance, interaction, reappointment), Cronbach's  $\alpha = .91$ . Another factor was extracted (Annoyance) consisting of the mistreatment, experimental demands and dissatisfaction items; however since this factor had a relatively low reliability ( $\alpha = .60$ ), it was decided to treat these items individually. For the feelings questionnaire, three factors were extracted. Items calm, happy and inhibited were eliminated because they exhibited relatively low loadings spread over more than one factor. Factor 1 for the mood questionnaire was labeled Negative Affect (angry, relaxed, afraid, depressed, disgusted, nauseated), Cronbach's  $\alpha = .87$ . Factor 2 was labeled Arousal (entertained, bored (reversed), aroused, excited), Cronbach's  $\alpha = .86$ . One item, anxious, was dropped from

Table 11

Factor Matrixes for the Experimenter/Experiment Evaluation  
Form and Feelings Questionnaire

Experimental Evaluations			
Item	Factor 1 (Retaliation)	Factor 2 (Annoyance)	
Performance	<u>.86</u>	.35	
Interaction	<u>.93</u>	.09	
Reappointment	<u>.91</u>	-.01	
Mistreated	-.02	<u>.80</u>	
Excessive demands	.08	<u>.68</u>	
Dissatisfied	.45	<u>.88</u>	
Eigenvalue	3.04	1.32	
Percent of variance	50.8	22.0	
Feelings Scale			
Item	Factor 1 (Negative Affect)	Factor 2 (Arousal)	Factor 3 (Curious)
Entertained	-.41	<u>.76</u>	-.09
Anxious	.29	<u>.61</u>	.20
Bored	-.09	-. <u>.62</u>	-.02
Aroused	-.08	<u>.91</u>	-.11
Angry	<u>.75</u>	.04	.26
Curious	.17	.06	<u>.91</u>
Relaxed	-. <u>.78</u>	-.37	.23
Afraid	<u>.70</u>	.07	.25
Depressed	<u>.84</u>	-.12	.10
Disgusted	<u>.74</u>	-.35	.00
Excited	-.08	<u>.91</u>	.06
Calm	-.55	-.51	.36
Nauseate	<u>.83</u>	-.06	-.02
Happy	-.59	.52	.02
Inhibit	.46	.35	.04
Eigenvalue	4.84	3.93	1.18
Percent of variance	32.2	26.3	7.9

**Note:** Underlined factor loadings indicate items used to calculate reliabilities.  $n = 48$ .

this factor due to its lack of face validity. A third factor contained only one item, curious, which was used as a filler item and not of interest in this study. Correlations among the dependent variables (evaluation and mood assessment items) used in this study are presented in Table 12. The only significant correlation between the evaluation items and the affect variables was that found between the Arousal factor and the mistreatment item ( $r = .37$ ,  $p < .05$ ).

An analysis of variance was performed on the data using violence and degradation as independent variables. These results are presented in Table 13. Subjects in the high violence conditions were more retaliatory than those in the low violence conditions. While this finding was in the hypothesized direction ( $p = .08$ ), this seemed to be the

Table 12

Pearson Product-moment Correlations for Factors and Items on Experimental Questionnaire and Feelings Scale

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	RETAL	REAPP	INTER	PERF	MISTR	DEMAN	DISS	NEG
RETAL								
REAPP	.92**							
INTER	.93**	.81**						
PERF	.89**	.70**	.73**					
MISTR	.16	.34*	.11	-.01				
DEMAN	.19	.23	.18	.12	.24			
DISS	.49**	.58**	.45**	.32*	.40**	.38**		
NEG	-.03	-.02	-.05	-.00	.03	-.21	-.10	
AROU	-.20	-.12	-.19	-.25	.37*	.18	.15	-.16

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

RETAL = Retaliation; REAPP = Reappointment; INTER = Interaction; PERF = Performance; MISTR = Mistreatment; DEMAN = Demanding; DISS = Dissatisfaction; NEG = Negative Affect; AROU = Arousal.  $n = 48$ .

Table 13

2 x 2 (Violence x Degradation) Analysis of Variance

Source	n	Mean	Sum of Squares	DF	F	Sig. of F	Eta Squared
Retaliation							
Violence			3.01	1	3.19	.081	.07
Low	25	-.25					
High	23	.27					
Degrading			2.30	1	2.44	.125	.05
Low	22	.25					
High	26	-.21					
Interaction			.02	1	.02	.885	.00
LV,LD	11	-.02					
LV,HD	14	-.42					
HV,LD	11	.52					
HV,HD	12	.04					
Within			41.46	44	.94		
Reappointment							
Violence			1.69	1	1.82	.185	.04
Low	25	-.19					
High	23	.21					
Degrading			4.11	1	4.42	.041	.09
Low	22	.33					
High	26	-.28					
Interaction			.00	1	.00	.970	.00
LV,LD	11	.13					
LV,HD	14	-.45					
HV,LD	11	.52					
HV,HD	12	-.08					
Within			40.98	44	.93		
Interaction							
Violence			2.05	1	2.07	.157	.04
Low	25	-.20					
High	23	.22					
Degrading			1.37	1	1.38	.245	.03
Low	22	.19					
High	26	-.16					
Interaction			.05	1	.05	.822	.00
LV,LD	11	-.05					
LV,HD	14	-.33					
HV,LD	11	.43					
HV,HD	12	.03					
Within			43.40	44	.99		

