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ORIGINAL PAPER

On the Link Between Benevolent Sexism and Orgasm Frequency in Heterosexual Women

Emily Ann Harris[1] · Matthew J. Hornsey[1] · Fiona Kate Barlow[2]

Abstract Previous research on subclinical orgasmic difficulties among women has focused on intrapsychic and interpersonal variables, but little attention has been paid to the more distal ideological factors that might indirectly constrain sexual pleasure. We hypothesized that women's endorsement of a benevolently sexist worldview would be negatively associated with orgasm frequency. Specifically, we predicted that benevolent sexism would be associated with increased perceptions of male sexual selfishness. This perception of men as interested in their own sexual pleasure would then predict decreased willingness to ask a partner for sexual pleasure, which in turn would be associated with less frequent orgasms. We found support for our model across two studies (Study 1: $N = 339$; Study 2: $N = 323$). We did not, however, find a direct effect of benevolent sexism on orgasm frequency. We discuss possible additional variables linking benevolent sexism with orgasm frequency, implications, and future directions.

Keywords Benevolent sexism · Orgasm · Sexual functioning · Gender beliefs

Introduction

Many women struggle to achieve orgasm as frequently as they would like, with population estimates of women's orgasm difficulties ranging from 3.1 to 28.6 % (Hayes, Bennett, Fairley, &

Dennerstein, 2006). Not only are orgasm difficulties potentially distressing (Öberg, Fugl-Meyer, & Fugl-Meyer, 2004), but more frequent orgasms have been shown to have a number of benefits, such as increased sexual and relationship satisfaction (e.g., Fugl-Meyer, Öberg, Lundberg, Lewin, & Fugl-Meyer, 2006; Haavio-Mannila & Kontula, 1997; Klapilová, Brody, Krejčová, Husárová, & Binter, 2015). It is, therefore, important to consider the factors that may account for differences in women's orgasm frequency.

Previous research has identified a number of relationship and lifestyle factors associated with women's orgasm ability, with a focus on clinical dysfunction (Althof et al., 2005; Birnbaum, 2003; Laan & Rellini, 2011; Laumann, Paik, & Rosen, 1999; McCabe & Delaney, 1992; McCabe & Giles, 2012). This research is essential for identifying the factors directly causing and maintaining women's orgasm dysfunction, and creating tailored interventions (Heiman, 2002). There is also some social-psychological research aiming to address "subclinical" orgasm difficulties in women—that is, women who do not have an orgasm dysfunction, but who are unable to orgasm as easily or consistently as they would like. For the most part, these predictors have focused on intrapsychic and interpersonal factors that are conceptually proximal to sexual behavior. For example, decreased sexual assertiveness (Haavio-Mannila & Kontula, 1997; Sanchez, Phelan, Moss-Racusin, & Good, 2012), sexual guilt (Nobre, 2009; Woo, Brotto, & Gorzalka, 2011), romantic attachment avoidance (van den Brink, Smeets, Hessen, & Woertman, 2015), and body dissatisfaction (Sanchez & Kiefer, 2007; Satinsky, Reece, Dennis, Sanders, & Bardzell, 2012) are all negatively associated with women's ability to orgasm.

In this article, however, we examine a more distal factor that might help shape and constrain women's orgasm frequency: their stereotypes and worldviews about gender and how women should be treated by men (operationalized here as benevolent sexism). There is relatively little research looking at the link

✉ Emily Ann Harris
emily.harris@uqconnect.edu.au

[1] School of Psychology, The University of Queensland, Brisbane, QLD 4072, Australia

[2] School of Applied Psychology and Menzies Health Institute Queensland, Griffith University, Brisbane, QLD, Australia

between broad ideologies and specific sexual behaviors, but it is easy to make an intuitive case for such a link. First, it can be argued that ideologies provide the backdrop against which more proximal variables—such as sexual assertiveness—are developed and framed. Second, because the sexual domain is one where direct social comparisons are not readily available—and for which personal experience may be limited to a few sexual partners—women may be particularly likely to rely on their pre-existing attitudes about gender and gender roles as a template to guide their behavior (for commentary, see Daniluk, 1998). Below, we define our key terms and review the existing literature before introducing a model drawing a potential link between benevolent sexism and orgasm frequency in women.

Benevolent Sexism

There are two distinct forms of sexism—hostile and benevolent sexism—which together are captured by the Ambivalent Sexism Inventory (Glick & Fiske, 1996). Hostile sexism describes an overt dislike of women. Benevolent sexism, on the other hand, comprises attitudes that are seemingly complimentary toward women, (e.g., "women have a quality of purity that few men possess"), and also afford women special treatment from men (e.g., "women should be cherished and protected by men"). However, this set of seemingly positive attitudes not only suggest that women should be looked after by men, but also that women need to be looked after by men. Benevolent sexism assumes female passivity and romanticizes the belief that women should be reliant on men. In this way, benevolent sexism is argued to be a form of legitimizing myth, whereby prejudicial attitudes toward women are justified through the guise of care and protection (Barreto & Ellemers, 2005; Becker & Wright, 2011; Glick & Fiske, 1996; Kilianski & Rudman, 1998).

Women are more likely to endorse benevolent sexism than hostile sexism (Kilianski & Rudman, 1998), and typically express similar levels of benevolent sexism to men (Glick & Fiske, 1996; Glick et al., 2000). Interestingly, in countries with greater gender inequality, women report higher levels of benevolent sexism compared to men (Glick et al., 2000). Furthermore, women who endorse benevolent sexism are less likely to be a victim of intimate partner violence (Sakalli, 2001). These findings suggest that adopting benevolent sexism may act as a protective ideology, such that expressing acquiescence to male dominance makes women less likely to be a target of male aggression (Glick et al., 2000; Rudman & Glick, 2008).

Although this may be functional, there is evidence that endorsing benevolently sexist attitudes carries a cost for women. For example, women who endorse benevolent sexism show lower personal and career ambition (Fernández, Castro, Otero, Foltz, & Lorenzo, 2006) and increased hostile sexism over time (Sibley, Overall, & Duckitt, 2007). Furthermore, women who are exposed to benevolent sexism experience higher levels of body shame and body surveillance (Calogero & Jost, 2011) and are more likely to de-emphasize their task-related and academic competence (Barreto, Ellemers, Piebinga, & Moya, 2010). Thus, benevolent sexism may have damaging effects on women's sense of competence and self-esteem by limiting what it means to be a "good woman" (Dardenne, Dumont, & Bollier, 2007; Glick, Diebold, Bailey-Werner, & Zhu, 1997; Glick & Fiske, 1996)

The Link Between Women's Benevolent Sexism and Sexual Attitudes and Behaviors

In this article, we argue that benevolent sexism might also be implicated in sexual attitudes and behaviors that negatively influence orgasm frequency. First, we hypothesize that women's benevolent sexism will be associated with an increased perception of men as sexually selfish. This first hypothesis is founded on a theoretical extrapolation of ambivalent sexism theory. A core assumption within the benevolent sexist worldview is that women should be placed on a pedestal of virtue above men, and that they are more moral, culturally refined, and more pure than men (Glick & Fiske, 1996). The flipside of this belief is that men are less moral, refined, and pure compared to women: where women are heavenly and uncorrupted, men are earthly and flawed. One implication of such a belief might be that men are driven by their sexual urges; that they are more carnal than women and more driven by the "pleasure principle."

Two previous studies provide some tentative evidence for an association between benevolent sexism and the belief that men are more driven by their personal sexual needs than are women. Durán, Moya, and Megías (2011) found that after reading a hypothetical scenario in which a husband insists on having sex with his wife, participants high in benevolent sexism were more likely to state that sex was the husband's "right" and the wife's "duty." This study also compared ratings of the husband when he was depicted as either a benevolently sexist husband or his ideology was not described in the hypothetical scenario. The benevolently sexist husband was rated as more justified in demanding sex from his wife than the non-benevolently sexist husband. It was argued that when a man is seen to have cared for and protected his wife in other domains, he is more likely to be seen to deserve sexual favors from her.

A more recent study found that the more women were exposed to benevolent sexism in their daily lives, the more they reported having sex for relational reasons, rather than for their own pleasure (Fitz & Zucker, 2015; see also Albarracin & Plambeck, 2010). This in turn predicted a decreased likelihood of women using condoms. Together, these findings suggest that women who espouse benevolently sexist beliefs feel that men's sexual needs are of primary importance, and women's sexual needs are secondary.

On face value, the perception that men are selfish might seem inconsistent with the role prescription—common among those high in benevolent sexism—that men should sacrifice themselves in order to protect women. However, while benevolent sexism

encourages men to care for and protect women who adopt a traditional role, such benevolence is domain-specific. Men are expected to provide physical and financial security for women (Chen, Fiske, & Lee, 2009; Glick & Fiske, 1996; Sibley & Overall, 2011; Viki, Abrams, & Hutchison, 2003); however, there is nothing in the theorizing (or the scale) that suggests this chivalry should extend to the sexual domain. Indeed, the notion that women would expect or display sexual agency is highly inconsistent with the cluster of values and attitudes that comprise the benevolent sexist worldview. For example, Viki et al. (2003) found that benevolent sexism was significantly positively correlated with a measure of "paternalistic chivalry," which includes statements such as "A man should make the first move to have sex" and "It is not right for a woman to kiss a man first."

