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### Is Pornography Really about “Making Hate to Women”? Pornography Users Hold More Gender Egalitarian Attitudes Than Nonusers in a Representative American Sample

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## Is Pornography *Really* about “Making Hate to Women”? Pornography Users Hold More Gender Egalitarian Attitudes Than Nonusers in a Representative American Sample

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*According to radical feminist theory, pornography serves to further the subordination of women by training its users, males and females alike, to view women as little more than sex objects over whom men should have complete control. Composite variables from the General Social Survey were used to test the hypothesis that pornography users would hold attitudes that were more supportive of gender nonegalitarianism than nonusers of pornography. Results did not support hypotheses derived from radical feminist theory. Pornography users held more egalitarian attitudes—toward women in positions of power, toward women working outside the home, and toward abortion—than nonusers of pornography. Further, pornography users and pornography nonusers did not differ significantly in their attitudes toward the traditional family and in their self-identification as feminist. The results of this study suggest that pornography use may not be associated with gender nonegalitarian attitudes in a manner that is consistent with radical feminist theory.*

Despite four decades of social scientific research on the topic of pornography, many of the effects of the consumption of sexually explicit material remain poorly understood. During this time, debate concerning the effects of exposure to pornography has been divisive. Some clinicians, researchers, and social commentators have adopted the view that pornography can improve sexual functioning by providing frank sexual information, reducing shame and anxiety associated with sex, and invigorating libido (Kaplan, 1984; Robinson, Manthei, Scheltema, Rich, & Koznar, 1999; Striar & Bartlik, 1999; Wilson, 1978). In contrast, others have cautioned that the use of such materials can be associated with risky sexual behavior, poor mental health and well-being, degraded relationship functioning, and, of course, sexual aggression (Bechara et al., 2003; Kingston, Malamuth, Fedoroff, & Marshall, 2009; Weaver et al., 2011).

Much of the contemporary debate concerning the potential harms of pornography use has historical roots in the writing and theorizing of radical feminists.

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According to this view, all (e.g., Brownmiller, 1975) or almost all (e.g., Diamond, 1985; Longino, 1980) sexually explicit materials present a distorted view of sexuality, one in which women are depicted as “anonymous, panting playthings, adult toys, dehumanized objects to be used, abused, broken and discarded” (Brownmiller, 1975, p. 394). Such characterizations of pornography are not limited to the most extreme sexual fare, as depictions of female nudes are still reductionist and deny female sexual agency (Brownmiller, 1975); “as the feminist critique of pornography asserts, at the core of contemporary pornography is contempt for women. One need not look at the most violent or sadomasochistic pornography to reach this conclusion” (Dines, Jensen, & Russo, 1997, p. 99). Those who adopt a radical feminist perspective assume that exposure to pornography denigrates women and increases acceptance of the view that women are inferior to men, and that it is appropriate for women to be subjugated, sexually and otherwise, by their male partner(s) (Reiss, 1986; see, for example, Brownmiller, 1975; Dworkin, 1985; Longino, 1980; MacKinnon, 1986). It is clear from this line of reasoning that pornography’s effects should be not limited to the sexual subjugation of women alone, as such theorists frequently state that “pornography’s subordinating practices [contribute to] structures and practices of inequality evident throughout society”

(Russo, 1998, p. 149). Such conceptualizations of pornography, both as a form of sexual discrimination in and of itself and as a source of discriminatory and subordinating attitudes and behaviors, have contributed to attempts to promote gender equality by censoring pornography in the United States (e.g., Dworkin & McKinnon, 1988) and the European Union (QMI Agency, 2013) and have successfully influenced the legal definition of obscenity in Canada (e.g., *R. v. Butler*, 1992; see also McCormack, 1993).

More germane to the current discussion, tenets of radical feminist theory have also informed a great deal of empirical research concerning the connection between pornography use and sexual objectification (Barak & Fisher, 1997; Jansma, Linz, Mulac, & Imrich, 1997; Kelley & Musialowski, 1986, as cited in Kelley, Dawson, & Musialowski, 1989; Linz, Donnerstein, & Penrod, 1988; McKenzie-Mohr & Zanna, 1990; Peter & Valkenburg, 2007, 2009; Wright & Tokunaga, 2013), and even more research concerning the impact of pornography use on sexual assault (Allen, D'Alessio, & Brezgel, 1995; Allen, Emmers, Gebhardt, & Giery, 1995; Hald, Malamuth, & Yuen, 2010; Malamuth, Hald, & Koss, 2012; Mundorf, D'Alessio, Allen, & Emmers-Sommer, 2007). These research literatures are related to the issue at focus, in that attitudes concerning gender inequality are assumed to be the product of the sexual objectification depicted in these materials (e.g., Brownmiller, 1975), and attitudes toward female subjugation are frequently theorized to both mediate and moderate the link between pornography use and sexual aggression (e.g., Malamuth et al., 2012). Unfortunately, studies concerning the connections between pornography use, sexual objectification, and sexual assault rarely assess attitudes toward gender equality specifically. Moreover, recent reviews of the literature concerning pornography use and sexual assault have identified important conceptual and methodological shortcomings of research conducted in this area and have concluded variously that pornography use either does not contribute to sexual violence (Ferguson & Hartley, 2009) or that it can but only within a limited portion of pornography users who are predisposed toward sexual aggression (Fisher, Kohut, Di Gioacchino, & Fedoroff, 2013; Kingston et al., 2009). With respect to such research, it remains unclear if pornography use affects attitudes toward gender inequality.