Source	n	Mean	Sum of Squares	DF	F	Sig. of F	Eta Squared
Performance							
Violence			4.20	1	4.43	.041	.09
Low	25	-.29					
High	23	.31					
Degrading			.90	1	.95	.335	.02
Low	22	.16					
High	26	-.14					
Interaction			.02	1	.02	.902	.00
LV,LD	11	-.15					
LV,HD	14	-.39					
HV,LD	11	.48					
HV,HD	12	.17					
Within			41.73	44	.95		
Mistreated							
Violence			1.66	1	1.78	.190	.04
Low	24	.14					
High	23	-.24					
Degrading			.02	1	.02	.878	.00
Low	22	-.07					
High	25	-.02					
Interaction			.01	1	.01	.910	.00
LV,LD	11	.10					
LV,HD	13	.17					
HV,LD	11	-.25					
HV,HD	12	-.23					
Within			40.21	43	.94		
Experimental Demands							
Violence			7.13	1	8.08	.007	.15
Low	24	.37					
High	23	-.40					
Degrading			.50	1	.57	.456	.01
Low	22	.10					
High	25	-.09					
Interaction			1.48	1	1.68	.202	.03
LV,LD	11	.30					
LV,HD	13	.44					
HV,LD	11	-.10					
HV,HD	12	-.67					
Within			37.92	43	.88		

Source	n	Mean	Sum of Squares	DF	F	Sig. of F	Eta Squared
Dissatisfied							
Violence			.01	1	.01	.935	.00
Low	24	-.02					
High	23	.02					
Degrading			1.65	1	1.65	.213	.04
Low	22	.20					
High	25	-.18					
Interaction			.00	1	.00	.968	.00
LV,LD	11	.18					
LV,HD	13	-.18					
HV,LD	11	.22					
HV,HD	12	-.17					
Within			44.34	43	1.03		
Arousal							
Violence			44.18	1	30.18	.000	.40
Low	24	4.95					
High	23	3.00					
Degrading			1.87	1	1.27	.265	.02
Low	22	3.76					
High	25	4.20					
Interaction			1.31	1	.89	.350	.02
LV,LD	11	4.91					
LV,HD	13	4.98					
HV,LD	11	2.61					
HV,HD	12	3.35					
Within			63.07	43	1.47		
Negative Affect							
Violence			8.74	1	6.58	.014	.10
Low	24	2.04					
High	23	2.88					
Degrading			22.63	1	17.06	.000	.25
Low	22	1.72					
High	25	3.09					
Interaction			.01	1	.01	.935	.00
LV,LD	11	1.30					
LV,HD	13	2.67					
HV,LD	11	2.14					
HV,HD	12	3.56					
Within			57.05	43	1.32		

LV = Low violence; HV = High violence; LD = Low degrading;  
 HD = High degrading.

Note to chart on previous page: The factors and items on the experimental evaluation form were converted to z-scores and the items for the experimenter evaluation form were recoded so that the higher the score on these items, the greater the verbal aggression. The scores for the Arousal and Negative Affect factors were based on a 7-point Likert scale ranging from "Not at all" to "Very much."

trend for all of the items contributing to the Retaliation factor. In fact, subjects in the high violence conditions were significantly more critical of the experimenter's performance than subjects in the low violence conditions. Interestingly, subjects in the low violence conditions reported the experimental demands of the first experiment significantly more excessive than subjects in the high violence conditions. In sum, the first hypothesis that materials rated high in violence would produce more verbal aggressiveness than materials rated low in violence was only partially supported.

No significant effects were found for the degrading conditions on the Retaliation factor. However, a significant effect was found for one of the items contributing to the measure, the reappointment of the experimenter as a research assistant. Subjects in the high degrading conditions were significantly more likely to agree that the first experimenter should be reappointed than subjects in the low degrading conditions. It should be noted here that previous researchers have found this item to be strongest indicator of retaliatory behavior among the items measuring retaliatory behavior (Sapolsky & Zillmann, 1981). The second



hypothesis that the degrading materials would lead to greater verbal aggressiveness was not supported. In fact, just the opposite appeared to be the case--the high degrading materials appeared to produce less verbal aggressiveness than the low degrading materials.

The third hypothesis that materials rated high in both violence and degradation toward women would induce greater verbal aggressiveness than materials with one or none of these attributes was also not supported. No significant findings were reported for any of the interactions between violence and degradation on any of the dependent variables.

Table 14

Post Hoc Analysis Comparing Degrading, Violent and Erotic Conditions

Measure	Degrading (HD, LV)	Erotic (LD, LV)	Violent (HV, LD)	F
n	14	11	11	
Retaliation	-.42 <sup>a</sup>	-.02 <sup>a, b</sup>	.52 <sup>b</sup>	3.70*
Performance	-.40	-.15 <sup>a, b</sup>	.48 <sup>b</sup>	3.64*
Interaction	-.33	-.05	.43	1.98
Reappointment	-.44 <sup>a</sup>	.13 <sup>a, b</sup>	.52 <sup>b</sup>	3.90*

\*p < .05

LV = Low Violence; HV = High Violence; LD = Low Degrading;  
HD = High Degrading.

Note. Higher z-scores for factors and items on the Experimenter Evaluation scale indicate greater verbal aggression. Within each row, means having no letter in their superscripts in common differ at  $p < .05$  by Tukey's test for comparisons between pairs of cell means.

After analyzing the data it became apparent that the greatest discrepancy among the conditions was between the HV-LD (violent) and LV-HD (degrading) conditions. A post hoc comparison of these two conditions, using the LV-LD (erotic) condition as a control, and their effect on the variables most directly assessing the experimenter's effectiveness was undertaken to further explore this relationship. The results of this analysis are presented in Table 14. On all but the interaction item, subjects in the HV-LD (violent) condition exhibited significantly more retaliatory behavior than subjects exposed to the LV-HD (degrading) condition. However neither condition was significantly different from the erotic, or "control" condition.