Furthermore, previous studies identified a link between women's benevolent sexism and exposure to erotica in which a man sexually dominates his female partner, whipping, spanking, and tying her up (Harris, Thai, & Barlow, 2016). After reading male-dominance erotica, women expressed significantly higher benevolent sexism compared to men (Harris et al., 2016), and were especially likely to endorse benevolent sexism if they rated erotica in which a man dominates a woman as "romantic" (Altenburger, Carotta, Bonomi, & Snyder, 2016). Thus, these studies suggest that a benevolently sexist worldview is associated with attitudes that limit women's sexual expression and endorse men's sexual dominance.

Second, we hypothesize that women who believe that men are sexually selfish will be less likely to ask their partner to give them sexual pleasure. This link is intuitive: a request for pleasure may be considered inappropriate (and potentially pointless) if men are expected to ignore their partner's sexual needs.

Finally, we predict that women's decreased willingness to ask for sexual pleasure will lead to decreased orgasm frequency. Previous research provides strong evidence for a link between sexual communication and orgasm ability (e.g., Coffelt & Hess, 2014; Larson, Anderson, Holman, & Niemann, 1998; Litzinger & Gordon, 2005; Mark & Jozkowski, 2013; Rehman, Rellini, & Fallis, 2011). For example, sexually assertive women have been shown to experience more frequent and consistent orgasms per sexual encounter and greater sexual desire compared to non-sexually assertive women (Hurlbert, 1991). Furthermore, women who report discomfort when talking about sex, and in particular, talking about clitoral stimulation, were significantly more likely to experience anorgasmia (i.e., inability to orgasm) (Kelly, Strassberg, & Turner, 2004). Thus, we suggest that if women are unwilling to ask their partner for pleasure, their likelihood of having an orgasm will be significantly diminished.

The Present Studies

We propose a model linking women's worldviews about the place of women relative to men (benevolent sexism) to their orgasm frequency. We predict that women who are high in benevolent

sexism may be more likely to believe that men are more focused on their own pleasure than their partner's pleasure. Through this, women may be less likely to ask their partner to pleasure them, which in turn leads to fewer orgasms.

The first study we present is a secondary data analysis of an existing dataset, in which we were able to test part of the model (benevolent sexism → perceived male sexual selfishness → orgasm frequency). The second study tested the complete model (benevolent sexism → perceived male sexual selfishness → willingness to ask for pleasure → orgasm frequency).

Study 1

Method

Participants

Data for Study 1 were taken from a larger survey (Barlow, 2016).[1] For the purposes of the current study, only female participants in heterosexual relationships ($N = 339$) were included in the present analysis. Participants were recruited from social networking sites (using a snowballing technique). Participants' ages ranged from 18 to 64 years ($M = 28.09$, $SD = 8.39$), and their relationship lengths ranged from 0 to 39 years ($M = 5.12$, $SD = 5.85$). The majority of participants identified as Australian (84.4 %).

Procedure

Participants were informed that the study would ask sensitive questions regarding their personal sexual history, political attitudes, and sexual attitudes. After providing their consent, and confirming that they were over the age of 18, participants were asked a number of demographic questions, followed by measures of political orientation, racism, social dominance orientation, and questions relating to sexual history and current sexual practice. The order of the questionnaire remained constant between participants. At the end of the survey, participants were debriefed and thanked for their time. Below, we report only the measures relevant to the current study.

Measures

Hostile and Benevolent Sexism Because this was part of a larger questionnaire, only four items were selected from the original 22-item Ambivalent Sexism inventory to measure hostile and benevolent sexism. The two items measuring benevolent sexism were "Women have a quality of purity that

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[1] The full survey measured men and women's sexual attitudes, sexual history, and social attitudes, $N = 986$. Additional information regarding the full survey can be provided by the authors upon request.

few men possess" and "Women need to be protected by men," $r(335) = .37, p < .001$. The two items measuring hostile sexism were: "Feminists want women to have more power than men" and "Women often seek special favors under the guise of asking for 'equality,'" $r(335) = .58, p < .001$. Response options varied from $1 = Strongly\ Disagree$ to $7 = Strongly\ Agree$. Due to the typically strong correlation between hostile and benevolent sexism (Glick & Fiske, 1996; Glick et al., 2000), hostile sexism was measured so that it could be statistically controlled for in subsequent analyses.

Perceived Male Sexual Selfishness   We created two novel items to assess the belief that men are selfish in bed: "During sex, men only care about their own pleasure" and "Men care more about 'getting off' than whether or not their partner has an orgasm," $r(333) = .79, p < .001$. Response options varied from $1 = Strongly\ Disagree$ to $7 = Strongly\ Agree$.

Orgasm Frequency   Three items from Costa and Brody (2007) were modified to measure women's orgasm frequency during penetrative sex, oral sex, and manual stimulation. Items included: "How often during penetrative sex do you orgasm?," "How often when receiving oral sex do you orgasm?," and "How often when receiving manual stimulation do you orgasm?" ($\alpha = .63$). Response options varied from $1 = Never$ to $7 = Always$.

Results and Discussion

Descriptive Statistics

Means, SDs, and inter-correlations for all measures are shown in Table 1.[2] Participants' mean levels of hostile sexism were slightly higher compared to mean levels of benevolent sexism ($M_{HS} = 3.12, SD_{HS} = 1.49; M_{BS} = 2.66, SD_{BS} = 1.26; t(338) = 5.88, p < .001$), which is not typical (Glick & Fiske, 1996), but is likely due to the use of shortened two-item scales. Mean responses to "perceived male sexual selfishness" were below the midpoint ($M = 2.28$), suggesting low overall levels of perceived selfishness; however, there was reasonable variation in these scores ($SD = 1.15$). Overall, when considering average orgasmability through manual, oral, and penetrative sex, women reported experiencing orgasm approximately half the time ($M = 4.34, SD = 1.62$).

Main Analyses

A mediation analysis was conducted to test the hypothesis that women's benevolent sexism predicts orgasm frequency indirectly, through the belief that men are focused on their own sexual pleasure (see Table 2). As is traditional when examining the pre-

dictive power of benevolent sexism, hostile sexism was entered as a covariate.

Using a bootstrapping approach, we estimated the indirect effect of benevolent sexism on orgasm frequency through "perceived male sexual selfishness." Results based on 10,000 bootstrapped samples indicated that, consistent with hypotheses, there was a significant indirect effect of benevolent sexism on orgasm frequency through "perceived male sexual selfishness" ($\beta = -.11, SE = .03$), 95 % CI [−.19, −.05]. Women's benevolent sexism significantly predicted perceived male sexual selfishness ($\beta = .37, p < .001$), such that the more women endorsed benevolent sexism, the more likely they were to perceive men as sexually selfish. Perceived male sexual selfishness was, in turn, significantly related to women's orgasm frequency ($\beta = -.29, p < .001$), such that the more women perceived men as sexually selfish, the fewer orgasms they experienced. Note, however, that there was no significant bivariate correlation between benevolent sexism and orgasm frequency, $r(337) = -.01$.

Study 1 provided initial support for an indirect relationship between benevolent sexism and orgasm frequency, whereby benevolent sexism was not directly related to orgasm frequency, but it was indirectly related to fewer orgasms through increased likelihood of perceiving men as sexually selfish.

Study 2

In Study 2, we aimed to (1) replicate the findings from Study 1 using the complete 22-item Ambivalent Sexism Inventory to measure hostile and benevolent sexism, and (2) test an expanded model including women's willingness to ask her partner for pleasure as a predictor of orgasm frequency. We hypothesized that women who believe that men are focused on their own sexual satisfaction would be less willing to ask their partner for pleasure, and as a result, would experience fewer orgasms.

Method

Participants

Participants from the U.S. were recruited using the online survey platform Amazon Mechanical Turk ($N = 1,054$) (Chandler & Shapiro, 2016). MTurk has been shown to produce results comparable to studies conducted in laboratory settings, with the benefit of a more demographically diverse sample (Buhrmester, Kwang, & Gosling, 2011; Goodman, Cryder, & Cheema, 2013). However, one potential risk associated with using MTurk is decreased participant engagement (Goodman et al., 2013). In order to address this problem, two items were included as attention checks that asked participants to select a specific response. Participants who did not select the correct response for at least one of the items were excluded from analyses ($n = 50$). A further 23 participants were excluded because they dropped out after

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[2] In both Study 1 and 2, each variable had >5 % missing data; hence, series mean substitution was used.