At present, comparatively little research has examined the impact of pornography use on the endorsement of gender inequality directly. Of the available research, a small number of studies have produced results that are consistent with radical feminist theory. For instance, laboratory research has shown that experimental exposure to pornography can decrease support for the women's liberation movement (Zillmann & Bryant, 1982, 1984). Furthermore, early survey research examining self-selected exposure to pornography has found

that men who consume more violent and degrading pornography hold more traditional nonegalitarian attitudes toward women (Garcia, 1986). More recently, research with adolescents has suggested that pornography use is associated with acceptance of less progressive gender roles (i.e., greater endorsement of rigid gender stereotypes) among women but not among men (Brown & L'Engle, 2009). Finally, a recent experiment conducted with a stratified random sample of 18- to 30-year-olds living in the second largest city of Denmark is also relevant. Before random assignment to an experimental task, which included exposure to nonviolent pornography, an assessment of baseline characteristics found that pornography use was associated with nonegalitarian attitudes as well as hostile sexism among male users of pornography but not among female users of pornography (Hald, Malamuth, & Lange, 2013).

In some respects, the baseline results presented by Hald and colleagues (2013) appear to be relatively conclusive: They employed a representative sample; they clearly assessed nonegalitarian attitudes; and the results were not limited to the use of a subset of explicitly violent or degrading material. At the same time, their sampling strategy was limited to relatively young adults and their sample size was relatively small ( $n = 200$ ). And even if we put those issues aside, their results stand alone: No other comparable studies demonstrate associations between more general (i.e., not specifically violent or degrading) pornography use and nonegalitarian attitudes; and most smaller-scale experimental and nonexperimental studies have not found such connections (Malamuth, Addison, & Koss, 2000). Specifically, experimental studies that have randomly assigned participants to view either pornography or nonsexual control stimuli have failed to find any impact of pornography exposure on participants' attitudes toward gender inequality (Barak & Fisher, 1997; Barak, Fisher, Belfry, & Lashambe, 1999; Fisher & Grenier, 1994; Linz et al., 1988; Padgett, Brislin-Slütz, & Neal, 1989). In one particularly telling study, researchers attempted to manipulate sexual objectification in an experimental setting by allowing participants to exert different degrees of control over the presentation of pornographic imagery (e.g., the option to zoom in on elements of the picture to encourage reductionism; Barak & Fisher, 1997). This study found no impact of sexual objectification on gender nonegalitarian attitudes. Similarly, studies that have involved survey research among both undergraduate students and nonstudent pornography users have also failed to establish reliable correlations between pornography use and nonegalitarian attitudes toward women or support for equal rights (Davies, 1997; Demaré, Briere, & Lips, 1988; Garos, Beggan, Kluck, & Easton, 2004; McKee, 2007; Padgett et al., 1989).

Taken together, it appears evidence that would substantiate radical feminist theory concerning pornography's role in maintaining structured inequality

between men and women remains inconsistent. However, some of the research that refutes this position has been conducted with relatively small samples of self-selected undergraduate students or nonstudent pornography users. For example, Padgett and colleagues (1989) employed a mere 66 participants in their experimental study of the effects of pornography exposure, which, while reasonably powered for large effect sizes, is grossly underpowered for the small effect sizes that are typically found in other studies involving pornography exposure (see Allen, D’Alessio, & Brezgel, 1995; Allen, Emmers, et al., 1995; Hald et al., 2010; Mundorf et al., 2007). As a point of comparison, in their meta-analysis of the experimental effects of pornography exposure on attitudes supportive of rape, Mundorf and colleagues (2007) reported an average effect size of  $r = .15$  (Cohen’s  $d = .30$ ) across 17 studies ( $N = 2,248$ ). Assuming a similar effect size for the experimental impact of pornography exposure on nonegalitarian attitudes, the power of the experimental study conducted by Padgett and colleagues (1989) was only 33% (using a one-tailed test at  $\alpha = .05$ ). While the experimental study found in Padgett and colleagues (1989) presents a particularly egregious example, several other studies with larger sample sizes are still arguably underpowered for research conducted in this domain. As the consequences of failing to detect anti-women effects of pornography may have serious social ramifications, even studies with 80% power—which is considered appropriate in other fields—are arguably underpowered for this work, as they still have a 20% chance of failing to detect the effects for which they are looking.

In addition, virtually all of the studies that have failed to find associations between pornography use and nonegalitarian attitudes have purposefully sampled from populations with restricted variability in the factors of interest. Undergraduate university students are known to have more egalitarian attitudes toward women than those who have not attended university (Thornton, Alwin, & Camburn, 1983), and the restricted range of available responses provided by undergraduate research participants may have attenuated associations between attitudes toward women and pornography use among such samples, potentially contributing to the null effects previously reported in the literature (e.g., Barak et al., 1999; Fisher & Grenier, 1994; Padgett et al., 1989). Similarly, studies that have tried to increase their generalizability by sampling consumers of pornography have made comparable mistakes by excluding nonusers from their samples (e.g., Davies, 1997; McKee, 2007; Padgett et al., 1989). Examining the relationship between increasing pornography use and gender nonegalitarian attitudes in this fashion reveals nothing about the most relevant contrast: those who do not consume pornography relative to those who do. If radical feminist claims hold true, nonconsumers of pornography should hold *more* egalitarian attitudes than consumers

of pornography, as they are not regularly inundated with the messages of inequality found in pornographic materials. As such, exclusion of nonpornography users from such research may weaken the association between pornography use and gender nonegalitarianism.

