Violence Against Women

Aggression and Sexual Behavior in Best-Selling Pornography Videos: A Content Analysis Update

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What is This?

Aggression and Sexual Behavior in Best-Selling Pornography Videos: A Content Analysis Update

Ana J. Bridges[1], Robert Wosnitzer[2], Erica Scharrer[3], Chyng Sun[2], and Rachael Liberman[4]

Abstract

This current study analyzes the content of popular pornographic videos, with the objectives of updating depictions of aggression, degradation, and sexual practices and comparing the study's results to previous content analysis studies. Findings indicate high levels of aggression in pornography in both verbal and physical forms. Of the 304 scenes analyzed, 88.2% contained physical aggression, principally spanking, gagging, and slapping, while 48.7% of scenes contained verbal aggression, primarily name-calling. Perpetrators of aggression were usually male, whereas targets of aggression were overwhelmingly female. Targets most often showed pleasure or responded neutrally to the aggression.

Keywords

content analysis, pornography

The pornography industry remains fast growing and lucrative, with annual sales growing from US$8 billion in 1996 (Stack, Wasserman, & Kern, 2004) to more than US$12 billion by 2005 (Adult Video News [AVN], 2006). Currently, more than 13,000 adult videos are produced annually in the United States, an increase of 60% over the same 10-year period (AVN, 2006). By comparison, the major Hollywood studios released 507 new titles in 2005,

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with domestic revenues of US$8.8 billion (Motion Picture Association of America [MPAA], 2010). Although consumers access pornographic materials in a number of forms—including the Internet, cable and hotel video-on-demand, the telephone, and magazines—videotapes (VHS) and digital video discs (DVD) still generate the most income (AVN, 2006). In fact, rentals at adult video stores increased from US$75 million in 1986 to US$665 million just 10 years later (Stack et al., 2004), culminating in over 950 million adult videos rented annually by 2005 (AVN, 2006). Video rentals generated more than US$4.28 billion in 2005, representing 34% of the total market for all adult products (AVN, 2006).[1]

The research community has focused largely on the effects of pornography consumption and, consequently, hotly contested debates have surfaced regarding whether all pornography or particular types of pornography are cause for alarm. In contrast to effects studies, comparatively few studies have attempted to systematically document the content patterns in pornographic materials, leading to some unsubstantiated claims regarding its nature. As Nina Hartley (2005), a self-described feminist pornography performer and producer, states, "by focusing on one or two examples [that one] finds particularly heinous, [one] obscures the broader truth, which is that the marketplace of sexual entertainment contains products for almost every taste and orientation, including material made by and for heterosexual women and couples, lesbians and gay men" (p. 1). Such claims of content diversity elude questions about audience composition and preferences. Our study joins a relatively small number of precursors in performing a systematic content analysis of top-circulating adult videos, thereby illuminating the current status of the themes and messages apparent in popular pornography, offering a vital update to the existing bodies of work available.

At the heart of many of the controversies about pornography is the topic of aggression and degradation. The social significance of these issues is undeniable, as much of the pornography effects research has shown pornography is more likely to have a negative influence on the thoughts, attitudes, or behavior of audience members if it features aggression (e.g., Donnerstein, Linz, & Penrod, 1987; Linz, Donnerstein, & Penrod, 1987). Experimental evidence suggests that degrading pornography increases dominating and harassing behavior toward women (Hall, Hirschman, & Oliver, 1994; Mulac, Jansma, & Linz, 2002), harsher evaluations of their real-life partners (Jansma, Linz, Mulac, & Imrich, 1997), and loss of compassion for female rape victims (Zillmann, 1989; Zillmann & Bryant, 1982).

Literature Review

Defining Pornography and Other Key Terms

Difficulties in conducting a content analysis of pornographic movies include defining what constitutes such media texts and measuring key concepts such as violence, sexual violence, and degradation. The Attorney General's Commission on Pornography (1986) defined pornography as "material predominantly sexually explicit and intended for purposes of sexual arousal" (pp. 228-229). Pornography has also been defined as "any sexually explicit material to which access was limited, either by signs or physical structure, to adults" (Barron & Kimmel, 2000, p. 162).

There is also considerable disagreement regarding whether violence and degradation are two separate concepts or one unified concept. Palys (1986), for example, treats violence and degradation separately (definitions appear in the next section), whereas Dines, Jensen, and Russo (1998) have considered degradation a type of violence, and Cowan and colleagues (Cowan, Lee, Levy, & Snyder, 1988) have conceived of violence as a type of degradation. McKee (2005) chooses to use the word *objectification* to encompass the dehumanizing depiction of some characters in pornography and has suggested violence is a subtype of (as well as a causal contributor to) objectification. A review of content analysis research (McKee, 2005) reveals that degrading depictions in pornography are typically defined as those that (a) encompass unusual or non-normative sexual practices (with the assumption that participation in these acts intrinsically is degrading to a character) and (b) imply differences in status between or among characters.

Violence, too, has proven to be a difficult concept to define and measure in past content analyses. Typically, physical acts are necessary for most content analysts to code something as violent, although verbal aggression is sometimes measured as a separate item in the analysis. Typically, definitions of violence include behaviors directed from one character to another that are intended to cause harm, with the recipient motivated to avoid such harm (Donnerstein et al., 1987). However, such definitions require knowledge about perpetrator intentions and target motivations, both difficult to codify with high reliability as they require the analysis of potentially complex sets of behaviors and subjective appraisals. Other scholars, such as Gerbner and colleagues (Gerbner, Gross, Jackson-Beeke, Jeffries-Fox, & Signorielli, 1978), have argued for the importance of coding violence that appears to be inconsequential, as this oftentimes captures aggressive or violent acts that have been naturalized. As a remedy to the "intentionality" trap, Gerbner et al. (1978) offered the definition of violence as an "overt expression of physical force, with or without weapon, against self or other, compelling action against one's will on pain of being hurt or killed, or actually hurting or killing" (p. 179). Gerbner et al.'s definition retains the problem of the agency of the recipient of violent acts. That is to say, Gerbner et al. distinguish violence when the violent act is "against one's will," under duress of what might be constructed as "pain of being hurt" or "actually hurting or killing," leaving open the subjective interpretations to the actions or expressions of the character on the receiving end of violence and aggression.