**Table 1** Means, SDs, and inter-correlations among variables in Study 1

Variable	M	SD	2.	3.	4.
1. Benevolent sexism (1–7)	2.66	1.26	.35***	−.01	.47***
2. Perceived male sexual selfishness (1–7)	2.28	1.15		−.26***	.14*
3. Orgasm frequency (1–7)	4.34	1.62			−.01
4. Hostile sexism (1–7)	3.12	1.49			

* $p < .05$

*** $p < .001$

Table 2 Summary of hierarchical multiple regression analysis predicting orgasm frequency in Study 1

	B	SEB	β	t	R^2	ΔR^2
Step 1						
Hostile sexism	−.01	.07	−.01	−.14	.000	
Benevolent sexism	−.01	.08	−.01	−.13		
Step 2						
Hostile sexism	−.02	.07	−.02	−.30	.074	.074***
Benevolent sexism	.13	.08	.10	1.57		
Perceived male sexual selfishness	−.41	.08	−.29	−5.16***		

*** $p < .001$

Table 3 Means, SDs, and inter-correlations among variables in Study 2

Variable	M	SD	2.	3.	4.	5.	6.
1. Benevolent sexism (1–7)	3.64	1.20	.18***	−.09	−.07	.48***	−.19***
2. Perceived male sexual selfishness (1–7)	2.86	1.40		−.27***	−.12*	.05	.03
3. Willingness to ask for pleasure (1–5)	3.37	1.15			.38***	−.10	.16*
4. Orgasm frequency (1–10)	4.76	2.41				−.02	.66***
5. Hostile sexism (1–7)	3.06	1.26					−.06
6. Masturbation frequency (1–10)	3.31	2.05					

* $p < .05$

*** $p \leq .001$
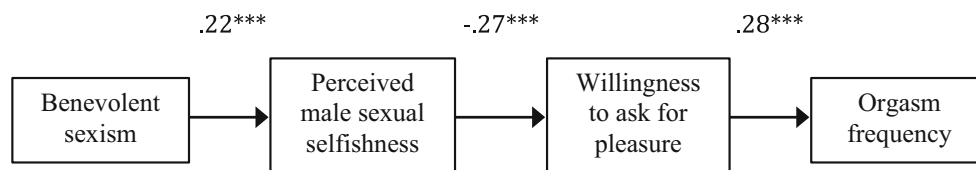
Fig. 1 Path analysis from Study 2. Hostile sexism and masturbation frequency were included as covariates in the model. *** $p < .001$

providing their demographic information and a further two participants were excluded because they were under the age of 18. As in Study 1, we selected only heterosexual women in relationships for the present analysis (final $N = 323$). Participants' ages ranged from 19 to 66 years ($M = 36.10$, $SD = 10.71$), and their relationship lengths ranged from 0 to 45 years ($M = 10.62$, $SD = 9.28$).

Procedure

Study 2 was conducted using the same procedure as Study 1; however, the content of the survey differed such that only questions relating to participants' sexual history, sexual attitudes and behaviors, and sexist attitudes were included. As in Study 1, at the end of the survey, participants were debriefed and thanked for their time. The survey took approximately 15 min to complete, and participants were reimbursed US$1 for their time.

Measures

Hostile and Benevolent Sexism The 22-item Ambivalent Sexism Inventory was measured to assess hostile and benevolent sexism (see Study 1 for example items). Eleven items measuring hostile sexism were combined to form a reliable scale ($\alpha = .93$), as were the remaining 11 items measuring benevolent sexism ($\alpha = .90$).

Perceived Male Sexual Selfishness The same two items from Study 1 were used to measure "perceived male sexual selfishness," $r(320) = .87, p < .001$.

Willingness to Ask for Pleasure Drawing from the Hurlbert Index of Sexual Assertiveness (Hurlbert, 1991), we used a single-item measure to assess women's willingness to ask her partner for sexual pleasure: "Do you tell your current sexual partner how to pleasure you?" Responses options varied from 1 = *Never* to 5 = *Always*.

Orgasm Frequency In order to assess general orgasm frequency, participants were presented with the single item: "How many orgasms do you have per week, on average?" Responses options varied from 1 = *None* to 10 = *More than seven*.

Masturbation Frequency In order to statistically control for differences in orgasm frequency as a function of masturbation frequency, we also asked participants: "How many times a week do you masturbate, on average?" Response options were the same as those used for the measure of orgasm frequency.

Results and Discussion

Descriptive Statistics

Means, SDs, and inter-correlations for all measures ($N = 323$) are shown in Table 3. Women's average levels of benevolent sexism were slightly higher compared to their levels of hostile sexism ($M_{HS} = 3.06, SD_{HS} = 1.26; M_{BS} = 3.64, SD_{BS} = 1.20; t(322) =$

8.41, $p < .001$), consistent with previous findings (Glick & Fiske, 1996). Women reported experiencing approximately three orgasms per week based on $M = 4.76, SD = 2.41$.

Main Analysis

A path analysis was conducted using AMOS 22.0. Benevolent sexism was included as the exogenous variable that predicted "perceived male sexual selfishness," which in turn predicted "willingness to ask for pleasure," which finally predicted orgasm frequency (see Fig. 1). Hostile sexism and masturbation frequency were included as control variables. The model was assessed for goodness of fit using the chi-squared test, chi-squared/degrees of freedom ratio, the comparative fit index (CFI), the root mean square error of approximation (RMSEA), and the standardized root-mean-square residual (SRMR). According to Hu and Bentler (1995), indications of a model with a satisfactory fit include a non-significant χ^2, or a χ^2/df ratio ≤ 3, a CFI $\geq .95$, and values of RMSEA less than .06 and SRMR less than .08. All reported effect sizes have been standardized.

The full model provided adequate fit to the data, $\chi^2(3, 323) = 7.16, p = .067, \chi^2/df = 2.39$; CFI $= .99$; RMSEA $= .07$; SRMR $= .02$. All proposed paths were significant, $ps < .001$ (see Fig. 1). Consistent with hypotheses, the indirect effect of benevolent sexism on orgasm frequency, mediated by "perceived male sexual selfishness" and "willingness to ask for pleasure," was significant ($\beta = -.02, SE = .01$), 95 % CI [$-.04, -.01$]. Since no direct path linking benevolent sexism and orgasm frequency was modeled, the total effect and the indirect effect were the same.

We then tested the model including a direct effect of benevolent sexism on orgasm frequency. Again, consistent with hypotheses, when a direct effect was modeled, the total effect became non-significant, ($\beta = .05, SE = .05$), 95 % CI [$-.04, .15$], which is likely due to a positive but non-significant direct effect ($\beta = .07, SE = .05$), 95 % CI [$-.01, .16$]. This positive direct effect suggests the presence of a suppression pathway, discussed further below.

We tested an alternative model in which the order of the mediators was switched, such that benevolent sexism predicted willingness to ask for pleasure, which predicted perceptions of male sexual selfishness, which then predicted orgasm frequency. However, this model did not meet the threshold for acceptable model fit, $\chi^2(3, 323) = 53.39, p < .001, \chi^2/df = 17.80$; CFI $= .86$; RMSEA $= .28$; SRMR $= .06$, and was therefore rejected.

We conclude that the model presented in Fig. 1 was a good fit for the data. Specifically, benevolent sexism was linked to higher beliefs that men are selfish in bed, and through this was associated with assertiveness about how to be pleasured and fewer orgasms. As in Study 1, however, the significant pathway was indirect: the overall relationship between benevolent sexism and orgasm frequency was non-significant.

General Discussion

In order to address how women's social attitudes may play a role in their sexual functioning, we tested the effect of women's benevolent sexism on orgasm frequency. We provide evidence for a model of women's benevolent sexism as an indirect predictor of women's orgasm via two pathways. First, we showed that women high in benevolent sexism were more likely to believe that men are sexually selfish; this effect was demonstrated across two independent samples from two different countries. Second, in Study 2, we showed that perceived male sexual selfishness predicted a significantly lower willingness to ask a partner for sexual pleasure, which in turn predicted lower orgasm frequency. The present study therefore furthers our understanding of how broad ideological factors such as benevolent sexism may (indirectly) impact women's orgasm functioning.

Of course, our proposed model was based on cross-sectional data and so causality cannot be established. Alternative directions in our model cannot be ruled out; however, they seem less plausible. The belief that men are sexually selfish is unlikely to precede benevolent sexism, since benevolent sexism represents a broad ideological construct, and as such is likely to shape more specific attitudes surrounding sex rather than the other way around. With regard to the second proposed link in our model, it is possible that women who do not ask their partner for pleasure believe that men are sexually selfish because they have not explicitly asked for sexual attention. However, this alternative causal pathway did not find support in the data. Finally, while asking for pleasure is the logical antecedent to achieving orgasm, we acknowledge that this may be somewhat bi-directional, whereby women who find it difficult to experience orgasms are less likely to ask for sexual pleasure. Future research should test this possibility using longitudinal data.

Interestingly, despite an indirect pathway that implied higher benevolent sexism should lead to lower orgasm frequency overall, we did not find a direct effect of benevolent sexism on orgasm frequency. Instead, we found that after controlling for the indirect effects in our final model, benevolent sexism had a positive but non-significant effect on orgasm frequency. This suggests that there may be an untested pathway through which benevolent sexism links positively with orgasm frequency, and that this variable is suppressing the negative pathway identified in our data. One possibility is that women high in benevolent sexism have more masculine partners, consistent with their preferences for traditional gender roles (Backus & Mahalik, 2011). If this is the case, they may experience more frequent orgasms, as past research suggests that women find it easier to orgasm with masculine partners (Puts, Welling, Burriss, & Dawood, 2012). A second possibility is that women high in benevolent sexism may have sex more often with their partner because they feel it is their duty (Durán et al., 2011), and as a consequence may experience more orgasms. Future

research could test these possibilities by assessing partner masculinity and sexual frequency.

