Sexual Scripts and the Sexual Behavior of Men and Women Who Use Pornography

Ana J. Bridges¹, Chyng F. Sun², Matthew B. Ezzell³, and Jennifer Johnson⁴

Abstract
Using data collected from 1,880 heterosexual men and women residing in the United States, this study investigated the associations among gender, pornography consumption, and 20 sexual behaviors observed in popular pornography. Acts were grouped according to whether participants reported engaging or being interested in trying specific sexual behaviors as the (a) aggressor (e.g., hairpulling, spanking, or choking), (b) target (e.g., being spanked or choked), or (c) uncommon and/or degrading sexual activity (e.g., male ejaculation in female partner’s mouth, anal sex, double penetration, and ass-to-mouth). Using sexual script theory, we hypothesized greater use of pornography would be associated with greater likelihood of both having engaged in and interest in engaging in these sexual behaviors. We further hypothesized gender differences consistent with pornographic sexual scripts that frequently portray men as aggressors and women as targets of aggression. Hierarchical multiple regressions revealed significant main effects for gender and pornography use on the three categories of sexual behavior but no significant interactions. Higher pornography use was associated with greater likelihood of both engaging and being interested in trying all categories of sexual behavior. Men were more likely than women to have engaged in aggressive and degrading/uncommon behaviors, and women were more likely than men to have engaged in target behaviors. However, men were more interested than women in trying all three categories of sexual behavior. Results provide partial support for sexual script theory; while higher pornography use increased interest and prior engagement in pornography-like sexual behavior, the increases in types of sexual behavior (aggressor, target, or uncommon/degrading) were not moderated by gender.

Keywords
pornography, sexual behavior, sexual scripts, aggression

The explosion and mainstreaming of online pornographic content has raised questions about its influence on the sexual lives of young people. In part facilitated by its accessibility, affordability, and anonymity (Cooper, 1998), exposure to online pornography is a nearly ubiquitous experience for both boys and girls (Brown & L’Engle, 2009; Sabina, Wolak, & Finkelhor, 2008). The question of effects of pornography use on individuals and their relationships is thus one of increasing scholarly interest. Studies have shown associations, for example, between pornography use and attitudes or beliefs, including political liberalism (Wright & Randall, 2014), acceptability of men’s violence against women (Flood & Pease, 2009; Hald, Malamuth, & Yuen, 2010), sexism (Hald, Malamuth, & Lange, 2013), and relationship satisfaction (Bridges & Morokoff, 2011). Research on pornography and violence against women in particular is long-standing, robust, and generally points to a positive association between the two (for a review, see DeKeseredy & Corsiniacos, 2016). For instance, Malamuth, Addison, and Koss (2000) note there is evidence that pornography in general, and violent pornography in particular, affects aggressive attitudes and behaviors, although they note individual differences are critical moderators of these effects and largely uninvestigated. Wright, Tokunaga, and Kraus (2016) conducted a meta-analysis of studies examining whether pornography use correlated with actual sexually aggressive behavior. Findings from 22 studies across seven different countries revealed an overall positive relation between the two, r = .28, p < .001. This correlation was similar for men and women.

¹ University of Arkansas, Fayetteville, AR, USA
² New York University, New York, NY, USA
³ James Madison University, Harrisonburg, VA, USA
⁴ Virginia Commonwealth University, Richmond, VA, USA

Corresponding Author:
Ana J. Bridges, University of Arkansas, 216 Memorial Hall, Fayetteville, AR 72701, USA.
Email: abridges@uark.edu
adolescents and adults, samples from the United States and other countries, for studies conducted before and after the widespread use of Internet pornography via web browsing, and for both violent and nonviolent pornography.

In the current study, we ask whether the frequency of pornography consumption is associated with sexual behavior that is often observed in popular pornography. Applying social learning theory (Bandura, 1971, 2001) and sexual script theory (Simon & Gagnon, 1986; Wright, 2011), we investigated whether pornography use by men and women is associated with their engagement in—or interest in trying—acts of sexual aggression, submission, and male-to-female uncommon and/or degrading sexual acts that are prevalent in popular pornography (Bridges, Wosnitzer, Scharrer, Sun, & Liberman, 2010; Sun, Bridges, Wosnitzer, Scharrer, & Liberman, 2008).

**Definitions of Pornography**

Providing a summary of research on pornography and sexual behavior is complicated by disagreements about what pornography is. Definitions of pornography vary tremendously, from being defined by its purpose, such as the Attorney General’s Commission on Pornography (1986) stating pornography is “material predominantly sexually explicit and intended for purposes of sexual arousal” (pp. 228–229) or by its accessibility, such as Barron and Kimmel (2000) defining pornography as “any sexually explicit material to which access was limited, either by signs or physical structure, to adults” (p. 162). Still others focus not on the sexual explicitness per se but on the combination of sexual explicitness and violence or degradation. For instance, Russell (1993) defined pornography as “material that combines sex and/or the exposure of genitals with abuse or degradation in a manner that appears to endorse, condone, or encourage such behavior” (p. 3). Lott (1994) stated pornography shows women being sexually dominated, degraded, humiliated, coerced, and/or beaten. Senn (1993) differentiates pornography from erotica, stating erotica is sexually explicit but not degrading or violent, while pornography combines themes of sexual explicitness with sexism, racism, homophobia, and violence. However, most empirical studies do not differentiate pornography from erotica (e.g., Bridges & Morokoff, 2011), despite content analyses showing themes of violence and degradation in pornography are common (Bridges et al., 2010; Sun et al., 2008).

**Social Learning and the Sexual Script**

Social learning theory (Bandura, 1971) posits that people are neither ruled by inner impulses nor helpless in the face of environmental forces, pressures, or constraints. Instead, human behavior is best understood in terms of a continuous and reciprocal relationship between cognitive, behavioral, and environmental influences. Although new patterns of behavior can be learned through direct experience, most human behavior is learned vicariously by observing people’s actions and the consequences of those actions (Bandura, 1986). This process often unfolds through observation of others in our immediate environment, but “the extensive modeling in the symbolic environment of the mass media” (Bandura, 2001, p. 126) can also have a significant impact as a result of its reach and power in shaping people’s images of reality. Indeed, in the Internet age, “electronic acculturation” can serve as a “major vehicle for socio-political change” (p. 127).

Social scripting theory argues people follow internalized scripts that provide meaning and direction for social interaction (Gagnon & Simon, 1973; Simon & Gagnon, 1986). Scripts can be viewed as “normative clusters which specify the parameters for lines of action in given social contexts” (Gecas & Libby, 1976, p. 37). Social scripts tell us, in other words, “what should or should not be happening, how people should or should not behave in response to what is or is not happening and what the outcomes of a particular course of action should be” (Wright, 2011, p. 348; see also Huesmann, 1986). Scripts are acquired through observation of others as well as through consumption of mass media.

Frith and Kitzinger (2001) define sexual scripts as “culturally available messages that define what ‘counts’ as sex, how to recognize sexual situations, and what to do in a sexual encounter” (p. 210). Given the inadequate sexual education imparted in both the home and school and an increasingly mainstreamed pornographic culture (Dines, 2010; Paul, 2005), pornography has become an important sexual script for many young men and women (Sun et al., 2016).

It is important to note that even if viewing the same pornographic content, different individuals may or may not incorporate the pornographic script into their sexual behaviors depending on individual differences (such as gender, moral standards, apathy, or self-regulation) and situational differences (such as time pressure, sexual arousal, or the availability of a sexual partner; Wright, 2011). However, some aspects of pornography make the incorporation of the pornographic sexual script more likely to occur than other media-driven scripts. In particular, the sexual arousal, masturbation, and orgasms that frequently accompany pornography viewing make it more likely that the sexual script will be activated and applied (Bandura, 1986; Wright, 2011). The pleasure felt by masturbation and orgasm to pornography are rewarding, thereby increasing the likelihood that the behavior will be repeated again in the future. This repeated exposure to pornographic sexual scripts, particularly when coupled with masturbation, is what Wright (2011) hypothesizes leads to increased adoption of the script.