Indeed, the focus on intention of the perpetrators (or aggressors) and the response of the targets (or victims) in defining violence is an area of great debate and tension. McKee (2005) argues that "consent" is ultimately important in sex acts. Thus, acts of bondage or domination/discipline in consensual sadomasochism pornography scenes are not considered violent, even if the targets of these acts experience pain. However, the genre of pornography oftentimes requires the apparent enjoyment of actors and actresses to all that occurs (Bridges, 2010), such that any touch or position by one actor to another is met with near orgasmic pleasure. If the genre requires meeting any act bestowed on a character as an act of pleasure, and if definitions of aggression require a target to be motivated to avoid harm, then a priori we can assert that none of these acts would be coded as violent or aggressive (save for a few films that are particularly focused on overt pain or harm—certainly not mainstream pornography of the kind analyzed in McKee, 2005). This results in a rendering of aggressive acts as invisible when they occur within the context of sex.

Based on the central tenets of social cognitive theory (Bandura, 1994, 2001), a crucial element in observed instances of aggression is whether the aggressive act is met with a favorable or an unfavorable response. A favorable response—for instance, one in which a character gets away with being aggressive rather than is punished, or even one in which that character is rewarded after being aggressive—sends a permissive message about aggression to audiences. However, an unfavorable response—in which a character who is aggressive receives an admonition or punishment or in which the recipient of the aggression is shown to be harmed—sends a prohibitive message about aggression to audiences.

Evidence From Prior Content Analyses

The closest parallels to the research at hand are previous content analyses of adult videos. Other media forms used to distribute pornography have also been subject to content analysis, including magazines (Malamuth & Spinner, 1980; Matacin & Burger, 1987; Scott & Cuvelier, 1993) and the Internet (Gossett & Byrne, 2002). Yet we focus here on studies that have explored the content of pornographic videos available for purchase or rental, as the present study was of adult videos only.

Method of Sampling

Content analyses of pornographic videos oftentimes have used sampling methods of convenience, limiting their generalizability. Some studies have selected movies from only one adult video locale (Duncan, 1991; Yang & Linz, 1990). Others have used multiple adult movie rental stores and popular rental lists but continued to be bound by geographic location (Cowan et al., 1988). In an attempt to overcome geographic limitations, some researchers have used local branches of national rental chains (Monk-Turner & Purcell, 1999). Only one recent content analysis sampled best-selling adult videos from two mail order international catalogs (McKee, 2005). Sampling adult videos from lists of popular titles is particularly clever if the content analysis aims to describe what most people view, although more specific genres may be explored for other reasons.

Aggression in Pornographic Videos

Estimations of the frequency of physical aggression in adult videos have varied from as low as 1.9% (McKee, 2005) to 26.9% (Barron & Kimmel, 2000). Other estimates suggest that approximately one quarter of adult videos contain aggression (Cowan et al., 1988). Notably, McKee coded violence only when an act was clearly intended to cause harm *and* was met with resistance by the target of aggression. Therefore, acts where the target appeared to enjoy the harm or aggression, or where there was no active attempt to avoid the harm, were not coded as "violent." This is particularly important, as frequently targets of pornographic video aggression do not actively resist the aggressive act (Prince, 1990).

Generally speaking, prior content analyses of pornographic videos have not assessed verbal aggression rates. When examined, verbal aggression rates had a tendency to be lower than physical aggression (Cowan et al., 1988), occurring in approximately 20% of adult scenes.

Regardless of levels of aggression present in these pornographic scenes, men are more frequently the perpetrators of aggression while women are more frequently the targets (Cowan & Campbell, 1994; Prince, 1990). Furthermore, studies that have examined interracial pornography have found that aggression levels increase when men and women are of different ethnicities (Cowan & Campbell, 1994; Monk-Turner & Purcell, 1999).

Sexual Behavior in Pornographic Videos

A number of content analytic studies of pornography have coded frequency and types of sexual behaviors. Again, gender disparities are often present and appear to be aimed at reflecting the desires of the (mostly) male audience. For example, women more often perform oral sex than vice versa (McKee, 2005; Yang & Linz, 1990). Such sexual acts appear to focus more on men's sexual pleasure and arousal rather than that of their female partners. Although both men and women initiated sexual encounters with approximately equal frequency across the set of studies (e.g., Prince, 1990), men were significantly more likely to be portrayed in a dominant role (Barron & Kimmel, 2000; Cowan et al., 1988).

Most sexual scenes in pornography terminate following the visible ejaculation of the male character(s). Some theorists contend that the visibility of the male ejaculation is "proof" of sexual pleasure and orgasm (Williams, 1999). Other scholars, however, have argued that the *location* of male ejaculation is a primary component of female degradation that links the male sexual imagination with misogyny and objectification (Schauer, 2005). The importance of ejaculation location is evident in prior analyses' attempts to code for this. Men ejaculate on a woman's body with high frequency: one study reported 85% of scenes depicted ejaculation on a woman (Monk-Turner & Purcell, 1999). While ejaculation on a woman's body in general may be seen as degrading, some have argued that male ejaculation on a woman's face is particularly degrading (Schauer, 2005) and occurs with regularity in pornography. For example, Cowan and Campbell (1994) found that 43% of White women and 28% of Black women in interracial pornography were portrayed with men ejaculating on their faces.

In conclusion, there is ample evidence of a disproportionably distributed agency, coupled with acts of violence, that have allowed critics to interpret a significant number of acts in pornography as degrading. Given that women are overwhelmingly the recipients of aggressive behavior and rarely have agency to either avoid or resist these acts, the placement of sexual acts within such a context has led critics to have extrapolated an interpretation suggesting that pornography caters to the sexual pleasure of men over that of women. In the interracial texts analyzed, more aggression is directed toward White women than their Black counterparts (Monk-Turner & Purcell, 1999). Forms of violence termed *extreme*, such as rape, use of weapons, or depictions of murder, are uncommon (Barron & Kimmel, 2000).

Indeed, the vicissitudes of the pornography industry and its distribution techniques prove problematic to any content analysis study. Currently, more than 13,000 sexually explicit titles are produced annually (AVN, 2006), employing diffuse and nontraditional distribution channels. Pornographic videos, unlike Hollywood films, are almost always viewed in the privacy of one's home, using VHS/DVD players, cable pay-per-view or, more recently, through Internet transmission. Pornographic videos are most commonly obtained through local retail video chains or through the recent phenomenon of online adult-only video rental services.