A limitation of Study 2 was the use of a general measure of orgasm frequency. We did not specify whether orgasms were due to partnered sex or masturbation, thus adding noisy variance to our data. However, since this limitation would have made finding effects more difficult, it is not necessarily a threat to our conclusions. Second, it is important to note the use of a single-item measure of "willingness to ask for pleasure." We were interested specifically in how women's belief that perceived male sexual selfishness would predict their willingness to ask their partner to pleasure them; however, it would be interesting to test whether a broader measure of women's sexual assertiveness would also fit this model. It seems plausible that the more women believe men are only interested in their own sexual pleasure, the less sexually assertive they would be in general (e.g., they might be less likely to initiate sex or reject unwanted sex) (Morokoff et al., 1997).

Future research should extend the present work by testing non-Western samples. The effect sizes in the current study were weak to moderate in size, suggesting modest but statistically reliable effects in Western samples. However, these effects may be even greater in more sexually conservative cultures. Woo et al. (2011) found that East Asian women reported lower sexual desire compared to Caucasian women, and this effect was explained by increased sexual guilt among East Asian women. Thus, the indirect effects of benevolent sexism on orgasm frequency may be even stronger among more sexually conservative cultures, where women who endorse traditional gender roles may be particularly likely to perceive the bedroom as a man's domain, and hence be less likely to express their own sexual desires. Finally, future research may focus on the role of women's benevolent sexism in their likelihood of faking orgasm. Women who endorse traditional gender roles may be more likely to fake orgasm because they may believe their partner does not care about their orgasm, or they may place a lower value on women's orgasm relative to non-traditional women (Cooper, Fenigstein, & Fauber, 2014). Faking orgasm may be an important indicator of women's ability to orgasm, as well as her desire to reach orgasm, yet we have a limited understanding of the psychological antecedents of faking orgasm.

In conclusion, the present study suggests that our ideas about gender can shape specific sexual attitudes and behaviors. At present, we do not have a good understanding of how our ideologies may form a basis for how we think about sex, and what we perceive to be sexually desirable, undesirable, appropriate, or inappropriate. It is therefore important for future research to expand its scope in order to investigate how ideologies function to constrain or enhance our sexual experience.

of Queensland Human Ethics Committee, the Australian National Statement on Ethical Conduct in Human Research, and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

Informed Consent Informed consent was obtained from all individual participants included in the study.

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Fifty Shades Flipped: Effects of Reading Erotica Depicting a Sexually Dominant Woman Compared to a Sexually Dominant Man

Emily Ann Harris, Michael Thai & Fiona Kate Barlow

Fifty Shades Flipped: Effects of Reading Erotica Depicting a Sexually Dominant Woman Compared to a Sexually Dominant Man

Emily Ann Harris and Michael Thai
School of Psychology, University of Queensland

Fiona Kate Barlow
School of Applied Psychology, Griffith University

*The present study examined the effects of reading submission- and dominance-themed erotica on attitudes toward women and rape, ideal partner preferences, and subjective sexual arousal. Heterosexual male (*n = 241*) and female (*n = 240*) participants read one of three erotic stories depicting male dominance, female dominance, or no dominance, or a fourth nonerotic control story. First, we found that after reading about a sexually dominant man, women reported increased benevolent sexism compared to men, and men reported increased rape myth acceptance compared to women. Second, men and women showed a similar level of preference for partner dominance after reading about a sexually dominant woman. This was in contrast to the typical pattern revealed in all other conditions, whereby women were more likely to favor dominant partners relative to men. Finally, we found no evidence to support the hypothesis that the story describing male dominance would be the most arousing. Rather, all three erotic stories were equally sexually arousing compared to the control condition, and men and women did not differ in the extent to which the erotic stories aroused them. Theoretical and practical implications are discussed.*

Erotic stories in which men sexually dominate women have long been popular, from the anonymously penned *The Lustful Turk* of the 19th century, to the 20th century novel *The Story of O* by Pauline Réage. More recently, the *Fifty Shades of Grey* trilogy by E. L. James has swept the market. This latter series has enjoyed spectacular success, with the first novel becoming the fastest-selling book of all time and the trilogy selling more than 100 million copies (Flood, 2014).

Social cognitive theory (SCT) states that the media we are exposed to shape how we see the world, including how we understand gender (Bandura, 1977, 2001). Thus, we learn not only from direct experience but also through a process of observational learning, whereby fictional characters are also social models. The erotica we read can therefore teach us what sexual attitudes and behaviors are socially normative and therefore encouraged, versus what is nonnormative and therefore discouraged (Bandura, 2001). From this theoretical perspective, we could therefore expect that exposure to erotica may impact attitudes toward men and women. While previous research has applied SCT to pornography exposure (e.g., Check & Malamuth, 1986; Emmers-Sommer & Burns, 2005), to the best of our knowledge none has applied SCT to erotica.

The present study had two aims: to test how erotica may influence our social attitudes, focusing on sexism and rape myth acceptance; and to test the effects of reading erotica on individual-level consequences, such as preference for a dominant romantic partner, and subjective sexual arousal. To do this, we presented participants with erotica depicting either a submissive woman, a submissive man, or two equal partners, followed by our key outcome measures.

We divided sexism into the two subtypes identified in the Ambivalent Sexism Inventory: hostile sexism, which describes an overt dislike of women; and benevolent sexism, which describes attitudes that appear positive but ultimately undermine women's agency (Glick & Fiske, 1996). We define *rape myth acceptance* as a set of beliefs that trivialize rape by assuming that the victim consented to, or was responsible for, being raped (Burt, 1980). Preference for a dominant partner describes the extent to which men or women rate dominance as an appealing trait in their ideal romantic partner (Buss & Barnes, 1986). Finally, subjective sexual arousal (hereafter referred to as *arousal*) was

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Correspondence should be addressed to Emily Ann Harris, School of Psychology, The University of Queensland, St Lucia, QLD, 4072, Australia. E-mail: emily.harris@uqconnect.edu.au

measured according to participants' self-reported states of physiological sexual arousal. Findings regarding which stories are more arousing than others may have important practical implications for sex therapy and the movement to "eroticize equality" (Sanchez, Phelan, Moss-Racusin, & Good, 2012). We next discuss each of our outcome measures, followed by our hypotheses.

Sexism

Little past research focuses on the impact of written erotica on attitudes toward women; however, a vast amount of research has been conducted on the impact of visual pornography. According to this past research, the relationship between pornography and sexism appears to be highly nuanced, depending on (a) individual-level factors (Malamuth, Hald, & Koss, 2012; Wright & Bae, 2014), (b) the level of violence/degradation depicted in the pornography (Donnerstein, 1980; Fisher & Grenier, 1994; Golde, Strassberg, Turner, & Lowe, 2000; Mulac, Jansma, & Linz, 2002), and (c) the type of sexism measured (Garos, Beggan, Kluck, & Easton, 2004). Taken together, this research suggests that exposure to pornography alone may not necessarily lead to more negative attitudes toward women. However, exposure to particularly degrading pornography appears to lead to increased sexism (Golde et al., 2000), and this effect may be particularly pronounced for men who are adolescent, low in agreeableness, or high in their endorsement of gender stereotypes (Hald, Malamuth, & Lange, 2013; Mulac et al., 2002; Peter & Valkenburg, 2009).

A study conducted by Hawley and Hensley (2009) is perhaps the most notable example of research on erotica and attitudes toward women. In this study, male participants read a passage of erotica describing a sexually submissive man; female participants read about a sexually submissive woman. After reading the passage, participants were asked to rate how similar the submission fantasy was to their own fantasies. Female participants were more likely to rate the fantasy as similar to their own fantasies if they believed that women enjoy forceful sex. Men, on the other hand, rated the story as less similar to their own —that is, they were *less* likely to fantasize about male submission—if they held more traditional views about women. Thus, this study suggests that holding more traditional views of women may be associated with an increased likelihood of fantasizing about women in a submissive role. Put another way, it shows that our attitudes about women may be linked to our enjoyment of submission fantasies. However, it remains unclear whether reading a story about sexual submission may actually cause a shift in attitudes toward women.

Hawley and Hensley's (2009) study notwithstanding, the lack of previous research on the effects of reading erotica on attitudes about gender is surprising, given that content analyses have shown that women in erotica are often depicted as sexually passive. Women in written erotica are less likely

to initiate sex than are men, and they are more likely to be the "touched" rather than the "touchers" during sex (Cabrera & Ménard, 2013; Ménard & Cabrera, 2011). We argue that exposure to stories describing women as sexually passive may lead people to believe that women *should* be passive, both in the bedroom and in society more generally. Consequently, in the presented study we present participants with erotica depicting women in submissive and nonsubmissive roles, followed by measures of two forms of sexism, hostile and benevolent, to test how reading erotica may affect attitudes toward women.

As stated, hostile sexism is an overt judgment of women as inferior to men and includes negative attitudes toward women who violate traditional gender roles (e.g., feminists, businesswomen). Benevolent sexism, on the other hand, encompasses a suite of attitudes toward women that appear positive (e.g., that women should be cherished and protected) but is grounded in the assumption that women are physically and intellectually weaker than men (Glick & Fiske, 1996). Benevolent sexism has been shown to have direct negative consequences for women. For example, women who are exposed to benevolent sexism are less likely to use condoms, which may be related to women's belief that they should be sexually passive (Fitz & Zucker, 2015). Further, benevolent sexism has been shown to suppress women's sense of goal-related competence and enhance men's sense of intimacy in a relationship context (Hammond & Overall, 2015).