In cognitive terms, script adoption may go through systemic processing (Wright, 2011) or automatic processing (Huesmann, 1998). Systematic processing requires a deliberate and careful evaluation of the script messages (Rubin & Windahl, 1986). When this happens, the script content is carefully scrutinized and rationally evaluated. However, systemic processing occurs infrequently because it requires mental energy and time (Huesmann, 1998; Shrum & Lee, 2012). The tendency to use automatic processing is especially elevated in a state of arousal. Ariely and Loewenstein (2006) found that when male college students were in a state of sexual arousal induced by
self-stimulation (masturbation), they were more likely, as compared to the neutral state, to report a wide range of stimuli and activities sexually appealing and they were more willing to report a desire to engage in morally questionable and risky sexual behaviors, such as having anal sex, spanking a partner, watching someone urinate, and becoming sexually excited by animals or prepubescent girls. Sexual arousal can play a powerful moderating role in the activation and application of the pornographic sexual script and may encourage automatic processing in sexual decision-making that bypasses critical faculty (see Shrum & Lee, 2012).

Heavy users of pornography arguably have pornographic sexual scripts readily accessible in memory. Because mainstream pornographic media provide manual-like, detailed, graphic illustrations of sexual encounters (Dines, Jensen, & Russo, 1998) and thus provide a “guide [for] a complete sequence of sexual behavior” (Wright, 2011, p. 358), it is likely that heavy pornography users will apply scripts that they learned from pornography in their real-life sexual behaviors. Indeed, studies have found associations between pornography use and sexual behaviors. For example, early exposure to pornographic material is associated with the perpetration of sexual harassment and engagement in oral sex and sexual intercourse for boys (Brown & L’Engle, 2009) and with sexually permissive behavior among Taiwanese adolescents (Lo & Wei, 2005). Further, greater pornography consumption is associated with greater likelihood of having engaged in anal sex for respondents in both Sweden (Rogala & Tydén, 2003) and the United States (Braun-Courville & Rojas, 2009; Weinberg, Williams, Kleiner, & Irizarry, 2010).

Longitudinal studies examining associations between pornography use, attitudes, and sexual behavior suggest media exposure precedes attitude and behavior change. For instance, Peter and Valkenburg (2010) conducted a three-wave panel study over the course of a year, surveying 1,052 Dutch adolescents aged 13–20 years. The study found that exposure to pornography increased subsequent views of sex as instrumental (for physical pleasure only) and that this influence was mediated by perceived realism. The authors argue for the importance of cognitive processing to understand the effects of pornography use on attitudes and sexual behavior. Another three-wave panel study of adolescent boys (Ward, Vandenbosch, & Eggermont, 2015) demonstrated that boys who consumed more sexualizing magazines tended to express more gender stereotypical beliefs about feminine courtship strategies over time. The study also ruled out the possibility that it was the beliefs that drove the media consumption. Wright (2013) found similar attitude changes in a representative sample of 1,276 U.S. adults: Higher pornography use at earlier waves predicted subsequent permissive attitudes about sex, but permissive attitudes did not prospectively predict pornography use. These findings extend to sexual behavior, as well. In the same sample of U.S. adults, Wright (2012) found pornography use predicted, prospectively, casual sex engagement but that casual sex did not predict later pornography use.

The Gendered Nature of Sexual Scripts

Sexual scripts are gendered not generic (Frith & Kitzinger, 2001; Wiederman, 2005). The pornographic sexual script reflects the relational construction of gender as a category of inequality (see, e.g., Fausto-Sterling, 2000; Lorber, 1994, 2005), often positioning men as sexual aggressors and women as targets of men’s aggression. Content analysis of top-selling pornographic DVDs, for example, finds that over 88% of scenes involve acts of physical aggression and over 48% involve verbal aggression, principally name-calling. While 70% of the aggressors were men, nearly all targets were women who, most often, expressed pleasure at the aggression (Bridges et al., 2010). Concurrently, content analysis of popular Internet pornography affirms the prevalence of degrading and aggressive sexual acts targeting women (Gorman, Monk-Turner, & Fish, 2010). However, very little research has focused on the associations between pornography and sexual behavior, especially sexual behaviors that are often portrayed in pornography (Bridges et al., 2010) but more rarely endorsed by nationally representative samples of adults (Michael, Gagnon, Laumann, & Kolata, 1994).

Purpose and Hypotheses

The current study explored the relations between pornography use and pornography-normative sexual behavior in heterosexual adults. Consistent with social modeling and sexual scripts theories, we hypothesized greater use of pornography would be associated with increased self-reported engagement in sexual practices often reflected in pornography, including anal sex, ass-to-mouth, and verbal and physical aggression (aggressor and target). Although prior studies have shown associations between pornography use and select sexual behaviors commonly found in pornography, in particular anal sex (e.g., Braun-Courville & Rojas, 2009), this study extends these findings by exploring additional frequently occurring sexual behaviors such as ass-to-mouth and ejaculation on a woman’s face. We further examine the degree to which pornography use predicts self-reported interest in engaging in pornography-normative sexual behavior in participants who had not yet tried the behaviors. Consistent with sexual script theory, we hypothesized greater use of pornography would be associated with increased interest in engaging in sexual behaviors frequently observed in popular pornography.

We also explored the extent to which gender moderated these associations. Because pornographic sexual scripts often depict men as aggressors and women as targets of aggression, we hypothesized pornography use would increase men’s engagement or interest in aggressor behaviors more so than women’s, while pornography would increase women’s engagement or interest in target behaviors more so than men’s. Finally, because many of the uncommon and/or degrading sexual behaviors portrayed in pornography involve men degrading women, we hypothesized pornography use would increase...
Table 1. Demographic Information for the Full Sample.

| Variable                                      | N (%)    | M (SD) |
|-----------------------------------------------|----------|--------|
| Male gender                                   | 620 (38.6%) |        |
| Age, in years (range 17–64)                   | —        | 22.55 (7.95) |
| Ethnicity                                     |          |        |
| White                                         | 1,427 (88.9%) |        |
| Black/African American                        | 67 (4.2%) |        |
| Asian                                         | 65 (4.0%) |        |
| Hispanic/Latino                               | 56 (3.5%) |        |
| Native American                               | 26 (1.6%) |        |
| Pacific Islander                              | 7 (0.4%) |        |
| White (nonbiracial)                           | 426 (87.5%) |        |
| Urban/rural residence                         |          |        |
| City                                          | 559 (34.8%) |        |
| Suburb                                        | 640 (39.9%) |        |
| Rural area                                    | 302 (18.8%) |        |
| Other                                         | 76 (4.7%) |        |
| Religion                                      |          |        |
| Protestant                                    | 527 (32.8%) |        |
| Catholic                                      | 505 (31.4%) |        |
| Jewish                                        | 52 (3.2%) |        |
| Other                                         | 22 (1.4%) |        |
| No religion                                   | 246 (15.3%) |        |
| Religiosity (range 1–6)                       | 3.75 (1.73) |        |
| Relationship status                           |          |        |
| Not in a relationship                         | 799 (49.8%) |        |
| In a relationship but not monogamous          | 67 (4.2%) |        |
| Committed relationship but not cohabiting     | 497 (30.9%) |        |
| Cohabiting                                    | 43 (2.7%) |        |
| Married                                       | 155 (9.7%) |        |
| College student                               | 1414 (88.0%) |        |
| Prior sexual experience                       | 1367 (85.1%) |        |
| Age at first sexual intercourse               |          |        |
| Never had intercourse                         | 192 (12.0%) |        |
| Younger than 12 years                         | 6 (0.4%) |        |
| 13–15 years                                   | 148 (9.2%) |        |
| 16–18 years                                   | 734 (45.7%) |        |
| 19–21 years                                   | 219 (13.6%) |        |
| 22 years and older                            | 61 (3.8%) |        |
| Number of sexual partners in the past year    |          |        |
| None                                          | 269 (16.7%) |        |
| 1–3                                           | 923 (57.5%) |        |
| 4–6                                           | 116 (7.2%) |        |
| 7–9                                           | 34 (2.1%) |        |
| 10 or more                                    | 14 (0.9%) |        |
| Parental educational attainment: Male guardian |          |        |
| Less than high school degree                  | 36 (2.2%) |        |
| High school degree or equivalent              | 237 (14.8%) |        |
| Some college, no degree                       | 210 (13.1%) |        |
| College degree                                | 499 (31.1%) |        |
| Graduate or advanced degree                   | 575 (35.8%) |        |
| Parental educational attainment: Female guardian |          |        |
| Less than high school degree                  | 29 (1.8%) |        |
| High school degree or equivalent              | 237 (14.8%) |        |
| Some college, no degree                       | 219 (13.6%) |        |
| College degree                                | 671 (41.8%) |        |
| Graduate or advanced degree                   | 416 (25.9%) |        |