Reliable and consistent data that indicate the popularity of movies have historically been difficult to obtain.

Finally, differences in coding violent and degrading behavior have made it challenging to obtain consistent estimates of aggression in pornography. Definitions that are contingent on intent or target reactions are problematic for two reasons. First, abstract concepts such as "intent" and "harm" are difficult to translate into specific observable behaviors, thereby making coding a daunting task. Second, although pornography portrays real sexual activity, the portrayers remain "actors" and may not be demonstrating a genuine response to certain acts. In addition, directors are also free to edit and reshoot scenes to obtain the perpetrator and target responses that they choose.

The present study sought to overcome these obstacles by (a) using sampling methods that permit wider generalizability and limit geographic constraints, (b) using a "gold standard" for coding aggression in television (National Television Violence Study, 1998), and (c) including both the perpetrators' and the targets' responses to aggression. To our knowledge, this study is also the first to code certain "nonnormative" sexual acts and to relate specific sexual acts to aggression or degradation.

Study Aims

The primary aim of the study is to provide an updated content analysis of popular pornographic videos. We examine aggression in the films as well as which variables, such as character gender and sexual behaviors, are associated with the presence of aggression. For the sake of clarity and precision in coding, *aggression*—a term used instead of *violence* to signify a range of acts both severe and relatively minor—is operationalized as a specific set of behavioral variables. In contrast, degradation is inferred separately in our discussion of key findings rather than coded directly.

Furthermore, we explore the central concept of consent in defining aggressive acts in analyses of what characters express immediately in response to a violent incident or interaction. In so doing, this study permits the separation of aggressive actions by perpetrators from target responses, thereby allowing the comparison of the current results to results obtained by others who have used more narrow definitions of aggression that focus on target avoidance of harm or intention of the perpetrator of an aggressive act.

Method

Population and Sample

In the current study, the designation of the films examined as "adult films" was ready-made by employing lists provided by AVN. The population of titles for this research was drawn from a compilation of 250 best-selling and 250 most rented video lists published monthly by AVN. The researchers selected the top 30 videos appearing on each list from December 2004 to June 2005.[2] After deleting duplications, the population consisted of 275 titles (AVN, 2005). Fifty titles were randomly selected from this list to comprise the sample, yielding

a total of 304 scenes. The sample, therefore, is meant to be generalized to the top titles of this 7-month period.

Operational Definitions of Concepts

Two units of analysis were used in the present study: each scene and each aggressive act. A *scene* was defined through the demarcation of the DVD menu, taken from the "scene selections" option available on the main menu of most adult DVDs. In the rare instance that the DVD recording did not contain clear scene demarcations, a new scene was recorded if the primary characters changed, or if the setting changed, or if a temporal break occurred. We describe first the scene level variables we coded (characters, sex acts, ejaculation position, presence of aggression, and presence of positive behaviors). We then describe the aggressive act level variables we coded (type of aggressive act, perpetrators and targets of aggression, response of target to aggression).

Scene-Level Variables

Primary characters. Primary characters were defined as only those characters engaged in explicit sexual interaction present within the scene. Each primary character's *gender* and *race* were recorded, using definitive visual cues such as genitalia, dress, skin color, facial features, and accents. *Gender* was recorded as "male," "female," "transsexual," or "other" (for instances where a primary character was not visible, such as wearing a full body suit or other outfit that did not provide definitive visual cues). Primary character's *race* was recorded as "White," "Black," "Asian," "Latino/a," "Other," or "Unknown." Although we attempted to code primary characters' approximate ages (<18 years, 18-30 years, >30 years), analyses revealed insufficient intercoder reliability. Therefore, the age variable was dropped from further analyses. However, we conduct and report qualitative observations of film titles, costume, and dialogue that suggest underage performers.

Other visible aspects of scene. Coders were instructed to record the presence of the following scene characteristics: condoms; sex toys or other objects used sexually; and/or discussions of sexually transmitted diseases, pregnancy, or safe sex.

Ejaculation position. In scenes containing at least one male primary character who ejaculated, coders were instructed to mark the location where male ejaculation occurred, using the following choices: *mouth*, *face*, *breast*, *stomach*, *buttocks*, *vagina* (*internal*), *vagina* (*external*), or *other*. In the event of multiple, simultaneous ejaculations, coders were instructed to record *multiple locations* and specify the predominant location.

Sex acts. Coders were instructed to use definitive visual cues to determine the presence of the following sexual acts: *male-to-female oral sex* (man performing oral sex on woman), *female-to-male oral sex*, *female-to-female oral sex*, *male-to-male oral sex*, *vaginal penetration with penis*, *vaginal double-penetration* (simultaneous vaginal intercourse between one woman and two men), *simultaneous vaginal and anal penetration* (one woman being penetrated simultaneously, anally and vaginally, by two men), *group sex* (numerous characters simultaneously engaged in various sexual acts), *anal penetration with penis, anal*

double-penetration (one woman being anally penetrated simultaneously by two men), and *ass-to-mouth (ATM) sequence* (where the woman performs oral sex on a man immediately after he has penetrated her anally). To our knowledge, no previous content analysis study of pornography has coded double penetrations, simultaneous penetrations, or ATM sequences. An additional open-ended response allowed coders to code other sexual acts, including rape and bestiality.

Positive behaviors. Coders were provided with some examples of positive behaviors as identified by various sex and relationship researchers (e.g., Denney, Field, & Quadagno, 1984; Guo, Ng, & Chan, 2004), such as kissing, hugging, and/or giving one another compliments and coded for their presence. In addition, any positive behaviors represented within the scene were qualitatively described.

Aggression. Aggressive acts were recorded according to two specific subtypes: verbal and physical. *Physically aggressive acts* were (a) pushing or shoving; (b) biting; (c) pinching; (d) pulling hair; (e) spanking; (f) open-hand slapping; (g) gagging (defined as when an object or body part, e.g., penis, hand, or sex toy, is inserted into a character's mouth, visibly obstructing breathing); (h) choking (when one character visibly places his or her hands around another character's throat with applied pressure); (i) threatening with weapon; (j) kicking; (k) closed-fist punching; (l) bondage or confining; (m) using weapons; and (n) torturing, mutilating, or attempting murder. *Verbally aggressive acts* were (a) name calling or insulting and (b) threatening physical harm. Coders indicated whether each scene contained verbal aggression (yes/no) and physical aggression (yes/no).