Rape Myth Acceptance

Theorists propose that reading erotica about women who enjoy sexual submission may reinforce the belief that women inherently desire forced sex (Malamuth & Check, 1985). Consequently, it is possible that the victims of rape may be perceived as "consenting victims" or even "responsible victims." Beliefs such as these are labeled rape myths because they are not supported by empirical evidence but rather exist to justify men's violence against women (Abrams, Viki, Masser, & Bohner, 2003; Bohner, Weisbrod, Raymond, Barzvi, & Schwarz, 1993). Negative consequences of endorsing rape myths include increased rape proclivity in men and increased victim blaming in men and women (for a review, see Grubb & Turner, 2012).

Past research demonstrates that exposure to pornography and erotica may be linked to increased endorsement of rape myths (Allen, Emmers, Gebhardt, & Giery, 1995; Golde et al., 2000; Malamuth & Ceniti, 1986; Malamuth & Check, 1985; Zillmann, 1989; Zillmann & Bryant, 1982). For example, Malamuth and Check (1985) found that when men listened to audiotapes describing various sexual encounters, rape myth acceptance was significantly higher among men who had listened to a story describing a woman who was aroused by sex to which she did not consent. However, hearing a story describing a woman who did not consent to sex and experienced disgust did not increase rape myth acceptance. Thus, it does not appear to be the level of

consent per se that increases rape myth acceptance. Rather, it is the perception of female arousal in response to rape that leads to an increase in rape myth acceptance. The erotica used in the present study did not depict rape. It did, however, depict a woman becoming aroused in response to male sexual dominance, including whipping, spanking, and bondage. We suggest that reading about a woman who is aroused in response to being dominated, albeit consensual, may also reinforce the belief that women may enjoy being raped. However, due to the personal relevance of rape to women, this effect is more likely to be evident in men compared to women (Malamuth & Check, 1981; Malamuth, Haber, & Feshbach, 1980).

Preference for a Dominant Partner

We now move to the second key focus of the study: individual-level consequences of reading erotica, including shifts in preferences for a dominant romantic partner, and arousal. An extensive body of literature has shown that women typically value dominance in a potential partner more so than do men (Bryan, Webster, & Mahaffey, 2011; Jensen-Campbell, Graziano, & West, 1995; Kenrick, Neuberg, Zierk, & Krones, 1994; Purnine, Carey, & Jorgensen, 1994; Sadalla, Kenrick, & Vershure, 1987). Both SCT and evolutionary theory provide possible explanations for women's increased preference for dominance relative to men.

According to a social cognitive perspective, the trait of dominance has become normatively masculine through a process of socialization, including exposure to media, and hence is considered more desirable in men (Bandura, 1977, 2001; Gagnon & Simon, 2005). According to an evolutionary account, dominance is more likely to be valued by women because, in our evolutionary past, having a dominant partner was associated with greater chances of survival for a woman and her offspring (Buss, 1989; Sadalla et al., 1987; Small, 1992; note that an evolutionary perspective also allows for the impact of culture; see Archer, 1996; Eagly & Wood, 1999; Schaller, 1997). Whether typical gender differences in preferences for dominance are the result of evolution or of socialization, we argue these preferences may temporarily shift in response to the media to which we are exposed.

The potential for media to influence mate preferences finds support in a study conducted by Batres and Perrett (2014). They found that people with Internet access favored more masculine-looking men, and more feminine-looking women compared to people without Internet access. Thus, exposure to media may affect the degree to which particular traits are considered attractive. Consistent with this idea, we argue that reading about a woman sexually dominating a man may attenuate the typical gender difference in preferences for dominance, such that men value dominance slightly more and women value dominance slightly less.

What Do Men and Women Find Most Arousing?

One possible explanation for the popularity of erotica depicting a submissive woman and a dominant man is that it is particularly arousing, more so than a story depicting a dominant woman and a submissive man. Hence, we wanted to test the impact of reading different types of erotica on men and women's arousal as an additional individual-level consequence of reading erotica.

To develop hypotheses about what arouses men and women, it is important to review the extant literature on sexual fantasy preferences. Research has shown that one of the most common sexual fantasies among women is that of being sexually dominated and overpowered by a man (for a review, see Leitenberg & Henning, 1995). Women report having more personal submission than dominance fantasies, and they rate fantasies about women sexually submitting as more positive than fantasies about women sexually dominating (Hawley & Hensley, 2009; Zurbriggen & Yost, 2004).

Findings regarding men's preferences, however, are less clear. In their review of the sexual fantasy literature, Leitenberg and Henning (1995) found that men were more likely to fantasize about being dominant and less likely to fantasize about being submissive compared to women (Leitenberg & Henning, 1995). Joyal, Cossette, and Lapierre (2014) found that high proportions of both men and women had fantasized about taking on a submissive role at some point, but when participants were asked to describe their favorite sexual fantasy, women were more likely to focus on their own submission (18.8%) compared to men (5.2%).

However, research investigating men's preferences for submission fantasies, rather than the frequency with which they generate such fantasies, has found that men rated a story describing male submission as significantly more appealing compared to a story describing male dominance. Furthermore, this preference for submission was actually greater among men than it was among women (Hawley & Hensley, 2009). Together, these findings suggest that although men appear to enjoy submission fantasies, perhaps even more so than women, they may generate submission fantasies less frequently compared to women (Hawley & Hensley, 2009; Joyal et al., 2014; Leitenberg & Henning, 1995). The authors speculate that perhaps men automatically generate fantasies about male dominance and female submission because such fantasies are consistent with gender stereotypes (Eagly, Wood, & Diekman, 2000).

To our knowledge, the study conducted by Hawley and Hensley (2009) is the only study to have investigated preferences for submission- and dominance-themed sexual stories. These findings provide an insight into men's and women's preferences for sexual fantasies and hint at what men and women may find the most arousing. However, Hawley and Hensley's (2009) study did not directly measure arousal but rather how subjectively appealing each

story was. Furthermore, the stories used in their study were not sexually explicit and were described as "a rather tame version of the force fantasy" (Hawley & Hensley, 2009, p. 571). This is an important point, as past research has shown that it is sexually explicit rather than romantic content that arouses men and women (Carvalho et al., 2013; Quackenbush, Strassberg, & Turner, 1995). As such, we still do not have a good understanding of how men and women are aroused by different depictions of submission and dominance in sexually explicit erotica.

The Present Study

In sum, in the present study we aim to test the impact of submission and dominance erotica on social attitudes, including sexism and rape myth acceptance, and individual-level consequences, including preference for a dominant partner and arousal. Drawing on the literature reviewed, we made the following hypotheses:

Hypothesis 1

Participants will show an increase in sexism after reading the story describing male dominance, compared to the other three story conditions. In line with findings from Hald et al. (2013), who tested the effects of pornography on sexism, we expected women to show an increase in benevolent sexism and men to show an increase in hostile sexism after reading the male dominance story.

Hypothesis 2

Men who read a story describing male dominance will be more likely to endorse rape myths compared to men who read stories describing female dominance, no dominance, or the control story. No change in women's level of rape myth acceptance was expected due to the personal relevance of rape for women (Malamuth & Check, 1981; Malamuth et al., 1980).

Hypothesis 3

Women will report preferring a dominant romantic partner more so than will men (as per Bryan et al., 2011; Sadalla et al., 1987). Note that we also examined the impact that erotica might have on participants' mate preferences as an exploratory analysis. From an SCT perspective, what we desire in a partner may be influenced by the media to which we are exposed (Bandura, 2001; Batres & Perrett, 2014). Thus, it is possible that exposure to nonnormative erotica may shift partner preferences, such that women may value dominance slightly less and men may value dominance slightly more after reading about a sexually dominant woman. Accordingly, the impact of erotic story condition on preference for a dominant mate, both alone and with interaction with gender, was tested.

Hypothesis 4

Women will be more aroused by the story describing male dominance than either the story describing female dominance or the story describing a sexual encounter without dominance (as per Leitenberg & Henning, 1995). Because past research on men's sexual preference for dominance has been mixed (e.g., Hawley & Hensley, 2009; Leitenberg & Henning, 1995), no specific hypotheses were made regarding men's arousal.

METHOD

We recruited a large online sample of heterosexual men and women from the United States. Participants were randomly assigned to read one of four stories. Three stories were erotic in nature, depicting a man dominating a woman, a woman dominating a man, or no dominance and equal participation. The fourth story was a nonerotic control story. We then measured our five outcome variables: hostile and benevolent sexism, rape myth acceptance, preference for a dominant partner, and arousal.

Because hostile and benevolent sexism have been associated with rape myth acceptance in past research (Glick & Fiske, 1996), we made the a priori decision to measure participants' hostile and benevolent sexism prior to the manipulation. This allowed us to control for baseline levels of sexism, thus providing a more accurate test of the manipulation on the outcome variables.

Participants

We recruited a total of 688 participants from the United States online via Amazon Mechanical Turk. While mTurk has proved a reliable source of participant data (Buhrmester, Kwang, & Gosling, 2011), there are risks associated with private online studies, such as lack of participant engagement and participants who complete the study more than once. We therefore excluded participants who failed the manipulation check items (outlined in the section that follows, $N = 187$). In addition, participants who completed the study twice had their second attempt deleted ($N = 20$). This resulted in a final sample of 481 participants (50.1% male) with an age range of 18 to 68 ($M = 31.34$, $SD = 10.58$). Each participant was paid US\$2.00 for completing the study.