*Responses coded on a scale from 1 (not at all important) to 6 (very important).*

men’s engagement or interest in uncommon/degrading behaviors more so than women’s.

Method

Participants

As part of a larger, multinational study, we recruited a convenience sample of 1,883 men and women residing in the United States who consented to participate in our survey. Participants who did not answer a question assessing sexual orientation (n = 20) or indicated being gay or lesbian (n = 22), bisexual (n = 46), or other sexual orientation (n = 5) were excluded from the study. Fifteen percent (n = 285) of the participants did not indicate their gender and were excluded from the study. Of the remaining 1,606 participants, 38.6% were men (n = 620) and 61.4% were women (n = 986).

Participant demographics are provided in Table 1. Most (88.9%) respondents indicated they attended a college or university. Most (88.9%) respondents were White and 76.0% lived in a city or suburb. Average age was 22.55 years (SD = 7.95). The majority (65% or greater) of male and female guardians of these participants had completed a college degree. Participants were primarily Protestant/Christian (32.8%) and Catholic (31.4%); 15.3% of participants were not religious. Participants reported an average level of importance of their religious faith (M = 3.75, SD = 1.73, scale from 1 = not at all important to 6 = very important). Many (41.2%) reported agreeing or strongly agreeing that religious faith was important to them. Half of the participants (49.8%) were not in a relationship.

Most participants (85.1%) reported having had prior dyadic sexual experiences, including being naked, touching genitals, engaging in oral sex, or having sexual intercourse (vaginal or anal). More specifically, only 12.0% of participants reported never having engaged in sexual intercourse. Of the remaining respondents who reported having engaged in sexual intercourse, 9.6% had done so prior to the age of 16, 45.7% first had sex between 16 and 18 years of age, and the remaining 17.4% first had sex at 19 years of age or later (data were missing for 15.2% of participants). Most sexually experienced respondents (87.9% of those who responded) reported three or fewer sexual partners in the past year.

Measures

Frequency of pornography use. Two questions assessed participants’ average frequency of pornography use: one specified pornography use for masturbation and the other specified pornography use but not for masturbation. The authors did not assess reasons for pornography use other than masturbation in the current study; however, prior work indicates people frequently report use because of boredom, curiosity, stress reduction, and as part of sexual activity with a partner (Bridges & Morokoff, 2011). The items were answered on an 8-point...
Table 2. Descriptive Statistics for Study Variables: Gender by Having Tried the Behavior.

| Variable                                         | Men      | Women    | χ² Statistic (1 df) |
|--------------------------------------------------|----------|----------|--------------------|
| Aggressor behaviors                               |          |          |                    |
| spanked my partner lightly                        | 435 (73.0%) | 417 (43.6%) | 128.31, p < .001   |
| spanked my partner hard enough to leave marks     | 208 (34.4%) | 97 (10.0%)  | 141.30, p < .001   |
| pulled my partner’s hair during sex              | 311 (51.8%) | 496 (51.5%) | 0.02, p = .900     |
| role-played forcing my partner into sex          | 77 (12.8%)  | 62 (6.4%)   | 18.62, p < .001    |
| slapped my partner in the face during sex        | 43 (7.1%)   | 28 (2.9%)   | 15.57, p < .001    |
| choked my partner with my hands during sex       | 96 (15.9%)  | 37 (3.8%)   | 70.18, p < .001    |
| tied my partner up                               | 139 (23.2%) | 159 (16.4%) | 11.04, p = .001    |
| Target behaviors                                  |          |          |                    |
| been spanked lightly                             | 283 (47.0%) | 632 (65.4%) | 51.01, p < .001    |
| been spanked hard enough to leave marks          | 112 (18.5%) | 242 (24.9%) | 8.83, p = .003     |
| my hair was pulled during sex                    | 248 (41.5%) | 544 (56.4%) | 33.05, p < .001    |
| role-played being forced into sex                | 66 (11.0%)  | 96 (10.0%)  | 0.43, p = .513     |
| my face was slapped during sex                   | 49 (8.1%)   | 35 (3.6%)   | 14.91, p < .001    |
| been choked (with hands) during sex              | 54 (9.0%)   | 124 (12.8%) | 5.48, p = .019     |
| been tied up by my partner                       | 115 (19.1%) | 197 (20.4%) | 0.38, p = .538     |
| Degrading/uncommon sexual behaviors              |          |          |                    |
| fellatio (man standing, woman kneeling)          | 423 (70.6%) | 614 (64.7%) | 5.82, p = .016     |
| man ejaculated on a woman’s face or mouth        | 397 (66.7%) | 589 (62.1%) | 3.44, p = .064     |
| double penetration (two men, one woman)          | 17 (2.9%)   | 11 (1.2%)   | 6.11, p = .013     |
| anal sex                                         | 168 (28.2%) | 267 (28.2%) | 0.00, p = .988     |
| ass-to-mouth                                     | 43 (7.2%)   | 18 (1.9%)   | 27.22, p < .001    |
| name-calling (e.g., “slut,” “whore”)             | 160 (26.9%) | 187 (19.7%) | 10.91, p = .001    |

Likert-type scale (0 = never, 1 = less than once a year, 2 = a few times a year, 3 = once a month, 4 = a few times a month, 5 = 1–2 days a week, 6 = 3–5 days a week, and 7 = daily or almost daily). The 2 items were summed to yield a total frequency of pornography use score.

Other aspects of pornography use. In addition to assessing frequency of use, for descriptive purposes, we asked participants to indicate what kind of pornography they consumed most often (magazines or books, video on demand or pay per view, cable television channels such as Playboy, pornographic digital video disks, and the Internet). We also asked the respondents their age at first exposure to pornography and the age at which they first used pornography for masturbation.

Aggressor behaviors. Seven questions assessed engagement in mild aggression during sex (Table 2). Items asked about spanking, pulling hair, slapping, choking, tying up a partner, and role-playing rape. Each item was answered on a 6-point scale: 1 (tried it and liked it), 2 (tried it and did not like it), 3 (tried it and did not sure if I liked it), 4 (have not tried it but would like to), 5 (have not tried it and do not want to), and 6 (I do not know what this means). Responses were recoded into two dichotomous variables. The first indicated if the participant had ever tried the behavior (Responses 1–3 were coded as yes, while Responses 4–5 were coded as no). Respondents who indicated they did not know what the question was asking were coded as missing data on that variable. Second, responses for the subgroup of participants who had not engaged in the behavior were coded to indicate if the participant had an interest in trying the behavior (Response 4 was coded as yes, Response 5 was coded as no).