Aggressive Act–Level Variables

Acts of aggression within each scene were recorded using the PAT technique, as outlined in the National Television Violence Study (1998). The PAT technique permits the tallying of instances of aggression by counting as a unique act each time the perpetrator (P), target (T), or specific *physical* or *verbal* aggressive act (A) changes during the course of the scene. An individual instance of aggression is recorded only when one or more of these three components changes, subsequent to initiation of the first aggressive act.

In the current study, a modified definition of aggression that was introduced by Mustonen and Pulkkinen (1993) is employed, with aggression defined as any purposeful action causing physical or psychological harm to oneself or another person, whereby psychological harm is understood as assaulting another verbally or nonverbally. This definition avoids the coding of harmful behaviors that are accidental or aggressive behaviors that occur with inanimate objects (such as throwing a vase against the wall). However, by removing the requirements that the target must avoid the harm, this definition better conforms to the manner in which aggressive acts are often depicted in pornographic movies. Furthermore these aggressive behaviors are of a sexual nature (occurring before, during, or after sex).

The genders of the perpetrators and targets of each aggressive act were recorded. *Gender of Perpetrator* was recorded as either "male," "female," "other," or "unknown" if the perpetrator was not readily visible (e.g., outside the camera lens). *Gender of Target* used the same scheme while also adding "self" to record those aggressive acts that were self-inflicted.

Response of Target to Aggression

In the study at hand, not only are aggressive acts distinguished (e.g., verbal vs. physical) and tallied but also are the responses of the characters to aggressive incidents and interactions recorded. The response of the targets and the perpetrators' reactions are critical to understand the potential media effects. Target and perpetrator responses to each aggressive act were recorded as follows: (a) *Target expresses pleasure or responds neutrally*—In this instance, the target expressed pleasure either verbally or physically or did not appear affected in any manner by the aggressive act, and the scene continued without interruption. (b) *Target expresses displeasure; perpetrator ignores*—The target expressed displeasure at being aggressed against, either verbally or physically, which the perpetrator ignored. (c) *Target expresses displeasure; perpetrator acknowledges with positive act*—The target expressed displeasure at being aggressed against, verbally or physically, and the perpetrator either stopped the aggressive action or expressed remorse. (d) *Target expresses displeasure; perpetrator acknowledges with negative act*—The target expressed displeasure at being aggressed against, either verbally or physically, and the perpetrator increased the aggressive action(s) in severity or frequency or continued with other aggressive acts.

Intercoder Reliability

The sample was coded by three female coders of differing age, race, and educational backgrounds. All were highly trained in the method and coding scheme. Prior to coding the actual sample, the authors coded a randomly chosen pornographic film to devise the method and coding schemes. Coders were given an initial training session conducted by one of the authors, where one pilot video was viewed and the coding scheme was discussed in detail. The coders then independently coded five titles from the sample (for a total of 26 scenes), and reliability results were computed. After the initial round yielded unacceptable rates of agreement, minor changes and definitional clarifications were executed. The coders recoded the same five films, reaching acceptable levels of agreement on nearly all variables. When disagreements arose, they were discussed in detail until resolved. On the third round of pilot testing, using Holsti's coefficient of reliability for all variables, it was determined that the overall composite level of agreement across all variables and all pairs of coder comparisons was 0.958 (see appendix). Having established an acceptable rate of agreement in the pilot data, the three coders coded the remaining films using the same techniques and operational definitions from the third round of pilot testing.

Analytic Strategy

To address primary aims, we provide frequencies and percents of scene-level and aggressive act–level variables. We provide means and standard deviations for the number of aggressive acts contained in scenes. We conduct chi-square analyses to explore gender differences in aggression. Furthermore, we conduct a series of binary logistic regressions to explore how the gender composition of primary characters and the sexual acts portrayed in the scenes

relate to the presence of verbal and physical aggression. Finally, we provide qualitative observations of film titles, costumes, and dialogue that relate to illegal content (specifically, pornography that gives the appearance of underage performers).

Results

Characters

The number of main characters that were portrayed in a given scene ranged from 1 to 19, with an average of 3.23 ($SD = 2.09$). Males comprised 53.1% of the main characters. The majority of characters (82.2%; $n = 804$) were White. A total of 8.8% ($n = 78$) of main characters were African American, 2.7% were Latino/a, and only 2.5% ($n = 24$) were Asian. Ethnicity was unable to be determined for 3.7% of main characters.

Sexual Health and Sexual Devices

Of the 304 scenes analyzed, only one (0.3%) showed characters discussing pregnancy concerns or the risks of sexually transmitted diseases. Condoms were used in 10.9% ($n = 33$) of scenes. Sexual devices, such as vibrators, were used in 19.1% of scenes.

Sexual Acts

The most frequent sexual act portrayed in the sample was female-to-male oral sex, appearing in 90.1% ($n = 274$) of the scenes coded. Vaginal intercourse was the second-most frequent sexual act, appearing in 86.2% ($n = 262$) of the scenes. Male-to-female oral sex was found to occur in 53.9% ($n = 164$) of the scenes coded, less than anal sex which appeared in 55.9% ($n = 356$) of the scenes. Portrayals of sexual activities between characters of the same gender occurred only for women, with female-to-female oral sex taking place in 22.7% ($n = 69$) of the scenes.

"Nonnormative" Sex Acts

The ATM sequence occurred in 41.1% ($n = 125$) of scenes. Double penetrations of any type occurred in 19.1% ($n = 58$) of scenes. Simultaneous vaginal/anal penetration was the most frequently occurring double penetration (18.1% of scenes; $n = 55$). Less common were double vaginal (1.6%; $n = 5$) and double anal penetrations (2.0%; $n = 6$). None of the scenes coded contained illegal sex acts, including bestiality, rape, and pedophilic acts.