## DISCUSSION

Conceptual Analysis

No significant effects were found for either independent variable, degradation or violence, on the retaliatory factor nor was any interaction found between degradation and violence. In fact, these two variables appeared to have distinct, somewhat opposite tendencies. For example, male subjects exposed to highly violent materials were significantly more likely to depreciate the female confederate's performance--one of the items used to measure retaliatory behavior. Contrary to predictions, subjects exposed to highly degrading materials, compared to subjects in the low degrading conditions, were significantly more likely to recommend a female confederate's reappointment--perhaps the single most direct measure of retaliatory behavior. This, of course, was contrary to the hypothesized effect of depicted degradation on verbal aggression. How can such a finding be explained?

One possibility is suggested by the arousal-affect model proposed by Zillmann and his colleagues and shown to decrease aggressiveness after exposure to arousing materials (Zillmann & Bryant, 1984; Zillmann & Sapolsky; 1977). In fact, Zillmann and Bryant (1984) relied on this model to explain their finding that the more subjects were exposed to nonviolent, degrading materials the less aggressive they became toward a same-gender confederate. The less arousing and repulsive the films were to subjects, the less

aggressive they became. However, in the present study the relationship between the evaluation measures and subjects' affective responses was found to be minimal--the only significant correlation being between Arousal and the mistreatment item--an item for which no effects were found. In Zillmann and Bryant's study (1984), the authors simply noted a correspondence between arousal/affect and aggression, but did not report any significant correlations. In the present study, no comparable pattern was evident between the affective and evaluation responses. In fact, subjects reported more negative affect after viewing the segments rated high in degradation than subjects exposed to the low-degrading segments. There were no differences in arousal between the high and low degrading groups. According to the arousal-affect model, this should have led, if anything, to greater aggressiveness on the part of those subjects exposed to the highly degrading portrayals, not less.

Another explanation may lie in the portrayal, in some types of degrading pornography, of the male, who seems to be depicted as a somewhat passive recipient of female-initiated sexual activity. This would appear to be characteristic of the "availability" theme described by Zillmann and Bryant (1982) and others. In such instances female characters are typically portrayed as "raving, slobbering nymphomaniacs" (Brownmiller, 1980, p. 32) and "eager to accommodate any and every imaginable sexual urge of any man in the vicinity"

(Zillmann & Bryant, 1982). This being the case, the message imparted to male viewers may be that nonaggression, or passiveness, in relations with the opposite sex may be rewarding. As such, nonaggression could be their response, at least initially, when placed in a similar situation. In retrospect, one of the degrading stimuli, "Barbara Broadcast," may have contained a comparable message. In this segment an almost oblivious male waiter was the recipient of female-initiated oral sex. Subjects exposed to the degrading-only materials (LV-HD), which included "Barbara Broadcast," tended to exhibit the least aggressive responses. In fact, these subjects reported significantly less retaliatory behavior than subjects in the violence-only (HV-LD) condition. However such an explanation would not satisfactorily explain the possible contribution of the other three degrading segments, in which the male characters were rated relatively high on the dominance factor.

The preceding does point out the need to more carefully ~~distinguish between~~ various types of sexually explicit materials and, more specifically, degrading portrayals. As defined in the literature degrading materials seem to encompass a wide range of themes, from availability to objectification and dominance. While it is argued here that these themes have in common the lowering of the status of the female participant, the portrayal of the participants may vary. For example, in the availability theme the female is characterized by unbounded sexuality while the male

appears to be a somewhat passive recipient. In other themes, the male may be dominant while the female is, at least initially, somewhat passive or reluctant. In terms of an imitation effect, the depiction of the male, which has not received as much attention from researchers, as well as the portrayal of the female, may be an important determinant of subsequent behavior.

Another possibility is that subjects may have thought that the depictions in the sexually violent segments were morally improper and thus guarded against an aggressive response. Such an occurrence has been theorized by Berkowitz (1993) who argues that if media aggression is perceived as improper or morally wrong then the depiction will not promote aggression-enhancing thoughts or actions. Disapproval of an aggressor's behavior may actually activate inhibitions against aggression. As noted by Fisher and Grenier (1994) contemporary educational efforts to decrease anti-woman attitudes and behaviors could influence male subject's responses in current research. In fact, much of the research reporting significant findings was conducted in the late 1970s and early 1980s. An increased awareness of the negative consequences of such attitudes and behaviors on the part of subjects could result in null findings or at least "mask" the true effects of sexually violent and degrading materials. For example, Donnerstein et al., (1976) cite a number of studies reporting that subjects exposed to debriefings designed to dispel common myths about sexual

violence later (up to 7-8 months) have exhibited significantly less acceptance of similar types of myths. In addition, as noted by Malamuth (1984), recent documentaries and dramas concerning sexual violence such as "Cry Rape," "Why Men Rape," "A Scream of Silence," and pornography in general, "Not A Love Story," have been created to make the general public more cognizant of the myths surrounding these types of portrayals. In Canada, the heightened public awareness of the harmful effects of sexually violent and degrading pornography has prompted the Supreme Court to censor such materials (R v. Butler, 1992). As such, subjects' disapproval of sexual violence and degrading behaviors may have inhibited their retaliatory responses. Put into a theoretical perspective, viewing degrading behavior towards females might depersonalize women in general and lead to subsequent aggression, except when the degrading behavior is perceived as morally improper, in which case subjects' aggressive responses might be inhibited. There is ample evidence in the present experiment that male subjects were able to detect degrading behaviors. Their pre-test ratings did not differ from those of female subjects, and they exhibited significantly more negative affect towards the high-degrading films compared to the low-degrading segments. As a result, they may have guarded against making an aggressive response towards the female confederate. Future research could address this proposition by the administration of a pre-test assessing subjects'

attitudes toward women, the assumption being that the more negative their attitudes, the less likely they would be able to perceive degrading behaviors and guard against making an aggressive response.