In short, the failure to find evidence that pornography use is associated with attitudes toward gender inequality among many studies may simply reflect the methodological shortcomings of research in this area, which has been typically underpowered and has employed sampling strategies that may have reduced the magnitude of the associations that investigators were trying to find. A more rigorous test of the relationship between pornography use and attitudes toward gender inequality requires a larger representative sample that is not chosen in such a way as to reduce the range of responses on the variables of interest.

In the face of inconsistent empirical evidence for their position, several contemporary feminist voices continue to assert the view that pornography trains men to devalue women. According to Gail Dines, “Porn is the most succinct and crisp deliverer of a woman-hating ideology. While we have other places that encode such an ideology, nowhere does it quite as well as porn, as this delivers messages to men’s brain via the penis—a very powerful method” (“So You Think You Know,” 2009, para. 25). If such claims have merit, we should expect to find clear evidence that pornography users report more gender nonegalitarian attitudes toward women than nonusers (Reiss, 1986). Further, because pornography is said to train men to be aggressors while simultaneously training women to accept their fate as victims (Dines et al., 1997; Leidholdt & Raymond, 1990), we should also expect to find evidence that pornography use is associated with nonegalitarian attitudes in both men and women.

The current study tested the view that pornography use should be associated with nonegalitarian attitudes within a large American sample by using the data collected for the General Social Survey (GSS; Smith, Marsden, Hout, & Kim, 2011), a long-running sociological survey of the American public funded by the Sociology Program of the National Science Foundation. The General Social Survey has employed random probability sampling to collect data every one to two years since its inception in 1973, capturing responses on a broad range of social issues and including variables that assess personal pornography use as well as attitudes that are relevant to gender equality. The use of this data set avoids the limitations of previous research by conducting high-powered tests on an appropriate sample, which consists of both pornography users and nonusers of pornography.

To this end, all variables present in the GSS data set that appeared to assess aspects of gender nonegalitarianism were reviewed for analysis. The first variable that we considered was feminist identification. If

pornography depicts women-hating ideology and contributes to structured gender inequality throughout society, then pornography users should be more likely to adopt such views and should be less likely to identify as feminists than nonusers, because feminists, regardless of their theoretical orientation, reject gender inequality. The GSS also contains questions that assess beliefs and attitudes that are relevant to the endorsement or rejection of various campaigns that feminist movements have waged against gender inequality—in particular, the right to political representation and economic independence, the promotion of reproductive autonomy, and the rejection of the “traditional” gendered division of work and care (for a historical overview that includes a detailed consideration of conflicts within feminist ideology, see Evans, 1997). For the purposes of this study, evidence of nonegalitarianism was operationalized as holding negative attitudes toward women in positions of power, women working outside the home, and women’s access to abortion, as well as holding more positive attitudes toward the traditional family, which were defined in the GSS as family arrangements in which men work and women raise children.

## Method

### Data Source

The data for this study were drawn from the GSS (Smith et al., 2011), a large-scale, random-probability, personal interview survey that has been conducted in the United States every one to two years since 1973. Since 1975, each residence in the United States has had an equal probability of being sampled, with adults within each household also having an equal probability of being interviewed. The interviews were typically conducted face-to-face, though phone interviews were employed when participants were unable to meet in person. In an effort to reduce participant fatigue while still including a large number of questions, the GSS has contained a set of core questions that were asked of everyone surveyed, but has also contained other questions that were asked of only a portion of participants or were asked only in certain years. Since 1973, the GSS has had a reasonable response rate, ranging from 82% in 1993 to 70% in 2000. The data used in this study were collected between 1975 and 2010.

### Participants

Across all of the survey years used in the current study, 10,946 American males and 14,101 American females responded to questions concerning pornography use in addition to questions concerning at least one of the following sets of measures: feminist identification; attitudes toward women in positions of power; attitudes

**Table 1.** *Demographic Characteristics of the Sample*

Category	Proportion (%)
Gender	
Female	56.30
Male	43.70
Ethnicity	
Caucasian	82.58
African American	13.29
Other	4.14
Marital status	
Married	53.94
Never married	19.97
Divorced	12.48
Widowed	10.13
Separated	3.45
Political view	
Moderate	35.94
Conservative	31.89
Liberal	24.56
Religion	
Protestant	60.58
Catholic	24.54
None	9.70
Other	5.18

toward women working outside the home; attitudes toward abortion; and attitudes toward the traditional family. Of the total available participants, most were married (53.94%;  $n = 13,511$ ), White (82.58%;  $n = 20,683$ ), female (56.30%;  $n = 14,101$ ), politically moderate (38.90%;  $n = 9,001$ ), Protestant (60.58%;  $n = 15,124$ ), and had a mean age of 45.37 ( $SD = 17.59$ ) years. Further demographic information can be found in Table 1. The actual number of participants used in each analysis differed for each dependent variable that was examined, as noted in the following section.