Ejaculation

Male character ejaculation almost always occurred outside the female character's vagina, most frequently in her mouth (58.6%; $n = 178$). Less common locations included the female character's anus (11.8%; $n = 36$), breasts (6.9%; $n = 21$), and face (3.9%; $n = 12$). Multiple

Table 1. Frequency and Types of Aggressive Acts (N = 3,376)

	n	% Aggressive Acts	% Scenes
Verbal aggression	632	18.7	48.7
Insulting	614	18.2	48.7
Threatening	10	0.3	1.0
Using coercive language	7	0.2	1.6
Physical aggression	2,743	81.3	88.2
Pushing/shoving	25	0.7	6.6
Biting	9	0.3	3.0
Pinching	49	1.5	12.2
Hair pulling	276	8.2	37.2
Spanking	980	29.0	75.3
Open hand slapping	408	12.1	41.1
Gagging	759	22.5	53.9
Choking	184	5.5	27.6
Threatening with weapon	0	0.0	0.0
Kicking	3	0.1	0.7
Closed fist punching	0	0.0	0.0
Bondage/confining	30	0.9	6.6
Using weapons	7	0.2	1.3
Torturing/mutilating	0	0.0	0.0
Other	2	0.4	3.0

ejaculation sites were portrayed in 12.2% of scenes (n = 37), closely corresponding with the 11.5% of scenes that were coded as "group sex" scenes (n = 35).

Aggression

On the whole, the pornographic scenes analyzed in this study were aggressive; only 10.2% (n = 31) of scenes did not contain an aggressive act. Across all scenes, a total of 3,375 verbally and physically aggressive acts were observed (Table 1). Of these, 632 were coded as instances of verbal aggression and 2,743 were coded as instances of physical aggression. On average, scenes had 11.52 acts of either verbal or physical aggression ($SD = 15.04$) and ranged from none to 128. Physical aggression ($M = 9.31$, $SD = 12.30$) was much more common than verbal aggression ($M = 2.13$, $SD = 4.01$), occurring in 88.2% (n = 268) of the scenes, whereas expressions of verbal aggression occurred in 48.7% (n = 148) of the scenes. By far, the most common verbally aggressive act was name calling (e.g., "bitch," "slut"; n = 614, or 97.2% of all 632 verbally aggressive acts). Spanking (35.7% of physically aggressive acts; n = 980), gagging (27.7%; n = 759), and open-hand slapping (14.9%; n = 408) were the most frequently observed physically aggressive acts. Other physically aggressive acts recorded included hair-pulling (10.1%; n = 276), choking (6.7%; n = 184), and bondage or confinement (1.1%; n = 30).

Table 2. Aggression Perpetrators, Targets, and Responses (*N* = 3,375)

	n	% Total Acts
Perpetrator gender		
Male	2,373	70.3
Female	991	29.4
Unknown	8	0.2
Target gender		
Male	176	5.2
Female	3,191	94.4
Unknown	12	0.4
Male perpetrator and		
Female target	2,335	69.2
Male target	11	0.3
Self-target	22	0.7
Unknown target	2	0.1
Female perpetrator and		
Female target	598	17.7
Male target	143	4.2
Self-target	241	7.1
Unknown target	5	0.1
Target response to being aggressed[a]		
Pleasure/neutral	3,206	95.1
Displeasure	90	2.7

a. Percentages do not sum to 100 due to missing data.

None of the scenes showed characters who threatened one another with a weapon, hit one another with a closed fist, or tortured and mutilated each other.

Women were overwhelmingly the targets of aggressive acts (Table 2). Across all acts of aggression, both physical and verbal, 94.4% (*n* = 3,191) were directed toward women. Men were the perpetrators of aggression more than twice as often as women, committing 70.3% (*n* = 2,373) of the aggressive acts recorded. In contrast, women were perpetrators of 29.4% (*n* = 991) of all aggressive acts. Even when women were perpetrators, their targets were frequently other women (17.7%; *n* = 598). Men were targets of only 4.2% (*n* = 143) of aggressive acts perpetrated by women. Male-to-male aggression was present in only 0.3% (*n* = 11) of the recorded instances and was most often verbal (only 4 instances of physical aggression with a male perpetrator and a male target were recorded).

There were significant differences in the types of aggressive acts males and females experienced, $\chi^2(13) = 234.51$, $p < .001$. Women were significantly more likely to be spanked, choked, and gagged than men. Aggregately speaking across the sample spectrum, women were verbally insulted or referred to in derogatory terms 534 times, whereas men experienced similar verbal assaults in only 65 instances. Women were spanked on 953 occasions, visibly

gagged 756 times, experienced an open-hand slap 361 times, had their hair pulled or yanked on 267 separate occasions, and were choked 180 times. Men, however, were spanked only 26 times, experienced an open-hand slap in 47 instances, and for all other aggressive acts, were aggressed against fewer than 10 times.

When aggressed against, 95.1% (*n* = 3,206) of targets responded with either expressions of pleasure (e.g., encouragement, sexual moans) or neutrally (e.g., no change in facial expression or interruption to actions). There was a significant difference between female and male target responses to aggressive acts, $\chi^2(1) = 51.31$, $p < .001$. Women were significantly more likely to express pleasure or neutrality when aggressed against (95.9%; *n* = 3,049) than men (84.0%; *n* = 147). In contrast, men were four times more likely to show displeasure when aggressed against (16.0%, *n* = 28) compared with women (4.1%; *n* = 132).

Positive Behaviors

A total of 9.9% (*n* = 30) of scenes analyzed contained positive behaviors. Most of the positive behaviors observed were kissing, but laughing, embracing, caressing, verbal compliments, and statements of "making love" or "I love you" were also noted. Scenes that contained positive behaviors were significantly less likely to contain aggression. On average, scenes with positive behaviors contained 4.00 acts of aggression (*SD* = 5.04), whereas scenes without contained three times this amount (*M* = 12.36, *SD* = 15.56), $t(110.88) = 6.31$, $p < .001$.

Predictors of Aggression

To determine what scene characteristics were related to increased likelihood of verbal aggression being present, a binary logistic regression analysis was performed. The regression included nine predictor variables: total number of male characters in the scene, total number of female characters in the scene, male-to-female oral sex, female-to-male oral sex, female-to-female oral sex, vaginal penetration, anal penetration, ATM sequence, and presence of physical aggression. A test of the full model was statistically significant, $\chi^2(9, N = 304) = 74.30$, $p < .001$. Nagelkerke's R^2 was .289. Table 3 shows regression coefficients, Wald statistics, odds ratios, and their 95% confidence intervals for each of the nine predictors. Five of the nine predictors were significantly related to verbal aggression. Specifically, scenes that depicted male-to-female oral sex were half as likely to contain verbal aggression and scenes with penile penetration of the vagina were one fifth as likely to show verbal aggression. In contrast, scenes that portrayed female-to-male oral sex or scenes that contained an ATM sequence were more than three times as likely to portray verbal aggression. Finally, physical aggression in the scene was significantly predictive of verbal aggression: when a scene contained some form of physical aggression, the odds of it also containing verbal aggression were increased by more than 350%.