For the hypothesis tests, we created two scores from the sum of the dichotomously coded variables tried and would like. For instance, a participant who had tried none of these behaviors obtained a sum score of 0, while a participant who had tried all seven of them obtained a sum score of 7. This sum score was then divided by the number of items that the participant had answered, yielding a proportion (or percentage) score. To illustrate, a participant who had tried six behaviors but only answered 6 of the 7 items obtained a percentage score of 100, identical to that of someone who had tried seven of the seven answered questions. Higher scores therefore indicated greater engagement in various aggressor behaviors during sex. Cronbach’s α for the 7-Item Tried Scale was .71. A similar score was created for the would like (or interest in) recoded items. A ratio was calculated with the total sum of would like items as the numerator and total sum of have not tried items as the denominator. Scores indicated the percentage of untried behaviors that the participant reported they would like to try at some point in the future. Scores could range from 0% to 100%, with higher scores indicating greater interest in trying the different types of behaviors. Cronbach’s α for the Interest Scale was .67.

Target behaviors. Seven questions assessed being the target of mild aggression during sex (Table 2). Items asked about being spanked, slapped, choked, or tied up by a partner; having one’s hair pulled by a partner; and role-playing being raped. Each
item was answered on the same 6-point scale described above for aggressor behaviors. Responses to these 7 items were also recoded into two sets of variables, tried (yes/no) and would like (yes/no), and then percentage scores were created by dividing the sum of tried and would like (or interest in) items by the number of items the participants had answered (of the total target items and of the total untried items, respectively). Higher scores indicate greater engagement in or interest in trying the different types of behaviors. Cronbach’s α coefficients for target behaviors were .73 for the Tried Scale and .71 for the Interest Scale.

Degrading/uncommon behaviors. Six questions assessed engagement in degrading and/or uncommon sexual behaviors (Table 2). Items asked about engaging in double penetration, anal sex, ass-to-mouth, oral sex (woman kneeling, man standing), ejaculation on a woman’s face, and name-calling. Each item was answered on the same 6-point scale described above. Responses were recoded into two sets of variables, tried (yes/no) and would like (yes/no), and then percentage scores were created by dividing the sum of tried and would like items by the number of items the participants had answered (of the total degrading/uncommon items and of the total untried items, respectively). Higher scores indicated greater engagement in or interest in trying degrading/uncommon sexual behaviors. Cronbach’s α coefficients were .64 for the Tried Scale and .69 for the Interest Scale.

Procedure
This project was part of a collaborative, multisite study of culture and sexual behavior conducted by a consortium of international, cross-disciplinary scholars from the fields of communication, psychology, and sociology. All participating university institutional review boards approved the project. Participants were recruited from Spring 2011 to Spring 2012 through departmental and college-wide e-mail announcements, posted campus flyers, or introductory psychology courses. Interested participants were directed to an online survey posted on SurveyMonkey, a web-based survey service, and each recruitment site had a unique link. Participants first provided consent and then confirmed their eligibility prior to completing the survey. Participation took approximately 30 min. Following survey completion, participants received a full debriefing and were given an opportunity to enter into a raffle to win one of the three cash prizes (one US$100 and two US$60 prizes were awarded via random selection of all interested participants).

Results
Frequency of Pornography Use
Prior to evaluating the study hypotheses, we explored the frequency of pornography use for masturbation in men and women. Descriptive statistics for pornography use are displayed in Table 3. Men reported significantly higher frequency...
of pornography use, both with and without masturbation, compared to women. In men, the average frequency of pornography use for masturbation was 4.14 (SD = 2.15), indicating a frequency that was a few times per month, and the average frequency of pornography use without masturbation was 1.41 (SD = 1.88), or a few times per year. The modal frequency of pornography use for masturbation use was 1–2 days per week (25.9% of male participants), while the modal frequency of pornography use without masturbation was never (53.7% of men). A total of 12.3% of men reported “never” using pornography.

In women, the average frequency of pornography use for masturbation was 1.35 (SD = 1.88), indicating a frequency that was once per year, and the average frequency of pornography use without masturbation was 0.50 (SD = 1.15), or less than once per year. The modal frequency of pornography use for and without masturbation was never (60.0% and 79.2% of women, respectively). A total of 55.0% of women reported “never” using pornography.

**Pornography Use and Engaging in Sexual Behaviors**

Descriptive statistics for frequency of engaging in specific aggressor, target, and degrading/uncommon sexual behaviors are provided in Table 2. χ² analyses with a Bonferroni correction (α value set at ≤ .001) revealed significant gender differences for engagement in six of the seven aggressor behaviors, three of the seven target behaviors, and two of the six uncommon and/or degrading sexual behaviors. The most common aggressor behaviors reported by both men (73.0%) and women (43.6%) was spanking a partner lightly, while the least common was slapping a partner’s face during sex (men = 7.1%; women = 2.9%). Men were more likely than women to have tried all but one of the aggressor behaviors (the exception was pulling a partner’s hair during sex). The most common target behaviors reported by men (47.0%) and women (65.4%) were having been spanked lightly, while the least common was having one’s face slapped during sex (men = 8.1%; women = 3.6%). Women were significantly more likely than men to have been spanked lightly or had their hair pulled by a partner during sex, while men were significantly more likely to have had their face slapped by a partner during sex. The most common degrading/uncommon sexual behavior reported by both men (70.6%) and women (64.7%) was having engaged in fellatio, with the man standing and the woman kneeling, while the least common was engaging in double penetration (men = 2.9%; women = 1.2%). Men were significantly more likely than women to have engaged in ass-to-mouth and called their partner names during sex.

Hierarchical multiple regression analyses were used to determine whether engagement in a greater variety of aggressor, target, and degrading/uncommon sexual behaviors could be predicted from gender (Step 1), frequency of pornography use (Step 2), and their interaction (Step 3). All analyses revealed no violations of assumptions of linearity, multicollinearity, and normal distribution of residuals. Results appear in Table 4 and are summarized below.

| Table 4. Hierarchical Linear Regressions Predicting Sexual Behavior From Gender and Pornography Use. |
|---------------------------------------------------|-----------------|-------------|--------|-----------------|
| Model and Predictors                             | Step F (df)     | B (SE)      | β      | Step R²         |
| **Aggressor behaviors tried**                   |                 |             |       |                 |
| Step 1***                                        | 72.63 (1, 1390) | −.11 (.01)  | −.22  | .50             |
| Female gender***                                 |                 | −.05 (.01)  | −.10  | .036            |
| Female gender***                                 |                 | .03 (.00)   | .23   |                 |
| Step 2***                                        | 54.47 (1, 1389) | .04 (.01)   | .24   |                 |
| Female gender***                                 |                 | −.04 (.02)  | −.08  | .000            |
| Female gender***                                 |                 | .03 (.01)   | .25   |                 |
| Gender × Pornography Use                        |                 | −.01 (.01)  | −.03  |                 |
| **Target behaviors tried**                      | 37.10 (1, 1391) | .08 (.01)   | .16   | .026            |
| Female gender***                                 |                 | −.03 (.01)  | −.05  | .020            |
| Female gender***                                 |                 | .02 (.02)   | .04   | .000            |
| Female gender***                                 |                 | .03 (.01)   | .17   |                 |
| Gender × Pornography Use                        | 1.74 (1, 1389)  | .13 (.02)   | .25   |                 |
| **Pornography Use**                             |                 | .03 (.01)   | .20   |                 |
| Degrading/uncommon behaviors tried              | 3.88 (1, 1384)  | .01 (.01)   | .05   | .003            |
| Female gender***                                 |                 | −.03 (.01)  | −.05  | .020            |
| Female gender***                                 |                 | .02 (.02)   | .04   | .000            |
| Female gender***                                 |                 | .03 (.01)   | .17   |                 |
| Gender × Pornography Use                        | 0.14 (1, 1382)  | .01 (.02)   | .03   | .000            |
| **Pornography Use**                             |                 | .02 (.01)   | .16   |                 |
| **P** .05. **p** .01. ***p** .001.               |                 | .00 (.01)   | .02   |                 |

**Aggressor behavior.** The first step was significant, F(1, 1390) = 72.63, p < .001, and explained 5.0% of the variance in aggressor behaviors. At Step 1, male gender significantly predicted engagement in aggressor sexual behaviors, β = −.22. The second step significantly incremented model fit, ΔF (1, 1389) = 54.47, p < .001, explaining an additional 3.6% of the variance. At Step 2, greater pornography use was associated with increased engagement in aggressor behaviors, β = .23. The interaction, entered at Step 3, did not significantly increment model fit, ΔF (1, 1388) = 0.51, p = .473, ΔR² = .00, interaction β = −.03.