✓ It may also be possible that degrading portrayals do not lead to increased aggressive behavior. In Zillmann and Bryant's (1984) study of prolonged exposure and in this study (reappointment item), subjects exposed to degrading materials subsequently exhibited less aggressive behavior. This contrasts with the McKenzie-Mohr and Zanna (1990) study in which exposure to nonviolent pornography was found to increase subjects' willingness to treat females as sex objects (measured by how close subjects sat next to a female confederate and how much they recalled about her physical features). One distinction between these studies is that the aggression measures in the first two studies were constructed so that subjects were aware that their responses might have harmful consequences for the female confederate (either by negative ratings or the infliction of physical pain). On the other hand, the type of behavior exhibited by subjects in the McKenzie-Mohr and Zanna study did not pose harmful consequences for the confederate. This being the case, exposure to degrading materials may lead males to relate to women as sexual objects, but without the intention of harm that might accompany more aggressive actions such as sexual violence or coercion. As mentioned previously, regarding women as sexual objects, while offensive to some,



can be viewed as an efficient means for the perpetuation of the species (Zillmann & Bryant, 1989). In addition, since the control group in McKenzie-Mohr and Zanna's study was shown a video of a House of Commons (Canada) question period, the somewhat important question of whether or not sexually explicit materials per se (erotica) would have lead to similar results was not addressed. Theoretically, instead of the target being depersonalized and subjects disinhibited, depictions of degrading behavior may result in the behaviors being imitated by viewers. Such behaviors may not be perceived to have harmful consequences, in fact the typical portrayal in pornographic materials is just the opposite--women seem to enjoy such treatment. As such the potential impact of degrading materials on society may be much more subtle than that of violent portrayals. As McKenzie-Mohr and Zanna (1990) note, the social implications of having males relate to women as sex objects are relatively unexplored in the research, although intuitively such behaviors and attitudes would seem to foster antisocial activities such as sexual harassment and discrimination.

Considering the above discussion, the theoretical perspectives leading to the hypotheses tested in this study need further elaboration. Berkowitz's (1974) aggressive cue theory was used to predict subjects' responses to the violent depictions and subsequent aggression opportunity. This theory posits that individuals take on an aggressive cue value if they can be associated with observed acts of

violence. Showing the female as a victim of violence should increase the aggressive-eliciting properties of females in general. Therefore viewing such portrayals should increase subsequent aggression toward females. This theoretical approach was partially supported by the data in this study in that the trend for exposure to the violent portrayals was increased retaliatory behavior ( $p = .08$ ). In addition, one of the items used to measure verbal aggressiveness, ratings of the female confederate's performance, was found to be significantly more negative for subjects in the violent conditions ( $p < .05$ ). Significant findings may have been limited by some of the procedural limitations, loss of subjects and provocation procedure for example, discussed in the following section. However, it appears that the theoretical approach used here to predict effects from exposure to violent portrayals is a reasonable one.

Perhaps the most parsimonious theoretical explanation for findings for the degrading conditions would be that of social learning theory (Bandura, 1977). This theory describes a modeling process whereby individuals observe and imitate media portrayals based on the likelihood of being rewarded. For example, when degrading behavior is depicted as rewarding, viewers are apt to imitate the behavior in similar circumstances. If passive behavior is depicted as rewarding in some pornographic materials, for example the passive male being serviced by the wildly euphoric nymphomaniac, then the chances of that behavior being

imitated should be increased. If degrading behavior is depicted as having positive consequences, for example the female is treated solely as a sex object during sexual activity by the male, then that behavior is more likely to be imitated, especially if the viewer believes the behavior will bring about the same rewarding result. This might explain why after viewing degrading pornography viewers might exhibit sexist behavior toward a female but not necessarily aggressive behavior--defined here as intending to inflict harm upon another. Obviously if such behavior is thought to be morally wrong, it would not be imitated.

The dehumanization process, while still a legitimate approach and certainly not disproven here, does not appear to offer as thorough an explanation for the results in this study. If subjects thought the degrading behavior was morally wrong (and certainly this is not a given at this point), then the dehumanization process should theoretically have been able to overcome that. This is because the dehumanization process has been used to explain how behavior that would be considered morally offensive, for example the Nazi's extermination of Jews during World War II, can be carried out. As Kelman (1973) argues, "to the extent that the victims are dehumanized, principles of morality no longer apply and moral restraints ... are more readily overcome" (p. 48). If the female characters in this study were truly dehumanized, then any moral restraints against aggressing against them should be overcome.

The only effect from the experiment evaluation items was that subjects in the low violence conditions (degrading and erotic films) rated the experimental demands as more excessive than subjects in the high violence conditions. Such a finding seems at odds with the theoretical concepts discussed previously in which depictions high on violence would be expected to produce greater annoyance. One explanation for this discrepancy, is that subjects may have simply compared the demands of the first part of the experiment (the problem-solving study) with that of the second part (film exposures). In the two conditions that led subjects to express the most displeasure with the first study were also the same two that subjects reported the most positive affect to. Subjects in these conditions reported being more aroused than subjects in the other conditions. These subjects may have compared the general feeling of pleasure experienced in the second experiment with the somewhat negative experience of the first experiment in having the experimenter arrive late, the test being difficult and not having enough time to finish, and rated these demands more as being more excessive than those subjects whose level of arousal was not significantly increased during exposure to the high violence films.