### Measures<sup>1</sup>

**Pornography use.** Pornography use was assessed by asking participants if they had viewed an X-rated film in the preceding year. Response categories were dichotomous (*Yes/No*). Across the entire sample of available participants, 22.82% ( $n = 5,715$ ) of participants indicated that they had viewed a pornographic movie within the past year. Recently published research using these data suggests that the prevalence of pornography use

<sup>1</sup>A rarely cited book by Ira Reiss (1986) presents similar analyses using some of the same data from the GSS. In this work, he presents five analyses that examine the associations between pornography use and attitudes toward women holding positions of power (three items), women working outside the home (one item), and women’s access to abortion (one item) using single-item criterion variables between the years 1973 and 1983 (p. 183). Our rationale and analyses were derived independently from this work, and while our conclusions are very similar our study extends his work by examining a broader range of constructs, with multi-item criterion variables where possible, over a larger span of time, using analyses that consider gender.

has increased slightly since in the 1970s, and individual-level analyses have indicated that pornography use within this data set is correlated with being younger, less religious, non-White, and holding more liberal attitudes toward sexuality within both men and women (Wright, 2013; Wright, Bae, & Funk, 2013).

In recent years, the GSS has included a frequency measure of online pornography use over the past 30 days. Unfortunately, this item has not been asked of participants who responded to items about nonegalitarian beliefs and attitudes, precluding its use in the current study. Surveys conducted in 2000 and 2002 asked a subset of participants to respond to both metrics of pornography use. Of the participants who indicated that they had *not viewed* an X-rated film in the previous year, only 6.89% ( $n = 21$ ) in 2000, and 7.14% ( $n = 10$ ) in 2002, indicated that they had accessed a pornographic Web site in the previous 30 days.<sup>2</sup>

**Feminist identification.** Feminist identification was assessed with a single item that asked participants, “Do you think of yourself as a feminist or not?” Response options included *Yes, a feminist*; *Don’t know*; and *No, not a feminist*. To clarify the interpretation, *Don’t know* responses were dropped from the analysis presented in this section, as only 46 participants selected this option.<sup>3</sup> Data were available only for survey year 1996 ( $n = 923$ ).

**Women holding positions of power.** Attitudes toward women holding positions of political power were assessed with three items: “Do you agree or disagree with this statement: Women should take care of running their homes and leave running the country up to men”; “If your party nominated a woman for president, would you vote for her if she were qualified for the job?”; and “Tell me if you agree or disagree with this statement: Most men are better suited emotionally for politics than are most women.” All items had three response options, either *Agree/Not sure/Disagree* or *Yes/Don’t know/No*. Responses to these scales were averaged, with reverse-coding where appropriate, to form an aggregate variable that could range from 1 (indicating a positive view toward women in politics) to 3 (indicating a negative view toward women in politics) ( $M = 1.49$ ;  $SD = 0.65$ ; Cronbach’s  $\alpha = .70$ ). Analyses concerning attitudes toward women holding positions of power were restricted to the survey years 1975, 1978, 1983, 1986, and 1988 through 1998 ( $n = 11,151$ ).

<sup>2</sup>For a comprehensive defense of the use of this measure in the Internet era, see Wright (2013).

<sup>3</sup>Supplementary analyses were also conducted using multiple linear regression, multinomial regression, and binary logistic regression (following arbitrary dichotomization of the variable) to determine whether omitting these cases altered the conclusions of the test. None of the results differed substantially from the analysis presented here.

**Working outside the home.** Attitudes toward women working outside the home were assessed with seven items using 5-point Likert scales that ranged from 1 (*Strongly agree*) to 5 (*Strongly disagree*). Example items included: “All in all, family life suffers when the woman has a full-time job”; “A woman and her family will all be happier if she goes out to work”; and “Both the husband and the wife should contribute to the household income.” Responses to these seven items were reverse-coded where appropriate, and averaged to create an aggregate variable that could range from 1 (indicating a positive attitude toward women working outside the home) to 5 (indicating a negative attitude toward women working outside the home) ( $M = 2.85$ ;  $SD = 0.70$ ; Cronbach’s  $\alpha = .70$ ). Analyses concerning attitudes toward women working outside the home were restricted to the survey years 1988, 1994, and 2002 ( $n = 1,279$ ).

**Abortion.** Attitudes toward abortion were assessed with three items. These items asked participants if they thought that it should be possible for a woman to obtain a legal abortion under different circumstances, including pregnancy as a result of rape, pregnancy when the woman is unmarried and does not want to marry, and abortion if the woman wants one for any reason. Response options included *Yes*, *I don’t know*, and *No*. Responses to these scales were averaged to create an aggregate variable that could range from 1 (indicating strong support for abortion) to 3 (indicating no support for abortion) ( $M = 1.90$ ;  $SD = 0.76$ ; Cronbach’s  $\alpha = .78$ ). Analyses concerning attitudes toward abortion were restricted to the survey years 1978, 1980, 1983, 1984, and 1987 through 2010 ( $n = 16,936$ ).