**Target behavior.** The first step was significant, F(1, 1391) = 37.10, p < .001, and explained 2.6% of the variance in target behaviors. At Step 1, female gender significantly predicted engagement in target sexual behaviors, β = .16. The second step significantly incremented model fit, ΔF (1, 1390) = 59.83, p < .001, explaining an additional 4.0% of the variance. At Step 2, greater pornography use for masturbation was associated with increased engagement in target behaviors, β = .24. The interaction, entered at Step 3, did not significantly increment
model fit, $\Delta F(1, 1389) = 1.74, p = .188, \Delta R^2 = .001$, interaction $\beta = .05$.

_Degrading and/or uncommon sexual behavior._ The first step was significant, $F(1, 1384) = 3.88, p = .049$, but explained only 0.3% of the variance in degrading/uncommon behaviors. At Step 1, male gender significantly predicted engagement in degrading or uncommon sexual behaviors, $\beta = -.05$. The second step significantly incremented model fit, $\Delta F(1, 1383) = 29.03, p < .001$, explaining an additional 2.0% of the variance. At Step 2, greater pornography use was associated with increased engagement in degrading/uncommon behaviors, $\beta = .17$. The interaction, entered at Step 3, did not significantly increment model fit, $\Delta F(1, 1382) = 0.14, p = .712, \Delta R^2 = .000$, interaction $\beta = .02$.

**Pornography Use and Interest in Sexual Behaviors**

Descriptive statistics for interest in engaging in specific aggressor, target, and degrading/uncommon sexual behaviors are provided in Table 5. Data are limited to those participants who reported having no prior experience with the specific behavior in the past. $\chi^2$ analyses with a Bonferroni correction ($z$ value set at $\leq .001$) revealed significant gender differences for interest in trying five of the seven aggressor behaviors, two of the seven target behaviors, and all of the seven uncommon and/or degrading sexual behaviors. The most common aggressor behaviors both men (44.3%) and women (36.5%) wanted to try was tying up a partner, while the least common was choking a partner during sex (men = 5.7%; women = 2.0%). Men were more likely than women to have interest in trying all but two of the aggressor behaviors (the exceptions were pulling a partner’s hair during sex and tying up a partner). The most common target behaviors both men (42.2%) and women (40.6%) wanted to try was being tied up by a partner, while the least common for men was being choked by a partner during sex (5.5%) and for women was having their face slapped (2.6%). Men were significantly more likely than women to want to role-play being forced into sex and have their face slapped during sex. The most common degrading/uncommon sexual behavior both men (81.8%) and women (39.4%) reported wanting to try was engaging in fellatio with the man standing and the woman kneeling, while the least common for men was interest in calling a partner names (13.1%) and for women was interest in ass-to-mouth (0.5%). Men were significantly more likely than women to want to try all of the degrading/uncommon sexual behaviors, including ejaculating on a woman’s face or mouth, engaging in double penetration, having anal sex, engaging in ass-to-mouth, and calling a partner names.

Hierarchical multiple regression analyses were used to determine whether interest in engaging in a greater variety of aggressor, target, and degrading/uncommon sexual behaviors could be predicted from gender (Step 1), frequency of pornography use (Step 2), and their interaction (Step 3). All analyses revealed no violations of assumptions of linearity, multicollinearity, and normal distribution of residuals. Results appear in Table 6 and are summarized below.
A hierarchical multiple regression analysis was used to determine whether the percentage of aggressor sexual behaviors participants reported wanting to try could be predicted from gender (Step 1), frequency of pornography use (Step 2), and their interaction (Step 3). Preliminary analyses revealed no violations of linearity, multicollinearity, and normal distribution of residuals. The first step was significant, $F(1, 1373) = 4.04, p = .045$, but explained only 0.3% of the variance in interest in engaging in target behaviors. At Step 1, male gender was a significant predictor, $\beta = .05$. The second step significantly incremented model fit, $\Delta F(1, 1372) = 24.48, p < .001$, explaining an additional 8.3% of the variance. At Step 2, greater pornography use was associated with increased interest in trying target sexual behaviors, $\beta = .35$. The interaction, entered at Step 3, significantly incremented model fit, $\Delta F(1, 1371) = 4.08, p = .044, \Delta R^2 = .03$, interaction $\beta = .08$.

**Degrading and/or uncommon sexual behavior.** A hierarchical multiple regression analysis was used to determine whether the percentage of degrading/uncommon sexual behaviors participants reported wanting to try could be predicted from gender (Step 1), frequency of pornography use (Step 2), and their interaction (Step 3). Preliminary analyses revealed no violations of linearity, multicollinearity, and normal distribution of residuals. The first step was significant, $F(1, 1382) = 241.85, p < .001$, explaining 14.9% of the variance in interest in trying degrading and uncommon sexual behaviors. At Step 1, male gender significantly predicted the criterion, $\beta = .39$. The second step significantly incremented model fit, $\Delta F(1, 1381) = 128.30, p < .001$, explaining an additional 7.2% of the variance. At Step 2, greater pornography use was associated with increased interest in trying degrading or uncommon sexual behaviors, $\beta = .32$. The interaction, entered at Step 3, did not significantly increment model fit, $\Delta F(1, 1380) = 0.26, p = .612, \Delta R^2 = .00$, interaction $\beta = .02$.

**Post Hoc Analyses**

We conducted post hoc analyses to compare correlations between pornography use and the sexual behavior questions by gender. In particular, we asked whether the increases in engaging or desiring sexual behavior associated with increased pornography use were similar across the three categories (aggressor, target, and degrading/uncommon behaviors) for men and women. In men, correlations between pornography use and engagement in sexual behaviors were strongest for aggressor ($r = .210, p < .001$), followed by target ($r = .202, p < .001$) and degrading/uncommon ($r = .145, p < .001$). However, Fisher’s $Z$ tests revealed these correlations were all statistically equivalent (all $p$ values $> .05$). The same pattern was obtained in the correlations between pornography use and interest in engaging in various sexual behaviors (aggressor: $r = .277, p < .001$; target: $r = .253, p < .001$; degrading/uncommon: $r = .233, p < .001$). These three correlations were also not significantly different from one another (all $p$ values for Fisher’s $Z$ tests $> .05$).

In women, the strongest correlation was between pornography use and engagement in target sexual behaviors ($r = .209, p < .001$), followed by aggressor ($r = .175, p < .001$) and...
degrading/uncommon \( (r = .143, p < .001) \). Again, however, Fisher’s Z tests revealed these correlations were all statistically equivalent (all \( p \) values > .05). In contrast, pornography use in women was most strongly associated with an interest in engaging in degrading or uncommon sexual behaviors \( (r = .300, p < .001) \), followed by target \( (r = .258, p < .001) \) and finally aggressor \( (r = .202, p < .001) \) behaviors. The correlation between pornography use and interest in degrading/uncommon behaviors was significantly larger than the correlation between pornography use and aggressor behaviors, \( Z = 2.09, p = .037 \). All other correlations were statistically equivalent \( (p \) values > .05).