Finally, subjects' pre-test ratings of the film segments indicated a relationship between violence and degradation. In fact the correlation between the two proved to be highly significant ( $r = .64$ ,  $p < .01$ ). It appears that

while degrading materials can be something other than violent, violent materials may be perceived as at least moderately degrading. Apparently subjects believe that a violent attack is to some extent degrading for the victim. However there may be some limitations, not present in this study, in perceiving violent portrayals as degrading. Violence against an inanimate object, for example, may not be perceived as degrading at all since no person is victimized. In violence depictions in which two protagonists are portrayed in a somewhat even struggle against each other there also may not be a perception of degradation. However when one party is portrayed as relatively defenseless and is victimized by another, similar to the depictions used in this study for the violent conditions, then the perception seems to shift toward the victim being degrading. The greatest shift appears to come about for sexually violent portrayals, in which the female is most intimately violated, and apparently most degraded. In the present study it appeared that perceptions of violence and degradation, for reasons discussed above, had contrasting tendencies. Depictions rated high on violence tended to increase subject's verbal aggressiveness while depictions rated high in degradation tended to decrease verbal aggression. However, in regard to degrading materials, given the paucity of previous research and the inconsistent findings reported here, further investigation is need to draw more definitive conclusions.

Measurement/Procedural Limitations

Other factors, relating to measurement and procedural considerations, may also have influenced the results of this study. One area of the study that proved somewhat problematic was the provocation procedure. Because subjects could not be insulted due to the ethical considerations previously discussed, the provocation used in this study was relatively mild compared to other studies in which insults or physical aggression were used to provoke subjects. As a result, male subjects may not have been disinhibited enough to aggress. This possibility is supported to some extent by the pre-test provocation results in which subjects were significantly irritated ( $p < .05$ ), but only marginally angered ( $p < .10$ ).

A related factor may have been the stimuli selected for the experiment. Because violent X-rated films are censored in Canada, only R-rated films could be used for the sexually violent (HV-HD) condition. As mentioned previously, a common theme in X-rated violence is that the female victim eventually becomes aroused and ends up enjoying the sexual activity. Such a portrayal may not be as prevalent in R-rated films. For many of the films previewed for this study, sexual violence was depicted as having negative consequences for the female. In the ones selected, the female's reaction to the sexual aggression was ambivalent at best. She was certainly not the unwilling victim turned into "a raving, slobbering nymphomaniac" described by Brownmiller (1980, p.

32).

As Donnerstein and Berkowitz (1981) have shown, if subjects are not angered (and they may not have been to the extent needed in this study), then only a positive ending will induce an aggressive response. This being the case, subjects in the sexually violent (HV-HD) condition may not have reacted aggressively, in part, because the female victim's reaction was not overtly positive.

Another procedural consideration was subject loss and the resulting loss of power in detecting treatment effects. For example, for the Retaliation factor in Table 14, an acceptable degree of power (.80), given the derived means and total error variance for the analysis, would have required 18 subjects per treatment condition (Keppel, 1982). The harmonic mean for the three conditions considered in Table 14 was less than 12, resulting in a relatively low degree of power (.60) for the analysis, indicating the possibility of a type II error (failing to reject the null hypothesis when the alternate was true). Previous studies' subject pools have ranged widely, from 49 subjects (Linz, Donnerstein & Penrod, 1984)) to 160 subjects (Zillmann & Bryant, 1982) to over 400 subjects (Check & Guloien, 1989) with typically four experimental conditions having been used. The present study falls at the low end of that range ( $n = 48$ ) making it relatively less powerful than most other studies in the field. If the present study had more power, it may have been possible to determine whether, compared to

the erotic control group, violent portrayals increased aggression and/or degrading nonviolent portrayals decreased aggression.

The following procedural recommendations should be considered in future research endeavors. A provocation condition should be used so that subjects are clearly angered. It may not be sufficient for subjects to be irritated or simply predisposed to downgrade the experimenter. The question for ethics committees is whether the benefits of investigating the possible anti-social effects of sexual violent and degrading depictions on viewers outweigh the risks to subjects' self-esteem. The ongoing concern over these types of portrayals as well as the adequacy of the proposed debriefing procedure would seem to offer a compelling argument in favor of the potential benefits gained. Another recommendation is that the data should be collected in as short a time span as possible. Participants in this study may have talked between sessions, resulting in substantially more negative evaluations. This suggestion would appear to be particularly appropriate for experiments involving sexually explicit materials, since the temptation to talk about the stimuli, novel to say the least, may prove irresistible for many.

### Policy Implications

To a large extent, exposure to degrading materials has been shown to lead primarily to the reinforcement of sexist



attitudes and behavior (McKenzie-Mohr & Zanna, 1990; Wyer et al., 1985). As such they may not pose a threat to society (Zillmann & Weaver, 1989). In addition, many types of media offerings have been found to contain sexist images and perpetuate sexist attitudes. For example, Signorielli (1989) has found that women have been portrayed in a sexist fashion in prime-time television programs over the past two decades. Exposure to such programming has been positively correlated with more stereotypical views of women (See Gunter, 1986, for a summary). As discussed previously, the rape trivialization finding in Zillmann and Bryant's (1982) study was replicated by Weaver (1987) who used excerpts from R-rated movies. In effect, degrading or sexist materials in many contexts have been found to have what some may consider antisocial effects.

A similar argument can be made for sexually violent materials since an increase in aggressive behavior after exposure seems to depend on the female's reaction to the sexual violence and not the sexual violence per se. Only when the female is aroused does depicted sexual violence lead to increased aggression. Such depictions are not limited to X-rated materials, as illustrated by Check and Malamuth's (1981) field study in which commonly available, R-rated movies portraying sexual violence with positive outcomes were found to increase male subjects' acceptance of interpersonal violence against women. Indeed many studies of violent-only materials have found increases in subjects'

aggressive behavior after exposure (See Berkowitz, 1993, for a review). Such findings are similar to that of Donnerstein and Berkowitz (1981).