**Traditional family.** Attitudes toward the traditional family were investigated with 10 items that assessed the extent to which participants believed the institution of the traditional family either benefited or hindered its members. To this end, participants were first provided with the following definition of the traditional family: “In many married couples, women take the main responsibility for the care of the home and children, while men take the main responsibility for supporting the family financially.” Participants were first asked whether men, women, children, everyone, or no one benefited from this arrangement. They were then subsequently asked if the same five groups were hurt by this arrangement. Response options to these 10 items included *Yes*, *I don’t know*, and *No*. Responses to these 10 items were averaged, using reverse-coding where appropriate, to create an aggregate variable that could range from 1 (indicating a negative attitude toward the traditional family) to 3 (indicating a positive attitude toward the traditional family) ( $M = 2.3$ ;  $SD = 0.45$ ; Cronbach’s  $\alpha = .71$ ). Analyses concerning attitudes toward

the traditional family were restricted to the survey year 1996 ( $n = 630$ ).

**Data Analysis**

Because of the design of the GSS, not all participants were asked all of the variables that make up the outcomes of interest in this study. Consequently, it was not possible in this case to conduct a multivariate analysis of variance (MANOVA) to control for the inflated Type 1 error that occurs when multiple statistical tests are conducted. Instead, the current study employed the use of five separate analyses, with appropriate Bonferroni corrections.

First, the association between pornography use and feminist identification was assessed using a 2 (pornography use versus no pornography use)  $\times$  2 (male versus female) binary logistic regression that regressed pornography use, gender, and their interaction on self-identification as feminist. In addition to feminist identification, attitude toward the traditional family was also assessed in one survey year only. Consequently, this end point was examined with a 2 (pornography use versus no pornography use)  $\times$  2 (male versus female) analysis of variance (ANOVA).

Finally, the three remaining end points (e.g., attitudes toward women in positions of power, women working outside the home, and abortion) were made up of questions that were asked in more than one survey year. As traditional nonegalitarian attitudes have decreased in recent decades (Spence & Hahn, 1997; Thornton et al., 1983), end points with data gathered over multiple years of the survey were analyzed using separate 2 (pornography use versus no pornography use)  $\times$  2 (male versus female) analyses of covariance (ANCOVAs) that controlled for the year of the survey.

To correct for inflated Type 1 error we employed Bonferroni corrections ( $k = 5$ ,  $\alpha = .05$ ) to all of our analyses, which conservatively adjusted the significance threshold to  $p < .01$ . Each of the analyses described here was also conducted with both weighted (adjusting for the undersampling of adults living in multiple-adult residences) and unweighted samples. The conclusions reached from both sets of analyses were identical, so the unweighted results are presented for the sake of simplicity.

**Results**

The binary regression of feminist identification on pornography use, gender, and their interaction revealed a significant effect for gender,  $b = 0.89$ ,  $p < .05$ , but not for pornography use,  $b = 0.30$ , n.s., and no significant interaction between gender and pornography use,  $b = -0.13$ , n.s. In this sample, men were 2.43 times more likely to indicate that they were not feminists than

**Table 2.** Measures of Gender Nonegalitarianism by Previous Experience with Pornography and Gender

Measures	Pornography Users		Nonusers	
	Men	Women	Men	Women
Feminist identification <sup>a*</sup>	87.68	76.92	85.66	71.09
Women holding positions of power <sup>b††</sup>	1.40	1.32	1.51	1.52
Women working outside the home <sup>c*†</sup>	2.90	2.60	2.99	2.80
Abortion <sup>b†</sup>	1.74	1.77	1.90	1.95
Traditional family <sup>b</sup>	2.27	2.33	2.33	2.30

<sup>a</sup>Percentage of *No, not a feminist* responses.

<sup>b</sup>Means: scales ranged from 1 (*Egalitarian responses*) to 3 (*Nonegalitarian responses*).

<sup>c</sup>Means: scales ranged from 1 (*Egalitarian responses*) to 5 (*Nonegalitarian responses*).

<sup>†</sup>Significant gender difference,  $p < .05$ ; <sup>††</sup>Significant difference between pornography experience groups,  $p < .05$ ; <sup>†††</sup>Significant interaction between pornography and gender,  $p < .05$ .

women were. In contrast, pornography use was not related to identification as feminist (see Table 2).

The ANCOVA conducted on participants' attitudes toward women holding positions of power revealed a significant main effect for pornography use,  $F(1, 11146) = 110.31$ ,  $p < .05$ , partial  $\eta^2 = .01$ , and for year of the survey,  $F(1, 11146) = 468.80$ ,  $p < .05$ , partial  $\eta^2 = .04$ , but not for gender,  $F(1, 11146) = 6.64$ , n.s. However, the pornography main effects were qualified by a significant interaction between pornography use and gender,  $F(1, 11146) = 8.49$ ,  $p < .05$ , partial  $\eta^2 = .001$ . Tests of simple main effects within gender adjusting for survey year indicated that attitudes toward women holding positions of power were actually *more positive*,  $p < .001$ , Cohen's  $d = 0.18$ , among men who reported previous pornography use ( $M_{adj} = 1.40$ ,  $SE = 0.02$ ) than among men who did not ( $M_{adj} = 1.51$ ,  $SE = 0.01$ ). The effect of pornography use was even more pronounced among women,  $p < .001$ , Cohen's  $d = 0.31$ , where those who reported previous pornography use also reported more positive attitudes toward women in power ( $M_{adj} = 1.32$ ,  $SE = 0.02$ ) than those who did not ( $M_{adj} = 1.52$ ,  $SE = 0.01$ ).