A second binary logistic regression analysis was performed with physical aggression as the outcome variable. The same set of scene characteristics was entered into the regression, although verbal aggression replaced physical aggression as a predictor. A test of the full model was statistically significant, $\chi^2(9, N = 304) = 42.65$, $p < .001$. Nagelkerke's R^2 was .253.

Table 3. Logistic Regression Predicting Verbal Aggression

Predictors	B (SE)	Wald (df)	p Value	Odds Ratio (95% CI)
Total number of female characters	0.09 (.18)	0.25 (1)	.617	1.10 (0.77-1.57)
Total number of male characters	0.18 (.11)	2.98 (1)	.084	1.20 (0.98-1.48)
Male-to-female oral sex*	−0.61 (.28)	4.72 (1)	.030	0.55 (0.32-0.94)
Female-to-male oral sex*	1.26 (.63)	3.97 (1)	.046	3.52 (1.02-12.10)
Female-to-female oral sex	0.81 (.42)	3.79 (1)	.052	2.25 (0.99-5.09)
Vaginal penetration with penis*	−1.25 (.54)	5.39 (1)	.020	0.29 (0.10-0.82)
Anal penetration	0.20 (.40)	0.26 (1)	.610	1.23 (0.56-2.67)
Ass-to-mouth**	1.17 (.38)	9.53 (1)	.002	3.22 (1.53-6.75)
Physical aggression present*	1.32 (.52)	6.36 (1)	.012	3.73 (1.34-10.38)

*$p < .05$. **$p < .01$.

Table 4 shows regression coefficients, Wald statistics, odds ratios, and their 95% confidence intervals for each of the nine predictors. Two of the nine predictors were significantly related to physical aggression. Specifically, scenes that depicted an ATM sequence were more than eight times as likely to portray physical aggression. Furthermore, verbal aggression in the scene was significantly predictive of physical aggression: when a scene contained some form of verbal aggression, the odds of it also containing physical aggression were increased by more than 400%.

Additional Qualitative Observations

Among the 50 randomly selected pornographic videos, there were 6 films with titles suggesting that the female performers are young or underage, such as "Teen Fuck Holes," "Teenage Spermaholics #3," "Anal Teen Tryouts," "Cum Craving Teens," or "Barely Legal #50." In such films, the emphasis on childlike pornography was accomplished with visual cues as to the young actress's underage status, such as employing schoolgirl uniforms, pigtails, or the presence of braces on their teeth, and character references such as babysitters. In addition, narrative references such as "doing homework" or "I can't smoke" suggested that the actresses are young students, still under parental monitoring. There are also words in the titles that are derogatory in conventional social contexts, such as "I'm Your Slut #3," "New Whores," "Cumstains #4," or "Blow Me Sandwich #6."

Discussion

There are numerous difficulties with attempting to map the content of adult videos. Although some of these difficulties reside in the nature of pornography as an ever-evolving and changing text, many of these difficulties are methodological and can be overcome. This study has attempted to improve sampling methodology and increase the scope of the sexual and aggressive acts analyzed. In so doing, we hope to lay a foundation for future studies so that changes in pornographic content of videos can be tracked more precisely over time.

Table 4. Logistic Regression Predicting Physical Aggression

Predictors	B (SE)	Wald (df)	p Value	Odds Ratio(95% CI)
Total number of female characters	−0.09 (.23)	0.15 (1)	.700	0.91 (0.58-1.45)
Total number of male characters	0.22 (.23)	0.89 (1)	.345	1.25 (0.79-1.97)
Male-to-female oral sex	−0.32 (.45)	0.49 (1)	.482	0.73 (0.30-1.76)
Female-to-male oral sex	0.87 (.84)	1.06 (1)	.303	2.38 (0.46-12.32)
Female-to-female oral sex	1.13 (.76)	2.24 (1)	.134	3.11 (0.70-13.72)
Vaginal penetration with penis	0.56 (.75)	0.56 (1)	.454	1.75 (0.41-7.54)
Anal penetration	−0.15 (.48)	0.10 (1)	.752	0.86 (0.33-2.22)
Ass-to-mouth*	2.11 (.83)	6.53 (1)	.011	8.23 (1.64-41.47)
Verbal aggression present**	1.41 (.53)	7.09 (1)	.008	4.10 (1.45-11.59)

*$p < .05$. **$p < .01$.

Many critics of antipornography efforts have suggested that researchers pick out the most violent and aggressive videos available to alarm the public about potential harm or degradation in adult video texts (see interview with Ernest Greene in *The Price of Pleasure*, Sun & Picker, 2008). By selecting top-renting and best-selling videos for analysis, we attempted to provide a picture of what is commonly consumed. Our results suggest that popular pornographic videos contain high levels of both verbal and physical aggression. Compared with prior content analytic studies suggesting that aggression rates of pornographic films vary but rarely rise above 30% (Barron & Kimmel, 2000; Duncan, 1991), the results of the current study showed much higher rates, approaching 90%.

One of the reasons for the higher rates of aggression in the current study is the choice to define aggression as a purposeful act committed by someone that results in harm to either the self or another. This definition, unlike those used in some prior studies (e.g., McKee, 2005), does not require that the target of the aggression attempt to avoid the harm. If such a definition was used, the study would have found that only 12.2% of scenes ($n = 37$) contained aggression, as these were the only scenes where at least one of the acts of aggression was met with target displeasure and/or attempts to avoid the aggression. This figure is certainly higher than the aggression level of 1.9% found in the McKee study but more similar to those found in prior analyses (Duncan, 1991). However, by relying on definitions that emphasize consent, these previous studies are (perhaps inadvertently) complicit with naturalizing the presence of violence and aggression. In other words, treating violence or aggression as contingent on target consent masks the real asymmetries of power that exist in pornography. This masking has allowed pro-pornography critics to argue that not only does violence or aggression not exist but also all agencies equivocal rather than distributed based on social and historical conditions.