In addition, in the present study exposure to violent R-rated materials was found to increase verbal aggression relative to X-rated degrading materials. Paradoxically, in Canada, the R-rated violent materials, which were found to induce more harmful behavior, would not be banned while the X-rated degrading materials, which produced relatively less aggressive behavior, would be censored. Taken as a whole, these findings call into question the selective targeting of degrading and violent X-rated materials for increased prosecution and restriction. Since other, more mainstream, materials have been found to depict comparable behaviors and perpetuate similar views, the harmfulness approach to pornography, advocated by some feminists and embraced by the Canadian Supreme Court and the Meese Commission, seems misguided. If harmfulness is the concern, then it seems a broad range of materials should be considered since messages of violence and degradation have been found in X-rated as well as more mainstream media offerings. In addition, if subjects indeed found the degrading depictions to be morally wrong in the present study and thereby exhibited less aggressiveness, then perhaps the best procedure to follow would be to continue and/or increase educational efforts to counteract some of the common myths surrounding degrading and sexually violent portrayals (the recipient enjoys being

degraded or physically abused).

### Suggestions for Future Research

One category that was revealed in the pre-testing, but not examined in this study, is characterized primarily by verbal abuse. While this type of depiction has been mentioned in previous research, its potential significance has been relatively unexplored. Content analyses of X-rated videos have focused primarily on aspects of physical violence, such as rape or bondage. However, verbal abuse may also be a significant component, as indicated by the analysis of X-rated films by Cowan et al. (1988) in which verbal aggression, characterized by "abusive, derogatory language, swearing at the person" was found in 20% of all sexually explicit scenes (G. Cowan, personal communication, March 18, 1991). While little attention has been paid to the imitation effects of verbal aggression (Greenberg, 1980), the potential importance of such effects can be seen by the impact of verbal abuse in interpersonal relationships. The effect of such abuse on an individual's self-esteem and general physical and psychological well-being has been well documented (Kinney, 1994). As such, further research into this aspect of sexually explicit materials and media presentations in general seems warranted. Certainly, the perception of such presentations as violent lends support to the notion that they may have significant effects on anti-social attitudes and behaviors. In addition, based on

subjects' perceptions in this study, it appears that Gerbner's definition of violence may be too limiting and should be broadened to include verbal aggression as well as physical acts.

As mentioned previously, suggestions for improving the procedural and measurement elements of the present study include using a stronger provocation technique, the use of X-rated, as opposed to R-rated, violent materials and compressing the time period for data collection. Another suggestion would be to measure pre-existing attitudes and behaviors before assigning subjects to experimental conditions. A similar procedure was followed by McKenzie-Mohr and Zanna (1990) who pre-tested male subjects on their sex role identification. An advantage of this method is that it permits more powerful statistical analyses to detect differences in means. For example, McKenzie-Mohr and Zanna found no overall effects for the analyses of variance used in their study. However, using planned comparisons these authors found that subjects characterized as masculine sex-typed were significantly more likely to treat women as sex objects after exposure to a pornographic video than similar-typed subjects in a control group. Another possible pre-test variable might be frequency of previous pornography consumption. Check and Guloien (1989) found this variable to be significantly related to various "anti-woman" attitudes such as rape myth acceptance, acceptance of violence against women, sexual callousness and reported likelihood of rape

and forced sex. In addition, exposure to violent and degrading materials was found to reinforce certain sexually aggressive attitudes (Check & Guloien, 1989). By pre-testing subjects on such variables, future researchers may be able to more consistently delineate the effect of degrading and sexually violent materials.

## Description of Film Segments

Low violence, Low degrading (Erotica)"Femme-The Dressing Room"

A couple is shown kissing, caressing and touching backstage in a theater dressing room. The sexual activity progresses from cunnilingus to intercourse. There is no dialogue during the scene, only music.

"Urban Heat-Disco"

A male and female are shown undressing each other. Sexual activities include kissing and touching with the male caressing the female's breasts and genital area. The male character performs cunnilingus, then the female performs fellatio before the couple engages in intercourse with the male on top.

Low violence, High degrading (Degrading)"Amanda by Night"

Two vice squad detectives visit a massage parlor and decide the new girl needs to be "broken in." The female, who is nude, performs fellatio on both males at the same time. The sexual activity consists of double penetration (intercourse with one male and fellatio with the other). One male is shown chewing gum and partially dressed during the sexual activity while the other, after telling the female to turn over, comments, "You got to position them around, Fender, you know what I mean?"

### "Barbara Broadcast"

In one scene a female waitress performs fellatio on the male maitre d' after she drops and breaks a tray full of dishes. In another scene a female customer requests to perform fellatio on a male waiter. After the waiter, who is expressionless during the sexual activity, ejaculates in her face she says, "Thy rod and thy staff, they comfort me." All the sexual activity takes place in the midst of a busy restaurant.

### High violence, High degrading (Sexually violent)

#### "Blue Velvet"

The male character enters the room and disgustingly asks the female where his drink is, "You shithead...can't you fucking remember anything?" She gets his drink and they sit opposite each other. The male then orders the female to spread her legs. The male character then tells the female not to look at him ("Don't you fucking look at me!") and slaps her. He then throws her down on the floor, massages her genital area roughly and has intercourse with her. Next he hits her again, telling her not to look at him. The scenes ends with the male leaving and the female still lying on the floor.

#### "Last Tango in Paris"

The male character tells the female to get a stick of butter. While they are both sitting on an empty apartment floor, he opens the front of her pants, turns her over on

her stomach and puts a handful of butter on her bottom. They then have anal intercourse during which time the male demands she repeat an epitaph after him while the female is depicted as crying.

High violence, Low degrading (Violent)

"Dressed to Kill"

The female character is shown leaving the apartment of someone she has spent the night with. As she is leaving she finds a medical report indicating the man she has just slept with has been diagnosed with a venereal disease. As she is riding the elevator down from the apartment, she remembers she has forgotten her ring. She rides the elevator back up and when the door opens again a person wearing a blond wig enters and with a razor-like knife proceeds to slash the female character with it.