**Discussion**

Our study asked whether pornography use is associated with greater engagement in sexual behaviors frequently represented in pornographic films (Bridges et al., 2010). Furthermore, given that not all participants may have had a sexual partner with whom to try these behaviors, we explored whether pornography use related to interest in trying these sexual behaviors if an opportunity to do so arose. Utilizing sexual script theory (Simon & Gagnon, 1986; Wright, 2011), we hypothesized a positive association between pornography use and the two variables. We also examined whether frequency of engagement in or interest in trying the diverse categories of sexual behaviors (aggressor, target of aggression, and degrading/uncommon behaviors) would differ by gender. Because sexual scripts in pornography frequently portray female degradation (Gorman et al., 2010) and male-to-female violence (Bridges et al., 2010), we hypothesized gender would moderate the relations between pornography use and sexual behaviors.

**Sexual Scripts and Behavior**

Overall, we found broad support for sexual script theory. Multivariate analyses demonstrated significant associations between higher pornography use and higher engagement in all three types of sexual behaviors: aggressor, target, and degrading/uncommon. The standardized regression weights in our hierarchical regressions and our post hoc analyses showed associations between pornography use and sexual behaviors were comparable in magnitude across the various categories or types.

When compared to the data from Bridges et al. (2010) analysis of aggressive behavior in pornography, we found many behaviors frequently portrayed in popular pornography were less common among the sample in general. For instance, Bridges et al. found 41% of pornographic scenes depicted slapping a partner in the face during sex, but only 7% of men and 3% of women in the current study endorsed this behavior. Similarly, Bridges et al. found 28% of pornographic scenes depicted choking, compared to 16% of men and 4% of women who reported choking a partner during sex. On the other hand, other aggressive behaviors were fairly comparable in prevalence in both pornography and in the actual behavior of participants. For instance, Bridges et al. found 75% of scenes in popular pornographic films depicted spanking, compared to 73% of men and 44% of women in the current study who reported spanking a partner (and 47% of men and 65% of women who reported being spanked by a partner). Some behaviors were more commonly reported by our participants than were portrayed in pornography, including bondage/confining (present in <7% of pornographic scenes but reported by approximately 20% of our sample) and hairpulling (present in 37% of pornographic scenes but reported by over 50% of our sample).

Examining sexual behaviors specifically, most of the behaviors coded in this study were more common in pornographic scenes coded by Bridges et al. (2000) than in participants’ self-reports. Engaging in double penetration, present in 19% of pornography scenes, was reported by fewer than 3% of our participants. Anal sex, present in 56% of pornography scenes, was reported by less than 30% of our participants. Ass-to-mouth was present in 41% of pornographic scenes but only attempted by 7% of male and 2% of female participants. On the other hand, men’s ejaculation on a woman’s face, present in 62% of pornography scenes, was comparable in participants’ sexual behaviors (67% of men and 62% of women).

We also found significant associations between higher pornography use and higher desire to engage in all three types of sexual behaviors (aggressor, target, and degrading/uncommon) among participants who had not yet tried these. Taken together, results suggest higher pornography use is associated with higher engagement in or interest in trying sexual behavior consistent with pornographic scripts.

Although our data are cross-sectional, our findings support scholars who suggest pornography can be a source of sexual education or can expand the sexual repertoire of users (e.g., Weinberg et al., 2010). Those participants who reported greater pornography use did indeed report engaging in (or interest in trying) a greater variety of sexual behaviors. Because we did not assess other sexual or intimate behaviors that are infrequently present in pornography, such as kissing, hugging, or caressing, we are unable to determine whether pornography use is associated with a greater expansion of all types of sexual behaviors or is limited to only those that are frequently portrayed in pornographic media. However, in previous research with men, we found significant associations between pornography use and lower enjoyment of sexually intimate behaviors such as kissing and caressing (Sun et al., 2016). If indeed pornography expands sexual behavior, but only to behaviors that are aggressive or uncommon/degrading, it would be important to ask what are the mental health implications for users and the public health implications for communities.

**Gender Differences in Sexual Behavior Engagement**

In bivariate analyses, men were significantly more likely to have tried aggressor sexual behaviors frequently portrayed in pornography, including spanking a partner, slapping or choking a partner, tying a partner up, and role-playing the scenario of
forcing a partner into sex. On the other hand, women were more likely to have been targets of aggression, especially spanking lightly and hairpulling. The only target behavior more frequently reported by men than women was being slapped in the face during sex. On the whole, men were more likely to have engaged in behaviors representing female degradation, including ass-to-mouth and calling their female partners names.

In general, aggression against male partners by women was rare. Fewer than 10% of women reported engaging in each individual act of aggressive, with three exceptions. The exceptions included spanking a partner lightly (reported by nearly 44% of women), pulling a partner’s hair (nearly 52%), and tying up a partner (over 16%). In contrast, more than 10% of men reported engaging in each individual aggressive act save one: Only 7% of men reported having slapped a partner’s face during sex.

The same gender disparity was evident in engagement in degrading/uncommon sexual acts. When examined individually, over 25% of men reported engagement in each of the degrading/uncommon behaviors with two exceptions: very few men (less than 3%) had engaged in double penetration of a woman with another man and only 7% had tried ass-to-mouth. For women, engagement in degrading/uncommon sexual behaviors was relatively rare, with two exceptions: Most female participants reported fellatio while kneeling in front of a standing male partner (nearly 65%) and most (over 62%) reported having a male partner ejaculate on their mouth or face.

The opposite gender pattern was found for target behaviors. Here, all but two target behaviors (being spanked lightly and having one’s hair pulled) were reported by fewer than 20% of male participants. In contrast, more than 20% of female participants had tried four of the seven target behaviors (exceptions were role-playing being forced into sex, having one’s face slapped during sex, and being choked during sex).

Multivariate analyses confirmed these gender differences in engagement across the three categories of sexual behavior: aggressor, target, and degrading/uncommon. Even when controlling for pornography use, men were significantly more likely to have engaged in a greater variety of aggressor and degrading/uncommon behaviors compared to women, while women were significantly more likely to have engaged in target behaviors compared to men.

The gendered nature of our findings is interesting, although we lacked information about whether behaviors were done to express sexual agency and fulfill personal desire or, at least in part, because of perceived pressure or to acquiesce to a partner’s request. Tolman (1994) and others describe women’s lack of agency in sexual encounters, especially when those encounters are dictated by heterosexual male-focused scripts. As Tolman and Bridges and Morokoff (2011) report, young women may be motivated to engage in certain sexual behaviors primarily as a means to please a sexual partner or to view themselves from the perspective of their male partners, rather than because of a personal desire for the behavior. In fact, Tolman argues that adopting this male-centric perspective can rob young women of their ability to recognize their own feelings and sexual desires. Similarly, Walsh, Ward, Caruthers, and Merriwether (2011) find significantly more women (14%) than men (2%) report engaging in intercourse with a partner for the first time because of pressure from their partner. Thus, examining participants’ desire to engage in sexual behavior can provide additional insight.

**Gender Differences in Desire to Engage in Sexual Behavior**

In bivariate analyses examining desire to engage in different types of sexual behavior, men were significantly more likely to report a desire to engage in all three types of behaviors. Significant differences between men and women were found for five of the seven aggressor behaviors, two of the seven target behaviors, and all of the degrading/uncommon behaviors. However, it is notable that similar proportions of men and women reported the desire to try five of the seven target behaviors. On the whole, participants who had not yet tried the different categories of behaviors did not express a strong desire to do so. The two exceptions were fellatio (which nearly 82% of men but less than 40% of women wanted to try) and ejaculating in women’s faces or mouths (which nearly 60% of men but fewer than 13% of women wanted to try). Multivariate analyses found men were significantly more likely to want to try all three categories of sexual behaviors compared to women, even after controlling for pornography use.