Attitudes toward women working outside the home were analyzed with an ANCOVA, which found significant main effects for gender,  $F(1, 1274) = 32.16$ ,  $p < .05$ , partial  $\eta^2 = .01$ , and for pornography use  $F(1, 1274) = 16.92$ ,  $p < .05$ , partial  $\eta^2 = .03$ , but no significant effect for year of the survey,  $F(1, 1274) = 0.24$ , n.s., and no significant interaction between gender and pornography use,  $F(1, 1274) = 2.10$ , n.s. In this sample, female participants ( $M_{adj} = 2.69$ ,  $SE = 0.03$ ) held less negative attitudes toward women in the workplace than male participants ( $M_{adj} = 2.94$ ,  $SE = 0.03$ ). In contrast to radical feminist theory, those who had viewed pornography within the past year also held less negative attitudes

toward women in the workplace ( $M_{\text{adj}}=2.72$ ,  $SE=0.04$ ) than those who had not viewed pornography ( $M_{\text{adj}}=2.91$ ,  $SE=0.02$ ).

When attitudes toward abortion were subjected to ANCOVA, a significant main effect for pornography use was revealed,  $F(1, 16931)=240.79$ ,  $p<.05$ , partial  $\eta^2=.01$ , but no significant effects for gender,  $F(1, 923)=4.07$ , n.s., for survey year,  $F(1, 923)=0.17$ , n.s., or for the interaction between pornography use and gender,  $F(1, 923)=1.71$ , n.s. were found. Once again, those who had viewed a pornographic movie within the past year actually held less negative attitudes toward abortion ( $M_{\text{adj}}=1.73$ ,  $SE=0.01$ ) than those who had not viewed a pornographic movie ( $M_{\text{adj}}=1.95$ ,  $SE=0.01$ ).

When it came to the attitudes toward the traditional family, the ANOVA failed to produce a significant main effect for pornography use,  $F(1, 626)=0.04$ , n.s., or for gender,  $F(1, 626)=0.14$ , n.s., and there was no significant interaction between pornography use and gender,  $F(1, 626)=1.18$ , n.s. Within both men and women, attitudes toward the traditional family were generally positive and were similar across those who had viewed pornography within the previous year (men:  $M=2.27$ ,  $SE=0.05$ ; women:  $M=2.33$ ,  $SE=0.05$ ), and those who had not (men:  $M=2.33$ ,  $SE=0.03$ ; women:  $M=2.30$ ,  $SE=0.03$ ).

### Discussion

In contrast to radical feminist theory concerning the impact of pornography on gender inequality, the current study, using data collected by the General Social Survey, found no support for the proposition that pornography use is associated with holding attitudes supportive of gender nonegalitarianism. Of the five high-powered statistical tests conducted in this study, a total of three tests indicated that individuals who had viewed a pornographic film in the past year held *more* egalitarian attitudes than those who had not—a pattern of results that directly contradicts the predictions generated from radical feminist theory. Of the remaining two tests, neither was statistically significant. Taken together, the results of this study fail to support the view that pornography is an efficient deliverer of “women-hating ideology” (“So You Think You Know,” 2009).

Instead of demonstrating strong associations between pornography use and support of nonegalitarianism, if anything the current findings actually suggest weak associations in the opposite direction. Compared to nonusers, participants who reported viewing a pornographic film in the previous year also reported more positive attitudes toward women in positions of power, less negative attitudes toward women in the workforce, and less negative attitudes toward abortion—attitudinal differences that suggest many pornography users may be useful allies in the struggles that women face in obtaining public office, economic independence (and

perhaps equal pay), and reproductive autonomy and bodily integrity.

While unexpected from the perspective of radical feminist theory, these results are consistent with a small number of empirical studies that have also reported positive associations between pornography use and egalitarian attitudes. For example, the current results are similar to those reported by Baron (1990), who found that state-by-state circulation rates of soft-core pornography magazines in the United States were moderately correlated ( $r=.56$ ) with state measures of gender equality. One limitation of this work, pointed out by Baron himself, is that the state-level association between pornography accessibility and an index of gender equality cannot directly inform our understanding of the individual-level association between pornography consumption and personally held attitudes toward women. However, unlike Baron’s work, the current study demonstrated similar associations on an individual level; individuals who had consumed pornography within the past year held attitudes that were more supportive of egalitarianism than those who had not consumed pornography.

Similar results have also been reported by Padgett and colleagues (1989), who found that a small sample of male patrons of an adult movie theater held more positive attitudes toward women on an aggregate measure, which included items assessing gender egalitarian attitudes, than a sample of male university students, who as a whole were assumed to have less experience with pornography. The current study replicates and extends this finding, by using cleaner operationalizations of attitudes toward egalitarianism and employing a much larger and more generalizable sample that does not confound pornography nonuse with degree of education.