"Halloween"

This entire scene is shot from the perspective of the perpetrator. A couple is shown sitting on a couch in the female's house. They then go upstairs and a short while later the male friend comes down and leaves. The male perpetrator then goes to the kitchen, picks up a butcher knife and heads up the stairs to the female's bedroom. Noting the messed up bed, the perpetrator spots the nude female who is sitting at her dresser and begins to stab her with the knife as she shouts, "Michael, no!"



## Pre-test and Main Experiment Questionnaires

Problem-solving Exercise

## INTRODUCTION

This questionnaire contains questions about your background as well as various problem-solving exercises. Your answers on this questionnaire are completely anonymous. You will be given a certain amount of time by the experimenter to complete each section. The problem-solving items were designed to be somewhat difficult but please try to answer as many of them as you can.

## DEMOGRAPHIC INFORMATION

Age \_\_\_\_\_

Place of Birth: \_\_\_\_\_ Country: \_\_\_\_\_

Sex: Male \_\_\_\_\_ Female \_\_\_\_\_

Year in university    1st \_\_\_\_\_  
                             2nd \_\_\_\_\_  
                             3rd \_\_\_\_\_  
                             4th or higher \_\_\_\_\_

What is your field of study? \_\_\_\_\_

Are you: Black \_\_\_\_ White \_\_\_\_ Asian \_\_\_\_ Indian \_\_\_\_ Other \_\_\_\_

What is your religious affiliation (if any)?  
  
\_\_\_\_\_

## PART 1

Please answer the following items by writing in your answer in the space provided below each item.

1. A person spends one-eighth of his spare change for post cards and four times as much for a box of letter paper, and then has 90 cents left. How much money did he have at first?

2. A certain military division contains 3,000 artillery, 15,000 infantry and 1,000 cavalry. If each branch is expanded proportionately until there are in all 20,900 men, how many will be added to the artillery?

3. In a certain year, Manitoba produced  $\frac{2}{3}$  and Ontario produced  $\frac{1}{6}$  of all the iron ore produced in Canada. If all the other provinces combined produced 18 million tons that year, how many million tons did Manitoba produce that year?

## PART 2

Below are 10 mixed-up sentences. Please write under each sentence what it would say if the words were straightened out.

1. nights seen the moon not be some can

2. cardinal cultivated the be virtues should

3. with that apple a and begin ant words acorn are

4. repeated call human for courtesies associations

5. friends in us disaster never appearances are

6. size now of guns use are great in

7. sadness lists great casualty cause

8. health necessary camp a is to clean

## PART 3

Please write your answers to the following questions below each question. You may use the space provided below each question for your calculations. Please try to do as many as you can.

1. A grocer will offer a particular kind of fruit for sale only on the day it is delivered.

The delivery schedule is the same each week.

The grocer's store is open for business Monday through Saturday only.

Cherries are delivered only every other business day.

Oranges are delivered every business day.

Peaches are delivered on two non-consecutive business, but not on Monday, Friday or Saturday.

Lemons are delivered on the same days as cherries but also on Saturdays.

Grapefruit are delivered only on the two consecutive days on which lemons are delivered.

What is the maximum number of days on which both lemons and peaches can be purchased?

On which days are the fewest kinds of fruit mentioned above for sale?

2. A half tone is the smallest possible interval between notes.

Note T is a half tone higher than note V.

Note V is a whole tone higher than note W.

Note W is a half tone lower than note X.

Note X is a whole tone lower than note T.

Note Y is a whole tone lower than note W.

What is the relative order of the notes from the lowest to the highest?

3. A farmer plants only five different kinds of vegetables--beans, corn, kale, peas and squash. Every year the farmer plants exactly three kinds of vegetables according to the following restrictions:

If the farmer plants corn, the farmer also plants beans that year.

If the farmer plants kale one year, the farmer does not plant it the next year.

In any year the farmer plants no more than one of the vegetables the farmer planted in the previous year.

What would be a sequence of combinations for the farmer to plant in two successive years?

If the farmer plants beans, corn and kale in the first year, what combinations must be planted in the third year?

Evaluations for Experimenter/Experiment

## EXPERIMENTER EVALUATION

Please indicate your answers to the questions below by checking the appropriate space. All answers are on a continuum from -100 (most negative) to +100 (most positive). Remember your responses are completely anonymous. Please answer these questions as honest as possible.

\_\_\_\_\_  
Experiment

\_\_\_\_\_  
Experimenter's name

1. How well did the above named research assistant perform in her/his role as an experimenter?

\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_  
-100 +100  
POORLY EXCELLENTLY

2. How would you rate his/her manner of interacting with others?

\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_  
-100 +100  
Extremely UNPLEASANT and DISCOURTEOUS  
Extremely PLEASANT and COURTEOUS

3. In your opinion, should this student be reappointed as a research assistant?

\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_  
-100 +100  
Definitely NOT Definitely YES

## Experiment

          :          :          :          :          :          :          :          :          :          :          

0100

**MISTREATED  
to a GREAT  
EXTENT**

          :          :          :          :          :          :          :          :          :          :

0100

EXTREMELY  
EXCESSIVE

        :        :        :        :        :        :        :        :        :        :

0100

EXTREMELY  
DISSATISFIED

(used only for provocation pre-test)

Please indicate by marking the following items in the appropriate space how you feel right now.

4. Relaxed

Not at \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ Very  
all  
much

5. Angry

Not at \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ Very  
all  
much

6. Anxious

Not at \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ Very  
all  
much

7. Pleased

Not at \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ Very  
all  
much

8. Irritated

Not at \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ Very  
all  
much

9. Calm

Not at \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ Very  
all  
much

ADDITIONAL COMMENTS:



Pre-Test of Film Segments

## INTRODUCTION

The purpose of this study is to measure your reactions to the video segments you will see. You will need to fill out part of the questionnaire after viewing each segment. Each film section on the questionnaire is the same and has three parts. The first part asks for your OVERALL impressions of the segment, the second part for your impressions of the FEMALE character(s) and the third part for your reaction to the MALE character(s).