**Pornography Use and Sexual Behavior: No Evidence of Gender Moderation**

We did not find significant interactions between gender and pornography use when predicting categories of sexual behavior, regardless of whether we assessed behaviors the participant reported having done in the past or behaviors the participant had not done but had interest in doing. Because pornographic sexual scripts are gendered, with women frequently being portrayed in more submissive roles, we expected pornography use would interact with gender such that behaviors that followed the gendered pornographic script would be exaggerated in men (for aggressor and degrading/uncommon behaviors) or in women (for target behaviors).

The fact that bivariate analyses suggested clear differences in both engagement and interest in engaging in many behaviors, but there was no interaction between pornography use and gender, suggests pornography use does not exaggerate the gender differences already reflected in men’s and women’s sexual behavior. However, since we found positive associations between pornography use and sexual behaviors, and since significantly more men than women reported using pornography (nearly 87% of men and 40% of women in our sample), men are more likely to show or have an interest in engaging in sexual behavior that comports with the pornographic script.
**Limitations and Future Directions**

The findings of our study are limited by the following. First, our data were cross-sectional in nature. Although theoretically pornography use would precede sexual behavior engagement and interest, and other scholars have shown this to be the case (Peter & Valkenburg, 2010; Ward et al., 2015, Wright, 2012), we could not determine the temporal ordering of our variables.

Second, our data were primarily from young college-aged men and women residing in the United States, and most participants were non-Hispanic White. The generalizability of our results is therefore limited to similar populations, and future studies should replicate and extend these findings with more diverse samples.

Third, a sizable minority of our participants (approximately 15%) had no prior sexual experience and approximately half were not in a romantic relationship. These may have limited the opportunities participants had to engage in the range of sexual behaviors we assessed in our study.

Fourth, the indices we created for sexual behaviors (aggressor, target, and degrading/uncommon) were formed by a summation of the number of different types of sexual behaviors participants reported having either tried or an interest in trying. They were therefore indices of breadth of behaviors but not of frequency. For instance, participants who had only tried two aggressor behaviors once in their lifetime would receive the same score as participants who regularly engaged in two types of aggressor behaviors. As such, future studies that assess type and frequency of sexual behaviors will be important.

Fifth, we did not provide participants with any definition of “pornography”; as such, we were unable to determine whether the material they reported consuming contained themes of violence and degradation or not. Future studies would benefit from trying to better assess the content of the pornography participants actually use, as it seems likely different types of sexually explicit material would yield different associations with the variables assessed in the current study.

Sixth, we lacked information about the context in which participants had engaged in the sexual behaviors assessed in our study. For instance, we do not know if participants made requests of their partner or were responding to their partner’s requests to engage in anal sex or other behaviors. Given the discrepancies between interest in trying behaviors (among participants who had not yet tried) and actual engagement in behaviors, especially in our female participants, it is possible many people were responding to requests by a partner to try specific behaviors. To illustrate, 62% of women reported having had a male partner ejaculate on their face or mouth, but among those who had not experienced this, only 12.5% reported wanting to have a male partner ejaculate on their face or in their mouth. It is possible that women who had interest in this behavior also had opportunities to try it, but it is also possible women were generally uninterested in this behavior but acquiesced to a partner’s request. As such, future studies may assess the contextual factors surrounding engagement in sexual behaviors. Finally, and relatedly, we did not assess whether sexual behaviors occurred strictly in the context of consenting sexual encounters with willing partners. Some of the behaviors implied consent (e.g., role-playing being forced into sex), but others did not. These other behaviors may have occurred in the context of implied or explicit consensual encounters or may have occurred in the context of sexual assault. Given the high sexual assault rates in college-aged men and women (approximately 20% of women and 5% of men; Black et al., 2011; Krebs, Linquist, Warner, Fisher, & Martin, 2009), it would be important for future researchers to determine whether sexual behaviors are enacted in a consensual manner versus by coercion.

**Conclusions**

Overall, our results indicate heterosexual men and women who use pornography more frequently are more likely to have tried or have an interest in trying sexual behaviors most frequently seen in pornography. Many of these sexual behaviors involve some level of aggression ranging from light slapping to choking or involve sexual behaviors which can present health consequences to the female body such as double anal penetration or ass-to-mouth. While this study did not find pornography use was associated with an amplification of conventional gendered sexual scripts, use of pornography remains a gendered phenomenon; men are far more likely to watch pornography and more likely to have engaged or want to engage in pornographic sexual behaviors. This may explain the misalignment of men’s and women’s sexual behaviors reported in Table 2. For the smaller number of women who do watch pornography, their sexual scripts are more in tune with men’s; they too are interested in trying or have tried more pornographic behaviors. However, for women, who are most often the targets of the sexually aggressive behavior or are engaged in a sex act that is more taxing on their body, the health concerns implicit in pornographic sex acts are more consequential. This chasm between men and women’s sexual interests and attendant gendered health implications raise concerns related to sex education, consent, and public health.

Given that the first exposure to pornography is often accidental and unwanted, typically occurring around the age of 12 (Sabina et al., 2008), well before the median age of first intercourse at 17 years (Bozon, 2003), pornography is increasingly an unavoidable source of sexual education. The immense growth in the pornography industry over the past decade (Johnson, 2010) has come about at the same time the public sex education system in the United States has grown more calcified and antiquated (e.g., Stanger-Hall & Hall, 2011). These two trends have left young people without a clear, common, and noncommercialized understanding of sexual health. Perhaps conceptualizing pornography as a public health issue will help propel the development of public sex education programs that address, among other things, pornographic sexual scripts. In so doing, educational efforts can better ensure that all young men and women understand the emotional, personal, and physical implications of sexual requests and consent.
Declaration of Conflicting Interests
The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding
The author(s) received no financial support for the research, authorship, and/or publication of this article.

Notes
1. We completed the same analyses controlling for age and religiosity. Older age was a significant predictor of greater engagement in degrading/uncommon behaviors only. Religiosity was a significant predictor of all three categories of behaviors, with higher religiosity associated with lower engagement in each category of sexual behaviors. The effects of gender and pornography use were not different when including demographic covariates; therefore, we report fully only the results of the simpler regressions.

2. We also completed these analyses controlling for age and religiosity. Older age and higher religiosity were significantly associated with lower interest in trying perpetration and target behaviors. Age was not significantly associated with interest in trying degrading/uncommon behaviors, but higher religiosity remained significantly associated with lower interest in trying degrading/uncommon behaviors. The effects of gender and pornography use were not different when including these demographic covariates; therefore, we report fully only the results of the simpler regressions.