Another possible reason for the higher rates of aggression observed in our study compared with prior content analyses is that we included *gagging* as a form of aggression. However, even if every scene with gagging was excluded from the analysis, the conservative estimate is that at least 75% of scenes contained other forms of physical aggression, given that this was the percentage of scenes containing spanking. As gagging was the only physically aggressive act we included in our analysis that has not been coded in prior analyses, this

alone is insufficient to account for the increased aggression estimates we obtained in the current study.

Our study was the first to track an important trend in pornographic videos: the increasing portrayal of sexual practices that are unusual and potentially harmful to women in real life (and to the actresses in pornography videos), such as double penetrations or what the pornography industry has termed ATM sequences. In an analysis of its contextual meaning, Dines (2006) described ATM as humiliating for women, who perform fellatio subsequent to the penis being inserted into an anus and, thus, may be contaminated with feces. In the current study, ATM was depicted in 41% of scenes. Logistic regression analyses revealed that ATM was a strong predictor of the presence of both verbal and physical aggression in the scene. We argue that this provides criterion validity to ATM as an inherently degrading practice and suggest that future studies continue to code for its presence.

Our study further contributes to the scientific literature by amplifying the typical behaviors coded. For example, our study specifically sought to examine the frequencies and types of positive sexual behaviors portrayed in adult films. This permits the calculation of a ratio of positive to aggressive behaviors and thus a more complete understanding of adult video content. In the current study, only 9.9% of scenes contained positive behaviors whereas 89.8% contained some form of aggression. This is of some concern; if aggressive behaviors are occasional and occur in the context of many positive behaviors, then their presence may be less of a concern. However, we found evidence for the opposite. Sexuality, as portrayed in these popular videos, was primarily aggressive and positive behaviors were the exception rather than the rule.

Finally, although our study used a definition of aggression that included consensual aggressive acts, by coding target responses to aggression we were able to obtain a more nuanced picture of how pornography portrays aggression and highlight the importance of hiding negative responses, which would lead to reduced sexual enjoyment of the scene for most people (Loftus, 2002).

In contrast with previous studies, we did not observe depictions of rape or scenes that perpetuated the "rape myth" (in which the target first expresses pain or resistance to male dominance but eventually expresses enjoyment; Cowan et al., 1988; Duncan, 1991). In fact, although most of the targets of aggression were women, almost all of them expressed enjoyment or did not respond while being aggressed against. This finding mirrors findings in literature on pornography effects: recent studies have failed to uncover a previously robust finding that aggressive pornography increases acceptance of rape and endorsement of the rape myth (Garos, Beggan, Kluck, & Easton, 2004). Garos et al. (2004) suggest that this shift has occurred because people have become more educated about women's rights and sexual assault. However, these same researchers found that pornography increases benevolent sexism. It may be that consumers of pornography are, happily, on the whole uninterested in and unaroused by sexual dominance of unwilling women. However, what has taken its place has been sexual dominance of willing women—many of these same dominating behaviors were evident in these popular films but were met without resistance by women. This consensual depiction of aggression is concerning as we run the risk of rendering true aggression against women invisible (Sun & Picker, 2008).

Portrayals of women expressing pleasure while being aggressed against have significant implications in terms of the effects of pornography on consumers. Social cognitive theory (Bandura, 1994, 2001) suggests that whether an individual will model aggression learned from viewing a media text depends in large part on whether the act they observed was rewarded or punished. By extension, viewers of pornography are learning that aggression during a sexual encounter is pleasure-enhancing for both men and women. One may ask, what may be the social implication for this type of learning?

Limitations and Future Directions

Although this research offers advances in sampling and research design and an update of content analysis of contemporary, popular pornography, it has three notable limitations. First, the three coders were all female. Past research has indicated that women, compared with men, tend to hold different views of pornography in general and of violent and degrading pornography in particular (Cowan & Dunn, 1994). Yet recently, Glascock (2005) found no differences in ratings of degradation between men and women when they were exposed to 20 to 30 min of a pornographic film. Nonetheless, a mixture of male and female coders would have been a more ideal configuration.

Second, the study at hand is quantitative in nature, helpful in investigating patterns and frequencies but less productive in investigating meanings of the findings, such as, what exactly does ejaculating on a woman's face mean? Prince (1990) advocates for the use of content analyses to engage in the inquiry of a text's ideological values as well as to integrate quantitative measures with qualitative ones. He thus states, "content analysis can provide information about the distribution of codes across a body of material, and it may be an important means of evaluating claims regarding the ideological content of texts and of enabling theory to dialectically move forward" (p. 40). We concur with Prince's vision and particularly find the additional method of qualitative analysis valuable, if not imperative, in examining the definition and operation of "violence" and "degradation," as meanings need to be generated from a contextual field and cannot exist in isolation (Dines et al., 1998). Future studies may incorporate both content analysis and textual analysis so not only the patterns and frequencies but also the ideological construction of the meanings are investigated.

Appendix

Intercoder Agreement Matrix for All Coding Pair Comparisons Averaged Across All Variables

	Coder 1	Coder 2	Coder 3
Coder 1	—	0.854	0.836
Coder 2	0.854	—	0.888
Coder 3	0.836	0.888	—
Average agreement		0.859	
Composite coefficient agreement		0.958	

Declaration of Conflicting Interests

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Notes

1. According to AVN (2006), 34% of pornographic texts are consumed through video sales and rentals, 6% through cable pay-per-view, 4% through hotel in-room video on demand, and 20% through Internet sources. Clearly, video sales and rentals are the preferred method of consumption in the United States. AVN, while not a "traditional" research publication, is the leading reporter of record for the adult industry, with a monthly circulation of more than 25,000 (www.avnid.com).
2. The study started in July 2005, so we selected from the most recent lists at that time.

References

Attorney General's Commission on Pornography. (1986). *Final report.* Washington, DC: Government Printing Office.

AVN. (2005). *Top 250 VHS & DVD rentals*. Retrieved August 15, 2010, from http://www.avn.com/index.php?Primary_Navigation=Charts

AVN. (2006, January). State of the U.S. adult industry. *Adult Video News*, *22*, 30-31.

Bandura, A. (1994). Social cognitive theory of mass communication. In J. Bryant & D. Zillmann (Eds.), *Media effects: Advances in theory and research* (pp. 121-154). Hillsdale, NJ: Lawrence Erlbaum.

Bandura, A. (2001). Social cognitive theory of mass communication. *Media Psychology*, *3*, 265-299.