Design

The experiment employed a 4 (erotic story: male dominance; female dominance; no dominance; control) × 2 (participant gender: male; female) between-groups design. Dependent measures included hostile and benevolent sexism, rape myth acceptance, preference for a dominant partner, and arousal.

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Procedure

Participants were advised that the study contained explicit sexual content, that responses were voluntary and anonymous, and that they were free to withdraw at any time. Participants were required to be over age 18 and to self-identify as heterosexual (as our sexual stimuli featured a heterosexual encounter). Premeasures of hostile and benevolent sexism were presented prior to the experimental manipulation so that individual differences could be controlled for in subsequent analyses. Participants then completed a "spot the difference" cleansing task, which involved identifying minor discrepancies between two otherwise identical images. Participants were then randomly assigned to one of four story conditions: male dominance and female submission; female dominance and male submission; no submission or dominance; or a nonerotic control story, "The Life of a Canada Lynx" (Hulbert, 2009). Each story was presented in a series of 12 blocks. After reading the first 11 blocks, participants were asked to report their levels of arousal and hostile and benevolent sexism (postmeasures). The final block of the story was then presented, followed by measures of rape myth acceptance and partner preferences. The dependent measures were interspersed between the final two blocks of the story to capture participants' responses when they were most engrossed in the story. Finally, participants completed the manipulation check and were fully debriefed.

Measures

Demographic Information. Participants were asked to report their gender (measured independent variable), age, and level of education.

Hostile and Benevolent Sexism. Pre-and postmeasures of hostile and benevolent sexism were administered. The hostile and benevolent sexism subscales that together comprise Glick and Fiske's (1996) 22-item Ambivalent Sexism Inventory were split in two so that participants were presented with the first five items of the benevolent sexism subscale and the first six items of the hostile sexism subscale prior to the erotic story manipulation. Following the manipulation, participants were then presented with the final six items measuring benevolent sexism and five items measuring hostile sexism. Two example items of hostile sexism include "Women are too easily offended" and "Feminists are not seeking for women to have more power than men" (reverse scored). Two example items of benevolent sexism were "Women should be cherished and protected by men" and "In a disaster, women ought not necessarily to be rescued before men" (reverse scored). Responses were recorded using a Likert-type scale ranging from 1 (*Strongly disagree*) to 5 (*Strongly agree*) with high scores indicating high sexism. Reliability for the premeasures of hostile and benevolent sexism were $\alpha = .88$ and $\alpha = .70$, respectively. Reliability for the

postmeasures of hostile and benevolent were $\alpha = .81$ and $\alpha = .78$, respectively. Pre- and postmeasures of hostile sexism correlated at .83, $p < .001$. Pre- and postmeasures of benevolent sexism correlated at .80, $p < .001$.

Rape Myth Acceptance. Rape myth acceptance was measured using an abbreviated five-item stereotyped beliefs about rape scale adapted from Costin (1985). Two example items were "Women often provoke rape through their appearance or behavior" and "A raped woman is an innocent victim, not a responsible one" (reverse scored). Responses were recorded using a Likert-type scale ranging from 1 (*Strongly disagree*) to 5 (*Strongly agree*). Items were averaged to form a reliable scale with high scores indicating high rape myth acceptance ($\alpha = .77$).

Preference for a Dominant Partner. A single item taken from the Mate Value Inventory (Kirsner, Figueredo, & Jacobs, 2003) was used to measure partner preference for the trait of dominance. Participants were asked: "Please rate what you would find minimally acceptable in your ideal romantic partner" for the trait "dominance." Responses were recorded using a Likert-type scale ranging from 1 (*Extremely low in this trait*) to 7 (*Extremely high in this trait*).

Subjective Sexual Arousal. Subjective sexual arousal was measured using an abbreviated five-item Multiple Indicators of Subjective Sexual Arousal Scale taken from Mosher (2011). For example, participants were asked to estimate their "overall level of sexual arousal" using a Likert-type scale ranging from 1 (*No sexual arousal at all*) to 7 (*Extremely sexually aroused*), and their levels of "genital sensations" from 1 (*No sensation at all*) to 7 (*Extreme genital sensation*). Items were averaged to form a reliable scale with a high score indicating high sexual arousal ($\alpha = .95$).

Materials and Checks

Erotic Story Manipulation. Participants were randomly assigned to read one of four stories. Three of the stories were erotic in nature, and were all titled "Julia and Steven." The fourth story was a nonerotic control story, titled "The Life of a Canada Lynx." All three erotic stories described a consensual, heterosexual encounter involving oral and penetrative sex. The male dominance story described a man sexually dominating a woman. The female dominance story described a woman sexually dominating a man. Sexually dominating behavior included the dominator tying up the submissive, spanking her or him, and forcefully giving and receiving oral sex. In both of these stories a "safe word" between the characters was established, such that the sex could be prevented any time the safe word was said (which it wasn't). Therefore, the sexual activity was consensual. In the no dominance story the dominance and submission themes were removed, and

the sexual activity was mutually initiated; characters were described as directing the sexual experience equally. A precise sexual script was constructed so that only the gender of the individual who was dominant or submissive, and the presence of dominance and submission, differed between conditions. The control story described the upbringing of a Canadian lynx and included no sexual content. Full stories can be obtained from the authors on request.

Manipulation Checks. Participants in the three erotic story conditions were presented with two items asking them to rate both "Julia" and "Steven" as dominant, submissive, or neither dominant nor submissive. Participants in the control condition were presented with two items asking them whether they perceived dominance or submission themes in the story (Yes/No). Participants who answered incorrectly to both manipulation check items were excluded from the study.

RESULTS

Prior to conducting individual analyses of covariance (ANCOVAs) to test our specific hypotheses, we first conducted a multivariate analysis of covariance (MANCOVA) to assess the effects of erotic story condition and gender on the five outcome variables. We found significant main effects of gender (Wilks's Λ = .87, F (5, 463) = 13.63, $p < .001$, η_p^2 = .13) and condition (Wilks's Λ = .50, F (15, 1279) = 24.30, $p < .001$, η_p^2 = .21), and a significant interaction between gender and condition (Wilks's Λ = .93, F (15, 1279) = 2.27, $p = .004$, η_p^2 = .02). We then followed this up with a series of between-subjects univariate ANCOVAs to test the effects of condition and gender on each of the dependent variables. Age was entered as a covariate in all analyses. In addition, as we were interested in the effects of the erotic story manipulation independent of preexisting sexist attitudes, we controlled for premeasured hostile and benevolent sexism in all analyses. For estimated means and standard errors, see Table 1.

Hostile Sexism

In hypothesis 1, we predicted that men in the male dominance condition would show an increase in hostile sexism. A univariate ANCOVA revealed a significant main effect of gender on the postmeasure of hostile sexism, such that men were significantly higher in hostile sexism than women, F (1, 468) = 7.62, $p = .006$, η_p^2 = .02. There was no significant main effect of erotic story condition, F (3, 468) = .95, $p = .415$, η_p^2 = .01, and there was no significant interaction, F (3, 468) = 1.18, $p = .315$, η_p^2 = .01. Thus, we did not find support for our first hypothesis with regard to hostile sexism.

Benevolent Sexism. In hypothesis 1, we also predicted that women's benevolent sexism would increase after reading erotica depicting a sexually submissive woman. A univariate ANCOVA revealed no significant main effects of gender, F (1, 468) = 1.19, $p = .276$, $\eta_p^2 < .01$, or erotic story condition, F (3, 468) = 2.28, $p = .078$, η_p^2 = .01, on levels of benevolent sexism. However, there was a significant interaction between gender and condition, F (1, 468) = 2.66, $p = .048$, η_p^2 = .02 (see Figure 1). Follow-up simple comparisons of condition at each level of gender showed that women in the no dominance condition were significantly lower in benevolent sexism compared to women in the male dominance ($p = .001$) and control conditions ($p = .029$). There was no significant difference between the no dominance condition and the female dominance condition ($p = .060$), and there were no other significant differences between story conditions for women ($ps > .120$). There were no significant differences for men ($ps > .080$). Looked at another way, women were significantly higher than men in benevolent sexism but *only* in the male dominance condition ($p = .026$). There were no significant differences in benevolent sexism between men and women in the other three erotic story conditions ($ps > .123$). Thus, we found partial support for our hypothesis regarding benevolent sexism.