Consistent with the results concerning attitudes toward abortion specifically, Tokunaga, Wright, and McKinley (2014) recently reported that pornography use predicted later attitudes toward abortion in a nationally representative three-wave longitudinal data set. While this pattern of results is not easily explained by radical feminist theory, Tokunaga and colleagues (2014) suggest that pornography may promote attitudes toward abortion by activating scripts for sexual liberalism (e.g., acceptance of premarital and extramarital sex). Extending this argument, one reviewer of this article suggested pornography users may support abortion so that they can enjoy more recreational sex, free from the consequences imposed by child rearing. The authors caution against the wholesale endorsement of this view as the effects we found are small, and neither this study nor that of Tokunaga and colleagues (2014) found clear evidence for generally positive attitudes toward abortion among pornography users. Instead, the current study, for example, found that attitudes toward abortion were less negative among pornography users than nonusers, but the mean for this group remained on the negative side of “unsure.” Consequently, it does not appear



to be reasonable to argue that pornography promotes wide-scale support for abortion as an alternative method of birth control on such evidence alone.

Importantly, however, the current results are also at odds with those presented by Hald and colleagues (2013), who recently found that gender nonegalitarian attitudes as measured by the Attitudes Toward Women Scale (Spence, Helmreich, & Stapp, 1973) were correlated with frequency of pornography use among men but not among women. Before discussing the discrepancy in the results found with male participants, it is perhaps noteworthy to point out that neither study found evidence consistent with the view that female pornography users have more nonegalitarian attitudes than nonusers. At the very least, the view that pornography trains women to accept their subjugation is not supported by either study.

Explaining why Hald et al. (2013) found that men who used more pornography were less gender egalitarian while the results of the current study suggest the opposite is no easy task. One simple possibility is that differences between studies reflect cultural differences between Denmark and the United States. Although a systematic comparison of cultural differences between these countries may be enlightening, this explanation is not particularly satisfying, as no compelling rationale is immediately apparent to us. Another possible explanation lies in the different metrics of pornography use and attitudes toward women used by both studies. Arguably, the measures used by Hald et al. (2013) (i.e., Pornography Consumption Questionnaire and Attitudes Toward Women Scale) are more reliable measures of the relevant constructs than the measures used in the current study. However, this explanation offers few reasons to expect that pornography use, as measured in this study, should be associated with *more* positive attitudes toward women in positions of power, toward women in the workforce, and toward abortion, all of which would presumably be attenuated if the reliability was too low.

Perhaps a more compelling reason for the differences in the results lies in sampling differences between the two studies. While both studies solicited random samples from a larger population, and both had similar response rates, the GSS is a general sociological survey that covers a broad range of social issues, while the study by Hald and colleagues (2013) covered the more limited domain of pornography use. While specific details about the recruitment advertisements for Hald and colleagues' (2013) study were not published, for ethical reasons the researchers must have disclosed the nature of the study—which included experimental exposure to pornographic materials—before interested persons were asked to give consent to participate. It has long been known that individuals who volunteer for research involving exposure to sexual materials differ from those who do not on a number of dimensions (Saunders, Fisher,

Hewitt, & Clayton, 1985). Self-selection pressures were likely much stronger in Hald et al.'s (2013) study than the GSS study, which may have contributed to the differential recruitment of individuals who seek to avoid exposure to pornography (e.g., social conservatives, religious conservatives, radical feminists). Arguably, the samples obtained by the GSS are more likely to contain individuals who were both *less* likely to consume pornography as well as *more* likely to hold nonegalitarian attitudes (e.g., Southern Baptists) than the sample obtained by Hald and colleagues. Other things being equal, the inclusion of such individuals would influence the correlations between pornography use and gender egalitarianism in the current study in a positive, rather than negative, direction. Consequently, it appears possible that discrepancies in the types of people who volunteered for both studies may underlie some of the difference between the results.

A related sampling issue is that both studies differed considerably in the average age of participants; in Hald et al. (2013), the mean age of participants was  $M = 24.52$  ( $SD = 3.74$ ), while the mean age of the sample in the current study was 45.37 ( $SD = 17.59$ ). As age is known to be related to pornography use (Wright, 2013; Wright et al., 2013), and there are known cohort differences in attitudes toward gender equality (Spence & Hahn, 1997; Thornton et al., 1983), it is reasonable to ask if the difference in the mean age of the samples may explain different results between studies. Supplementary post hoc analyses were done to explore this possibility by including age as a moderator in our previous analyses. The results clearly implicated age as a relevant factor in these analyses, but the effects were not consistent across tests. While it is difficult to summarize the difference that age may have made between the studies, two things were made apparent by this diversion. First, where the associations existed, the strength of relationships between age and gender nonegalitarian attitudes (partial  $\eta^2$  values for main effects ranged from 0.02 to 0.04) were similar in magnitude to the relationships between pornography use and gender nonegalitarian attitudes (partial  $\eta^2 = 0.01$  to 0.03). Second, while we are not aware of any theoretical arguments that incorporate a consideration of age into radical feminist theorizing about pornography, we would intuit that age should serve to reinforce nonegalitarian attitudes, as older persons will have a longer history of exposure to the objectifying and woman-hating ideology found in pornography than younger persons. In no case was this apparent in our supplementary analyses; the inclusion of age either eliminated significant main effects for pornography or moderated them such that older pornography users were more egalitarian than would be expected from main effects for pornography use and age alone.