References
Bridges, A. J., & Morokoff, P. J. (2011). Sexual media use and relational satisfaction in heterosexual couples. Personal Relationships, 18, 562–585. doi:10.1111/j.1475-6811.2010.01328.x
Bridges, A. J., Wosnitza, R., Scharrer, E., Sun, C., & Liberman, R. (2010). Aggression and sexual behavior in best-selling pornography videos: A content analysis update. Violence Against Women, 16, 1065–1085. doi:10.1177/1077801210382866
Brown, J. D., & L’Engle, K. L. (2009). X-rated: Sexual attitudes and behaviors associated with U.S. early adolescents’ exposure to sexually explicit media. Communication Research, 36, 129–151. doi:10.1177/0093650208326465
Cooper, A. (1998). Sexuality and the Internet: Surfing into the new millennium. CyberPsychology and Behavior, 1, 187–193. doi:10.1089/cpb.1998.1.187
DeKeseredy, W. S., & Corsianos, M. (2016). Violence against women in pornography. New York, NY: Routledge.
Dines, G. (2010). Pornland: How porn has hijacked our sexuality. Boston, MA: Beacon.
Dines, G., Jensen, R., & Russo, A. (1998). Pornography: The production and consumption of inequality. New York, NY: Routledge.
Fausto-Sterling, A. (2000). Sexing the body: Gender politics and the construction of sexuality. New York, NY: Basic Books.
Flood, M., & Pease, B. (2009). Factors influencing attitudes to violence against women. Trauma, Violence, and Abuse, 10, 125–142. doi:10.1177/1524838009334131
Fridl, H., & Kitzinger, C. (2001). Reformulating sexual script theory developing a discursive psychology of sexual negotiation. Theory & Psychology, 11, 209–232. doi:10.1177/0959354301112004
Gagnon, J. H., & Simon, W. (1973). Sexual conduct. Chicago, IL: Aldine.
Gecas, V., & Libby, R. (1976). Sexual behavior as symbolic interaction. Journal of Sex Research, 12, 33–49.
Gorman, S., Monk-Turner, E., & Fish, J. N. (2010). Free adult Internet web sites: How prevalent are degrading acts? Gender Issues, 27, 131–145. doi:10.1007/s12147-010-9095-7
Hald, G. M., Malamuth, N. M., & Lange, T. (2013). Pornography and sexist attitudes among heterosexuals. Journal of Communication, 63, 638–660. doi:10.1111/jcom.12037
Hald, G. M., Malamuth, N. M., & Yuen, C. (2010). Pornography and attitudes supporting violence against women: Revisiting the relationship in nonexperimental studies. Aggressive Behavior, 36, 14–20. doi:10.1002/ab.20328
Huesmann, L. R. (1986). Psychological processes promoting the relation between exposure to media violence and aggressive behavior by the viewer. Journal of Social Issues, 42, 125–139. doi:10.1111/j.1540-4560.1986.tb00246.x
Huesmann, L. R. (1998). The role of social information processing and cognitive schema in the acquisition and maintenance of habitual aggressive behavior. In R. G. Geen & E. Donnerstein (Eds.), Human aggression: Theories, research, and implications for social policy (pp. 73–109). San Diego, CA: Academic Press.
Johnson, J. A. (2010). To catch a curious clicker: A social network analysis of the online pornography industry. In K. Boyle (Ed.), Everyday pornography (pp. 147–163). New York, NY: Routledge.
Krebs, C. P., Linquist, C. H., Warner, T. D., Fisher, B. S., & Martin, S. L. (2009). College women’s experiences with physically
forced, alcohol- or other drug-enabled, and drug-facilitated sexual assault before and since entering college. *Journal of American College Health*, 57, 639–647. doi:10.3200/JACH.57.6.639-649

Lo, V., & Wei, R. (2005). Exposure to Internet pornography and Taiwanese adolescents’ sexual attitudes and behavior. *Journal of Broadcasting and Electronic Media*, 49, 221–237. doi:10.1207/s15506878jobem4902_5

Lorber, J. (1994). *Paradoxes of gender*. New Haven, CT: Yale University Press.

Lorber, J. (2005). *Breaking the bowls: Degendering and feminist change*. New York, NY: Norton.

Lott, B. (1994). *Women’s lives: Themes and variations in gender learning*. Belmont, CA: Brooks/Cole.

Malamuth, N. M., Addison, T., & Koss, M. (2000). Pornography and sexual aggression: Are there reliable effects and can we understand them? *Annual Review of Sex Research*, 11, 26–91.

Michael, R. T., Gagnon, J. H., Laumann, E. O., & Kolata, G. (1994). *Sex in America: A definitive survey*. New York, NY: Warner Books.

Paul, P. (2005). *Pornified: How pornography is damaging our lives, our relationships, and our families*. New York, NY: Owl Books.

Peter, J., & Valkenburg, P. M. (2010). Processes underlying the effects of adolescents’ use of sexually explicit Internet material: The role of perceived realism. *Communication Research*, 37, 375–399. doi:10.1177/0097000409350209

Rogala, C., & Tydén, T. (2003). Does pornography influence young women’s sexual behavior? *Women’s Health Issues*, 13, 39–43. doi:10.1016/S1049-3867(02)00174-3

Rubin, A. M., & Windahl, S. (1986). The uses and dependency model of mass communication. *Critical Studies in Mass Communication*, 3, 184–199. doi:10.1080/15295039609366643

Russell, D. E. H. (1993). Against pornography: The evidence of harm. Berkeley, CA: Russell Publications.

Sabina, C., Wolak, J., & Finkelhor, D. (2008). The nature and dynamics of Internet pornography exposure for youth. *CyberPsychology and Behavior*, 11, 691–693. doi:10.1089/cpb.2007.0179

Senn, C. (1993). Women’s multiple perspectives and experiences with pornography. *Psychology of Women Quarterly*, 17, 319–341. doi:10.1111/j.1471-6402.1993.tb00490.x

Shrum, L. J., & Lee, J. (2012). Multiple processes underlying cultivation effects: How cultivation works depends on the types of beliefs being cultivated. In M. Morgan, J. Shanahan, & N. Signorielli (Eds.), *Living with television now: Advances in cultivation theory and research* (pp. 147–167). New York, NY: Peter Lang.

Simon, W., & Gagnon, J. H. (1986). Sexual scripts: Permanence and change. *Archives of Sexual Behavior*, 15, 97–120. doi:10.1007/BF01542219

Stanger-Hall, K. F., & Hall, D. W. (2011). Abstinence-only education and teen pregnancy rates why we need comprehensive sex education in the U.S. *PLoS ONE*, 6, e24658. doi:10.1371/journal.pone.0024658

Sun, C., Bridges, A. J., Johnson, J. A., & Ezzell, M. B. (2016). Pornography and the male sexual script: An analysis of consumption and sexual relations. *Archives of Sexual Behavior*, 45, 983–994. doi:10.1007/s10508-014-0391-2

Sun, C., Bridges, A. J., Wosnitzer, R., Scharrer, E., & Liberman, R. (2008). A comparison of male and female directors in popular pornography: What happens when women are at the helm? *Psychology of Women Quarterly*, 32, 312–325. doi:10.1111/j.1471-6402.2008.00439.x

Tolman, D. L. (1994). Doing desire: Adolescent girls’ struggles for/with sexuality. *Gender and Society*, 8, 324–342. doi:10.1177/089124394008003003

Walsh, J. L., Ward, L. M., Caruthers, A., & Merriwether, A. (2011). Awkward or amazing: Gender and age trends in first intercourse experiences. *Psychology of Women Quarterly*, 35, 59–71. doi:10.1177/0361684310387781

Ward, L. M., Vandenbosch, L., & Eggermont, S. (2015). The impact of men’s magazines on adolescent boys’ objectification and courtship beliefs. *Journal of Adolescence*, 39, 49–58. doi:10.1016/j.jadolescence.2014.12.004

Weinberg, M. S., Williams, C. J., Kleiner, S., & Irizarry, Y. (2010). Pornography, normalization, and empowerment. *Archives of Sexual Behavior*, 39, 1389–1401. doi:10.1007/s10508-009-9592-5

Wiederman, M. W. (2005). The gendered nature of sexual scripts. *Family Journal*, 13, 496–502. doi:10.1177/1066480705278729

Wright, P. J. (2011). Mass media effects on youth sexual behavior: Assessing the claim for causality. *Communication Yearbook*, 35, 343–386.

Wright, P. J. (2012). A longitudinal analysis of US adults’ pornography exposure: Sexual socialization, selective exposure, and the moderating role of unhappiness. *Journal of Media Psychology*, 24, 67–76. doi:10.1027/1864-1105/a000063

Wright, P. J. (2013). A three-wave longitudinal analysis of preexisting beliefs, exposure to pornography, and attitude change. *Communication Reports*, 26, 13–25. doi:10.1080/08934215.2013.773053

Wright, P. J., & Randall, A. K. (2014). Pornography consumption, education, and support for same-sex marriage among adult U.S. males. *Communication Research*, 41, 665–689. doi:10.1177/0093650212471558

Wright, P. J., Tokunaga, R. S., & Kraus, A. (2016). A meta-analysis of pornography consumption and actual acts of sexual aggression in general population studies. *Journal of Communication*. doi:10.1111/jcom.12201