Rape Myth Acceptance. We hypothesized that men, but not women, would show an increase in rape myth acceptance after reading the male dominance story. A

Table 1. *Estimated Means and Standard Errors for Outcome Variables by Erotic Story Condition and Gender*

Variables	Male Dominance		Female Dominance		No Dominance		Control	
	Men	Women	Men	Women	Men	Women	Men	Women
Hostile sexism	2.68 (.06)	2.62 (.06)	2.75 (.06)	2.60 (.06)	2.59 (.06)	2.56 (.06)	2.73 (.06)	2.50 (.06)
Benevolent sexism	2.83 (.05)$_a$	3.00 (.05)$_b$	2.76 (.05)$_a$	2.88 (.05)$_a$	2.86 (.06)$_a$	2.73 (.06)$_a$	2.89 (.05)$_a$	2.91 (.06)$_a$
Rape myth acceptance	2.04 (.07)$_a$	1.76 (.07)$_b$	1.88 (.07)$_a$	1.63 (.07)$_a$	1.69 (.08)$_a$	1.76 (.07)$_a$	1.83 (.08)$_a$	1.76 (.08)$_a$
Preference for a dominant partner	3.57 (.18)$_a$	4.64 (.18)$_b$	3.87 (.18)$_a$	4.26 (.18)$_a$	3.81 (.20)$_a$	4.71 (.19)$_b$	3.37 (.18)$_a$	4.92 (.20)$_b$
Subjective sexual arousal	4.40 (.16)	4.56 (.16)	4.32 (.16)	4.35 (.16)	4.24 (.18)	4.30 (.17)	1.76 (.16)	1.43 (.18)

Note. Estimated means and standard errors are reported rather than means and standard deviations, as all analyses were run controlling for age and premeasured hostile and benevolent sexism. Significant differences between men and women within each condition are represented by different subscripts, $p < .05$. Subscripts are included only where there is a significant interaction.
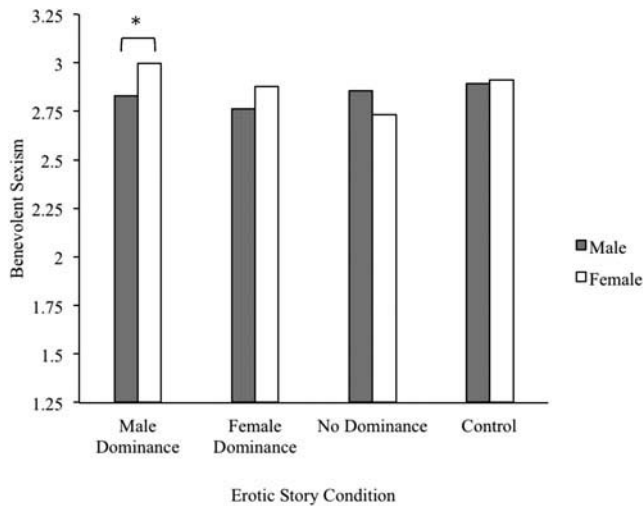
Figure 1. Mean levels of benevolent sexism as a function of erotic story condition and participant gender; *p < .05.

univariate ANCOVA found a significant main effect of gender on rape myth acceptance, F (3, 468) = 6.458, p = .011, η_p^2 = .01, such that men were significantly higher in rape myth acceptance than women. There was no significant main effect of erotic story condition, F (3, 468) = 2.54, p = .056, η_p^2 = .02; however, there was a significant interaction between gender and condition, F (3, 468) = 2.65, p = .049, η_p^2 = .02 (see Figure 2). Follow-up simple effects analyses of condition at each level of gender showed that men who read about male dominance were significantly higher in rape myth acceptance compared to men in the no dominance (p = .001) and control conditions (p = .026). There was no significant difference between the male dominance condition and the female dominance condition (p = .095), and there were no other significant differences between story conditions for men (ps > .060). There were no significant differences for women (ps >
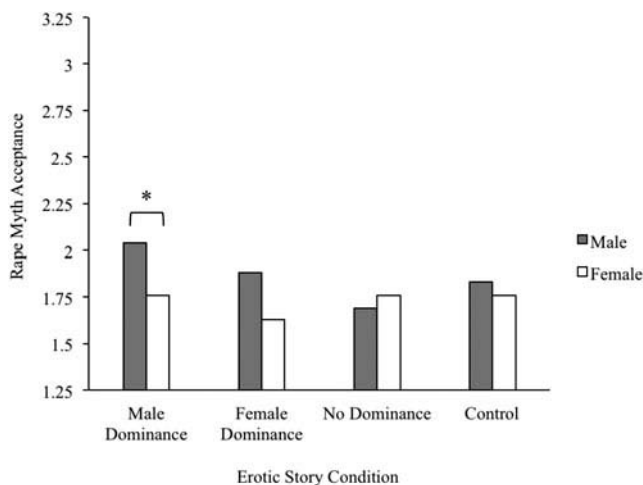
.174). Looked at another way, men were significantly higher in rape myth acceptance than were women in the male dominance (p = .003) and female dominance conditions (p = .011). There were no other significant differences between men and women in the other two story conditions (ps > .496). Thus, our second hypothesis was supported.

Preference for a Dominant Partner. Moving to our second focus of individual-level consequences, we predicted that women would rate dominance more highly than men but that this gender difference might be attenuated or disappear in the female dominance condition. A univariate ANCOVA found a significant main effect of gender on participants' partner preference for dominance, F (1, 467) = 51.29, p < .001, η_p^2 = .10, such that women were significantly more likely to prefer the trait of dominance in a partner compared to men. There was no significant main effect of condition, F (3, 467) = .42, p = .738, η_p^2 = .00. However, there was a significant interaction between gender and erotic story condition, F (3, 467) = 3.47, p = .016, η_p^2 = .02 (see Figure 3). Follow-up simple comparisons of gender at each level of condition showed that women were significantly more likely to prefer dominance compared to men in the male dominance, no dominance, and the nonerotic control conditions (all ps < .001). However, an exception to this pattern of effects emerged in the female dominance condition, where there was no difference between male and female participants in their partner preference for dominance (p = .119). While we proposed an interaction of gender at each level of condition, for completeness we also report the interaction focusing on the simple effects of condition at each level of gender. We found that men were significantly more likely to value dominance after reading the female dominance story compared to men who read the control story (p = .047).
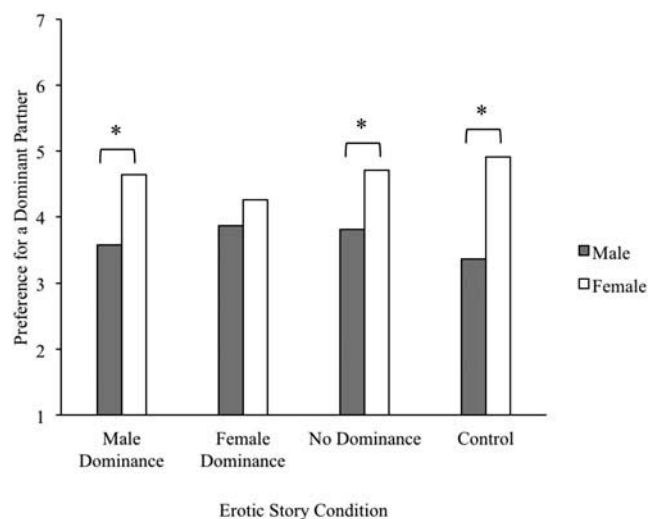

Figure 2. Mean levels of rape myth acceptance as a function of erotic story condition and participant gender; *p < .05.

Figure 3. Mean levels of preference for a dominant partner as a function of erotic story condition and participant gender; *p < .05.

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Women, on the other hand, were significantly less likely to value dominance after reading the female dominance story compared to women who read the control story ($p = .013$). There were no other significant differences between story conditions for men or women ($ps > .079$). Hence, hypothesis 3 was supported.

Subjective Sexual Arousal.   Finally, we predicted that the women would find the male dominance story the most arousing. First, a univariate ANCOVA revealed a significant main effect of erotic story condition on arousal, $F (3, 468) = 140.53$, $p < .001$, $\eta_p^2 = .47$ (see Figure 4). Follow-up pairwise comparisons revealed that participants in the three erotic story conditions—male dominance, female dominance, and no dominance—were significantly more aroused than participants in the control story condition ($ps < .001$). There were no differences in arousal between the three erotic story conditions ($ps > .210$). No significant main effect of gender, $F (1, 468) = .03$, $p = .866$, or significant interaction between gender and condition, $F (3, 468) = .84$, $p = .474$, emerged. Thus, our fourth hypothesis was not supported.

DISCUSSION

Depictions of sexually submissive women and sexually dominant men have been prominent throughout the history of erotic fiction (Brulotte & Phillips, 2006). However, previous research investigating the effects of sexual media on consumers has largely focused on visual pornography (for examples, see Garos et al., 2004; Glascock, 2005; Wright, 2013). Our study is the first to test the effects of reading erotica that systematically varies the submission/dominance roles of men and women on both social outcomes (sexism and rape myth acceptance) and individual-level outcomes (partner preferences and arousal).
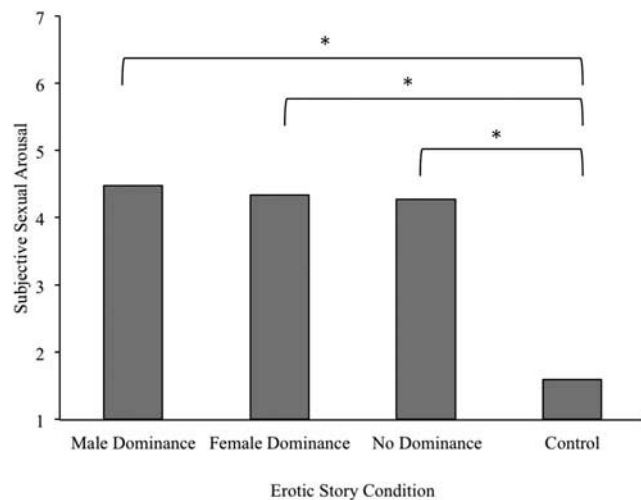

Figure 4.   Mean levels of subjective sexual arousal as a function of erotic story condition; *$p < .05$.