Barron, M., & Kimmel, M. (2000). Sexual violence in three pornographic media: Toward a sociological explanation. *Journal of Sex Research, 8*, 161-168.

Bridges, A. J. (2010). Methodological considerations in mapping pornography content. In K. Boyle (Ed.), *Everyday pornographies.* (pp. 34-49) Oxford, UK: Routledge.

Cowan, G., & Campbell, R. R. (1994). Racism and sexism in interracial pornography: A content analysis. *Psychology of Women Quarterly, 18*, 323-338.

Cowan, G., & Dunn, K. F. (1994). What themes in pornography lead to perceptions of the degradation of women? *Journal of Sex Research, 31*, 11-21.

Cowan, G., Lee, C., Levy, D., & Snyder, D. (1988). Dominance and inequality in X-rated videocassettes. *Psychology of Women Quarterly, 12*, 299-311.

Denney, N. W., Field, J. K., & Quadagno, D. (1984). Sex differences in sexual needs and desires. *Archives of Sexual Behavior, 13*, 233-245.

Dines, G. (2006). The white man's burden: Gonzo pornography and the construction of Black masculinity. *Yale Journal of Law and Feminism, 18*, 293-297.

Dines, G., Jensen, R., & Russo, A. (1998). *Pornography: The production and consumption of inequality*. New York: Routledge.

Donnerstein, E., Linz, D. G., & Penrod, S. (1987). *The question of pornography*. New York: Free Press.

Duncan, D. F. (1991). Violence and degradation as themes in "adult" videos. *Psychological Reports, 69*, 239-240.

Garos, S., Beggan, J., Kluck, A., & Easton, A. (2004). Sexism and pornography use: Toward explaining past (null) results. *Journal of Psychology and Human Sexuality, 16*, 69-96.

Gerbner, G., Gross, L., Jackson-Beeke, M., Jeffries-Fox, S., & Signorielli, N. (1978). Cultural indicators: Violence profile no. 9. *Journal of Communication, 28*, 176-207.

Glascock, J. (2005). Degrading content and character sex: Accounting for men's and women's differential reactions to pornography. *Communication Reports, 18*, 43-53.

Gossett, J. L., & Byrne, S. (2002). "Click here": A content analysis of Internet rape sites. *Gender & Society, 16*, 689-709.

Guo, Y. N., Ng, E. M. L., & Chan, K. (2004). Foreplay, orgasm and after-play among Shanghai couples and its integrative relation with their marital satisfaction. *Sexual and Relationship Therapy, 19*, 65-78.

Hall, G. C. N., Hirschman, R., & Oliver, L. L. (1994). Ignoring a woman's dislike of sexual material: Sexually impositional behavior in the laboratory. *Journal of Sex Research, 31*, 3-10.

Hartley, N. (2005). *Feminists for porn*. Retrieved February 2, 2005, from http://www.counterpunch.org/hartley02022005.html

Jansma, L. L., Linz, D. G., Mulac, A., & Imrich, D. J. (1997). Men's interactions with women after viewing sexually explicit films: Does degradation make a difference? *Communications Monographs, 64*, 1-24.

Linz, D. G., Donnerstein, E., & Penrod, S. (1987). The findings and recommendations of the Attorney General's Commission on Pornography: Do the psychological facts fit the political fury? *American Psychologist, 42*, 946-953.

Loftus, D. (2002). *Watching sex: How men really respond to pornography*. New York: Thunder's Mouth Press.

Malamuth, N. M., & Spinner, B. (1980). A longitudinal content analysis of sexual violence in the best-selling erotic magazines. *Journal of Sex Research, 16*, 226-237.

Matacin, M. L., & Burger, J. M. (1987). A content analysis of sexual themes in *Playboy* cartoons. *Sex Roles, 17*, 179-186.

McKee, A. (2005). The objectification of women in mainstream pornographic videos in Australia. *Journal of Sex Research, 42*, 277-290.

Monk-Turner, E., & Purcell, H. C. (1999). Sexual violence in pornography: How prevalent is it? *Gender Issues, 17*, 58-67.

Motion Picture Association of America. (2010). *Research and statistics.* Retrieved August 23, 2010 from http://www.mpaa.org/Resources/091af5d6-faf7-4f58-9a8e-405466c1c5e5.pdf

Mulac, A., Jansma, L. L., & Linz, D. G. (2002). Men's behavior toward women after viewing sexually-explicit films: Degradation makes a difference. *Communication Monographs, 69*, 311-329.

Mustonen, A., & Pulkkinen, L. (1993). Aggression in television programs in Finland. *Aggressive Behavior, 19*, 175-183.

National Television Violence Study. (1998). *National television violence study: Executive summary* (Vol. 3). Thousand Oaks, CA: Sage.

Palys, T. S. (1986). Testing the common wisdom: The social content of video pornography. *Canadian Psychology, 27*, 22-35.

Prince, S. (1990). Power and pain: Content analysis and the ideology of pornography. *Journal of Film and Video, 42*, 31-41.

Schauer, T. (2005). Women's porno: The heterosexual female gaze in porn sites "for women." *Sexuality & Culture, 9*, 42-64.

Scott, J. E., & Cuvelier, S. J. (1993). Violence and sexual violence in pornography: Is it really increasing? *Archives of Sexual Behavior, 22*, 357-371.

Stack, S., Wasserman, I., & Kern, R. (2004). Adult social bonds and use of Internet pornography. *Social Science Quarterly, 85*, 75-88.

Sun, C., & Picker, M. (Coproducers & Codirectors). (2008). *The price of pleasure: Pornography, sexuality and relationships*. Northhampton, MA: Media Education Foundation.

Williams, L. (1999). *Hardcore: Power, pleasure, and the "frenzy of the visible."* Berkeley: University of California Press.

Yang, N., & Linz, D. (1990). Movie ratings and the content of adult videos: The sex-violence ratio. *Journal of Communication, 40*, 28-42.

Zillmann, D. (1989). Effects of prolonged consumption of pornography. In D. Zillmann & J. Bryant (Eds.), *Pornography: Research advances and policy considerations* (pp. 127-158). Hillsdale, NJ: Lawrence Erlbaum.

Zillmann, D., & Bryant, J. (1982). Pornography, sexual callousness, and the trivialization of rape. *Journal of Communication*, *32*, 10-21.

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