Remember there are no "right" or "wrong" answers--the only correct responses are those that are true for you. REMEMBER THE QUESTIONNAIRE IS BEING USED SOLELY FOR RESEARCH PURPOSES AND IS COMPLETELY ANONYMOUS.

Work at a fairly high speed through this questionnaire. Do not worry or puzzle over individual items. It is your first impression we are interested in. At the same time, please do not be careless, because we want your true impressions. The ratings are based on a continuum from "not at all" to "very much."

EXAMPLE: If you felt the video was very humorous you would mark the following item in this way:

Humorous

Not at \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_X\_ Very  
all  
much

Film 1

Your impressions of the tape OVERALL:

Entertaining

Not at \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_X\_ Very  
all  
much

Violent

Not at \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_X\_ Very  
all  
much

## Sexually Arousing

Not at all \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ Very much

## Disgusting

Not at all \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ Very much

## Tranquil

Not at all \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ Very much

## Exciting

Not at all \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ Very much

## Brutal

Not at all \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ Very much

## Stimulating

Not at all \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ Very much

Your impression about the way the FEMALE character(s) was portrayed in this video:

## Affectionate

Not at all \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ Very much

## Humiliated

Not at all \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ Very much

## Willing

Not at all \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ Very much

## Submissive

Not at all \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ Very much

## Promiscuous

Not at all \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ Very much

## Dominant

Not at all \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ Very much

## Degraded

Not at all \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ Very much

## Aggressive

Not at all \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ Very much

Your thoughts about the way the MALE character(s) was portrayed in the video:

## Affectionate

Not at all \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ Very much

## Humiliated

Not at all \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ Very much

## Willing

Not at all \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ Very much

## Submissive

Not at all \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ Very much

## Promiscuous

Not at all \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ Very much

## Dominant

Not at all \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ Very much

## Degraded

Not at all \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ Very much

## Aggressive

Not at all \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ Very much

## Promiscuous

Not at \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ Very  
all much

## Dominant

Not at \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ Very  
all much

## Degraded

Not at \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ Very  
all much

## Aggressive

Not at \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ Very  
all much

Post-Exposure Mood Assessment Scale

## INTRODUCTION

The purpose of this study is to measure your reactions to the video segments you have just seen. Your responses need to be based on how you feel at the present time. Work at a fairly high speed through this questionnaire. Do not worry or puzzle over individual items. It is your first impression we are interested in. At the same time, please do not be careless, because we want your true impressions. The ratings are based on a continuum from "not at all" to "very much."

EXAMPLE: If you feel very confident right now you would mark the following item in this way:

Confident

Not at all    \_\_\_\_:\_\_\_\_:\_\_\_\_:\_\_\_\_:\_\_\_\_:\_\_\_\_:\_\_\_\_:   X      Very much

Remember there are no "right" or "wrong" answers--the only correct responses are those that are true for you. REMEMBER THE QUESTIONNAIRE IS BEING USED SOLELY FOR RESEARCH PURPOSES AND IS COMPLETELY ANONYMOUS.

Now, go ahead and mark for the following items to indicate how you feel at the present time.

## 1. Entertained

NOT AT ALL    \_\_\_\_:\_\_\_\_:\_\_\_\_:\_\_\_\_:\_\_\_\_:\_\_\_\_:\_\_\_\_:    VERY MUCH

## 2. Anxious

NOT AT ALL    \_\_\_\_:\_\_\_\_:\_\_\_\_:\_\_\_\_:\_\_\_\_:\_\_\_\_:\_\_\_\_:    VERY MUCH

## 3. Bored

NOT AT ALL    \_\_\_\_:\_\_\_\_:\_\_\_\_:\_\_\_\_:\_\_\_\_:\_\_\_\_:\_\_\_\_:    VERY MUCH

## 4. Sexually Aroused

NOT AT ALL    \_\_\_\_:\_\_\_\_:\_\_\_\_:\_\_\_\_:\_\_\_\_:\_\_\_\_:\_\_\_\_:    VERY MUCH

## 5. Angry

NOT AT \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:  
ALL

VERY  
MUCH

## 6. Curious

NOT AT \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:  
ALL

VERY  
MUCH

## 7. Relaxed

NOT AT \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:  
ALL

VERY  
MUCH

## 8. Afraid

NOT AT \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:  
ALL

VERY  
MUCH

## 9. Depressed

NOT AT \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:  
ALL

VERY  
MUCH

## 10. Disgusted

NOT AT \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:  
ALL

VERY  
MUCH

## 11. Excited

NOT AT \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:  
ALL

VERY  
MUCH

## 12. Calm

NOT AT \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:  
ALL

VERY  
MUCH

## 10. Nauseated

NOT AT \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:  
ALL

VERY  
MUCH

## 11. Happy

NOT AT \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:  
ALL

VERY  
MUCH

## 12. Inhibited

NOT AT \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:  
ALL

VERY  
MUCH

Suspi

1. Wh

2. Wh  
you t

3. Du

4. Di  
exper



Suspicion Check

1. What did you think these experiments were all about?
2. What did you think the hypotheses were (i.e., what did you think we were looking for, trying to study?).
3. During the experiment did you have any suspicions?
4. Did you think there any relationship between the two experiments?

Agreed  
cc  
Jo

Alexan

Bandur  
N

Bandur  
D  
r  
R

Baron,  
h  
S

Baron,  
T  
E

Baron

✓ Baron

✓ Baron

Bem, s

Bem, s

Berkov

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1

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