Putting discrepancies between studies aside for a moment, it is also important to interpret the current

findings in their proper context. First, it should be noted that these effects are relatively small, suggesting that, when other factors are controlled for (e.g., gender, survey year), pornography use is only weakly associated with less negative attitudes toward egalitarianism. Considering the large sample sizes involved in the analyses reported in this study, these small effects, while statistically reliable, may have little real-world meaning. It is also important to keep in mind that the design of this study was correlational and not experimental in nature, and consequently no cause-and-effect statements are warranted or implied. Indeed, it seems more likely that a common third variable may account for the association between pornography use and egalitarian attitudes toward women. For example, Baron (1990) previously suggested that cultural differences in the endorsement of free speech may explain the state-level association between pornography use and egalitarian attitudes. Although we could not determine if free-speech endorsement explained our effects with the current data set, we did run some additional supplementary post hoc analyses to determine whether participants' liberal versus conservative political dispositions offered a suitable explanation. These supplementary analyses found that while controlling for political disposition did reduce the magnitude of the associations between pornography use and egalitarian attitudes (partial  $\eta^2$  ranged from .007 to .009), it did not eliminate them altogether, as the main effects remained statistically significant at a  $p < .05$  level. These results are consistent with the view that recruitment characteristics partially account for our findings but by no means explain them entirely. Additional third variables (e.g., religious conservatism) remain to be thoroughly investigated.

### Limitations

It may not be a coincidence that the analyses concerning feminist identification and attitudes toward the traditional family were not statistically significant. Note that both analyses relied on data that were collected in a single year from comparatively few participants ( $n = 923$  and  $n = 630$ , respectively). As a consequence, these analyses may have been somewhat underpowered. To further complicate matters, neither analysis was a strong test of the association between pornography use and nonegalitarianism. For example, there are at least three feminist positions concerning pornography's appropriate role in society (McElroy, 1995): “pro-sex” feminism, which asserts that pornography can be beneficial to women; liberal feminism, which argues that free speech and women's rights to bodily autonomy need to be weighed against the possibility that pornography may promote gender-subordinating practices; and radical feminism, which adopts extreme arguments about pornography's effects on gender inequality. While we believe that the hypothesis concerning

feminist identification is still defensible—in that it tests hypotheses derived from radical feminist theory—the association is somewhat muddled, and potentially reduced, by what it means to identify as feminist.

The analysis involving attitudes toward the traditional family is also somewhat problematic, in that the term *traditional family* is semantically at odds with sexually liberal attitudes. While instructions in the General Social Survey clearly defined the traditional family as a specific work-care arrangement in heterosexual relationships, the expression may have nonetheless primed or activated liberal sexual attitudes among pornography users (Wright, 2013; Wright et al., 2013), reducing their support for traditional family—an effect that would be in conflict with their general support for gender inequality, if radical feminism was correct.

The results of the current study can also be reasonably criticized on methodological grounds, because the survey items used in these analyses were not originally designed to test this hypothesis. For example, the wording of the pornography use item, which asked participants if they had viewed an X-rated film in the past year, employed somewhat antiquated language that may not appropriately capture contemporary patterns of pornography use. We tried to prevent a similar charge from being leveled against the other variables used in this study by limiting our analyses to items that had a reasonably high degree of face validity and which could be, where possible, combined with other related items to create reliable multivariate indicators of the constructs of interest.

Unfortunately, at the time that these analyses were performed, only one item was available in the GSS that assessed pornography use that could be used to test this hypothesis. At the very least, this measure of pornography use accorded reasonably well with a frequency measure of online pornography use assessed in two samples in the early 2000s. While one-item dichotomous assessments of pornography use are far from ideal for reasons of reliability, again it is not clear to us why such an assessment would result in effects that are *contrary* to radical feminist theory. If there is a compelling reason to expect that people with an egalitarian disposition are more likely to report consuming X-rated films than other pornographic fare, or that X-rated films are more likely to disseminate pro-egalitarian messages than other pornographic media, then the generalizability of the current results should be circumscribed appropriately. While these possibilities seem unlikely to us, they remain empirical questions that cannot be answered without further study.

In our view, the fact that the GSS was not designed to test the hypothesis that pornography use is associated with anti-woman attitudes is as much a boon as it is a burden. Using the GSS data in this way undoubtedly reduced the effects of self-selection bias that are commonly found among other sexological surveys (see Saunders et al., 1985) and likely occurred in Hald and

colleagues' (2013) experiment. Further, because we had no involvement with the crafting of the survey items or the implementation of the interviews, our own research biases did not unduly influence the results.

### Conclusion

Taken together with the past inconsistencies in the research literature, and the differences in sample characteristics between the current study and that conducted by Hald et al. (2013), the current evidence, on balance, appears to indicate that pornography use may not be associated with nonegalitarian attitudes toward women in the manner implied by radical feminist theory. In light of this evidence, continued anti-pornography rhetoric proclaiming that "pornography is what the end of the world looks like" (Jensen, 2010, p. 105) appears unjustified.

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