First, in terms of social outcomes, we found that reading about male sexual dominance led women to report more benevolent sexism than men, and men to endorse rape myths more than women. Second, focusing on individual-level outcomes, we found that, after reading about female dominance, women and men valued dominance equally in a potential partner, whereas in all other conditions women valued dominance significantly more than men. In addition, we found no evidence that erotica in which a man dominated a woman is particularly arousing. Instead, all types of erotica were equally arousing, with men's and women's preferences mirroring each other. In the next section we describe these findings more fully and discuss the ways in which we extend existing research on erotica and its effects on readers.

Theoretical and Practical Implications

Overall, our research suggests that reading erotica depicting a man dominating a woman negatively impacts attitudes toward women. In line with findings from Hald et al.'s (2013) work on visual pornography, we found that women's sexism was responsive to written erotica. Specifically, women were significantly higher in benevolent sexism compared to men after reading erotica about a sexually dominant man. Interestingly, these findings fit neatly with previous studies investigating the effects of real (and primed) gender inequality (Fischer, 2006; Glick et al., 2000). In countries with high levels of gender inequality, women report significantly higher benevolent sexism compared to men (Glick et al., 2000); and when gender inequality is made salient, women's benevolent sexism increases (Fischer, 2006). It is thus possible that reading about even consensual sexual male domination primed gender inequality for women and hence increased benevolent sexism. In addition, Glick et al. (2000) argued that when women are motivated to protect themselves against male aggression they may be more likely to endorse attitudes that normalize men's protection of women, and highlight women's need to be protected. It is therefore also possible that our story, while arousing, prompted women to feel threatened. A final alternate possibility is that stories in which men sexually dominate women make male protection (and female weakness) seem attractive, and preferable to gender equality. Future research should test these possibilities.

For male readers, we did not see the predicted increase in hostile sexism after reading about a man sexually dominating a woman. Hostile sexism is an ideology that involves the derogation of women who violate traditional gender roles (e.g., career women, feminists). It does not, however, explicitly celebrate women who are submissive. Accordingly, it is possible that exposure to this story was too far removed from attitudes about high power women, resulting in a null effect on men's hostile sexism. However, it is interesting that men's endorsement of rape myths increased after reading the male dominance story. Here, there is a closer link between the content of the story (i.e.,

a woman consenting to male sexual aggression) and the attitude (i.e., women enjoy nonconsensual sex). We speculate that reading about a woman who enjoys sexual domination by a man may lead men to believe that women desire forceful submission in real life and hence develop ambivalence about women's right to refuse sex. It is important to note that men's increase in rape myth acceptance occurred despite the fact that our story did not depict arousal in response to rape, as was tested in the study conducted by Malamuth and Check (1985). Hence, we show that reading about a woman who is aroused in response to consensual sexual domination may also lead to an increase in men's rape myth acceptance.

In addition to affecting social attitudes, exposure to erotica also appeared to impact individual-level outcomes, specifically, preferences for a dominant partner and arousal. With reference to what people rate as desirable in a potential romantic partner, past research shows that women typically desire dominance more so than men (Sadalla et al., 1987). Some evolutionary theorists argue that this gender difference may exist due to the adaptive benefits available to women with dominant partners (Bryan et al., 2011; Buss, 1989; Sadalla et al., 1987). SCT also focuses on the social rewards afforded to dominant men and passive women as a factor that may contribute to this gender difference in preference for a dominant partner (Bandura, 1977, 2001; Bem, 1981).

In line with both evolutionary and SCT, the typical gender difference emerged in three of our four experimental conditions, whereby women valued dominance significantly more so than men. However, we found that this gender difference disappeared after reading the female dominance story. After reading about a dominant woman, it appeared that men became more open to female dominance in general and that simultaneously women became less concerned about dominance in a male partner. Consistent with a social cognitive approach, these findings suggest that preferences for dominance are not fixed but may change depending on the social environment; however, as stated earlier, evolutionary theory also allows for social influences (see Archer, 1996; Eagly & Wood, 1999; Schaller, 1997).

It may be that depictions of nontraditional men and women as "sexy" broaden our understanding of what is considered gender appropriate behavior. The battle for less prescriptive gender roles is often fought directly. Our work highlights that change can also occur indirectly via the stories that we tell, including those that sexually arouse us. While erotica has the potential to result in detrimental outcomes for women (i.e., through increased benevolent sexism and rape myths), it also has the potential to make the deviant desirable and prompt a shift toward acceptance of nontraditional gender roles. Although the shifts observed in our study were small and likely to be temporary, more consistent exposure to nonnormative erotica (or even literature more generally) may have a stronger impact on what men and women want in a partner. Future research could test whether

long-term readers of erotica and nonreaders differ in the types of romantic partners in which they are interested.

Focusing on arousal, previous research has largely assumed that men and women are more aroused by female, than male, sexual submission (Arndt, Foehl, & Good, 1985; Hawley & Hensley, 2009; Leitenberg & Henning, 1995). Our results do not support this assumption. In our work, explicit stories were equally arousing irrespective of who took the dominant role or whether there was dominance present at all. Thus, although men and women are more likely to fantasize about a man dominating a submissive woman (Leitenberg & Henning, 1995), this tendency appears to be unrelated to sexual arousal. It may be that men's and women's fantasy preferences are more likely to be driven by preexisting attitudes, such as attitudes toward traditional gender roles (Hawley & Hensley, 2009). Self-reported arousal, however, appears to be less influenced by ideological factors and may be a more automatic response to sexual stimuli.

The finding that all three erotic stories were equally arousing may also have important implications for the practice of sex therapy. Past research has shown that the more a woman associates sex with submission, the less sexual satisfaction she experiences and, in turn, the less overall relationship satisfaction she feels (Sanchez, Phelan, et al., 2012). In response to the negative effects of associating sex with submission among women, Sanchez, Fetterolf, and Rudman (2012) have noted a need to "eroticize equality" (p. 172). Our findings provide promising evidence that a focus away from female submission does not mean a decrease in sexual arousal. Rather, stories describing female dominance or no dominance were equally arousing and perhaps less likely to perpetuate the belief in women that sex and submission are necessarily linked (Sanchez, Fetterolf, & Rudman, 2012).

Strengths, Limitations, and Future Directions

Where past research has focused on the effects of exposure to non–sexually explicit forms of submission-/dominance-themed stories (Hawley & Hensley, 2009), our study provides the first test of sexually explicit erotica on attitudes about women, as well as partner preferences and arousal. By developing original erotica, we were able to ensure tight control over our manipulation such that only the submission/dominance roles of the characters varied, with all other content remaining the same. An additional strength of our study was that we included pre- and postmeasures of sexism. This allowed us to control for baseline levels of sexism, leading to a more accurate test of our manipulation.

A limitation of the study was the use of abbreviated scales and a single-item measure of partner preferences for dominance. Our erotic stories were detailed (involving multiple sex acts and forms of dominance) and thus took a considerable amount of time to read. Consequently we decided to use abbreviated measures of some of our core outcome variables to minimize participant burden. While

our abbreviated measures proved reliable, future research should replicate our results with full scales.

Conducting the study online using mTurk allowed participants to complete the study in private, which was important due to the sexually explicit nature of our erotica. Furthermore, mTurk has been shown to produce results comparable to studies conducted in laboratory settings, with the benefit of a more demographically diverse sample (Buhrmester et al., 2011; Goodman, Cryder, & Cheema, 2013). However, one problem with conducting studies using mTurk is that participants may be less likely to engage with experimental materials (Goodman, et al., 2013). To address this problem, we adhered to strict exclusion criteria, such that only participants who read and understood the key elements of the stories were included in analyses. Nonetheless, such findings should be replicated in the laboratory.

It should be noted that the effects of reading different submission/dominance stories on attitudes were small. We speculate that the potential consequences of reading male dominance erotica on attitudes, such as more negative views toward women, may be exacerbated following repeated exposure to such erotica. Future research might investigate the effects of a longer-term exposure to submission-/dominance-themed erotica by using a diary study to test the effects of reading a full-length erotic novel, or longitudinal work testing male dominance erotica consumption and attitudes over time. Finally, an additional avenue for future research would be to test the effects of reading popular erotica in a nonheterosexual sample. For example, submission and dominance between a consenting lesbian pair would be unlikely to carry with it the same political meaning as male-on-female dominance. It is possible, however, that effects may still be seen on partner preferences.

CONCLUSIONS

The recent surge in popularity of submission/dominance erotica following the release of the *Fifty Shades of Grey* trilogy has highlighted the need for a greater understanding of erotica and how it may affect its readers. We have shown that reading about a sexually submissive woman may have a negative impact on attitudes toward women, including increasing benevolent sexism in women and rape myth acceptance in men. However, erotica also had the power to challenge traditional gender roles. We found that after reading about a sexually dominant woman, men rated dominance as an appealing trait in a potential partner, at least to the same extent that women did. Finally, we found that men and women were similar in their levels of arousal in response to sexually explicit erotica and that different types of erotica are equally arousing, regardless of the dominance and submission roles taken on by the protagonists. In sum, although we highlight some potentially negative consequences of reading erotica depicting male dominance, our findings should not be interpreted as devaluing erotica.

Instead, our study hints at the utility and benefit of seeking out a range of erotica that eschews typical gender roles to encourage "eroticizing equality."

ORCID

Fiona Kate Barlow http://orcid.org/1792-3336-9172-961X0000-0001-9533-1256

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