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You're making us all look bad: Sexism moderates women's experience of collective threat and intra-gender hostility toward traditional and non-traditional female subtypes

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Abstract

Across two studies (*N*s = 265 and 735), we investigated whether women's endorsement of hostile (HS) and benevolent sexism (BS) moderate their experience of collective threat and subsequent hostility toward traditional and non-traditional female subtypes. As expected, HS was positively associated with intra-gender hostility towards the non-traditional subtype, and these effects were mediated by collective threat. HS was negatively associated with collective threat and hostility towards the traditional subtype, but only when the target endorsed prescriptive gender beliefs that explicitly reinforced gender inequality. BS was associated with collective threat and hostility toward the non-traditional subtype, but these effects did not emerge consistently across both studies. These results suggest that women are not a homogeneous group whose members all find the same subtypes collectively threatening. Rather, the extent to which women internalize patriarchal attitudes and stereotypes influences the behaviors they find threatening and deserving of hostility.

Keywords: Intra-gender hostility, Collective threat, Subtyping, Hostile Sexism, Benevolent, Sexism

You're Making Us All Look Bad: Sexism Moderates Women's Experience of Collective Threat and Intra-Gender Hostility Toward Traditional and Non-Traditional Female Subtypes

Intra-gender hostility is broadly defined as the expression of negative responses (including beliefs, emotions, and behaviors) toward members of one's own gender. Multiple reasons for women's intra-gender hostility have been identified. Of interest in the present study is the role of collective threat, or the concern that the poor behavior of an ingroup member will be generalized into negative judgements about the whole group (Cohen & Garcia, 2005). Social identity theorists argue that people use their social identities as a point of self-definition and evaluation, and thus are motivated to maintain a positive image of their own social group (Tajfel & Turner, 1979). When negative stereotypes against one's group are confirmed, ingroup members are likely to feel threatened because these reinforce negative perceptions of their group (Lewis & Sherman, 2003). This threat can, in turn, increase hostility towards those ingroup members who appear to perpetuate the negative stereotypes.

In the context of gender-based collective threat, women negatively evaluate and distance themselves from ingroup members who confirm negative (versus positive) stereotypes about women's competence (Cohen & Garcia, 2005; Duguid, 2011), and this is underpinned by the concern that these group members will reinforce negative stereotypes about their shared social identity (Duguid, 2011). Thus, women are aware of negative stereotypes about their gender, which in turn influence their evaluations of, and subsequent behavior towards, other women (Duguid, Loyd, Lewin, & Tolbert, 2012).

However, these investigations have not examined how individual differences in ideology affect the stereotypical behaviors that women find collectively threatening and that elicit intra-gender hostility. Previous research indicates that women's endorsement of hostile (HS) and benevolent sexism (BS) predicts their negative perceptions of non-traditional

women (e.g. career women; Glick, Diebold, Bailey-Werner, & Zhu, 1997). However, intra-gender hostility can also be expressed by non-sexist women, who can report limited support for women who conform to traditional stereotypes (Cichocka, Golec, de Zavala, Kofta, & Rozum, 2013). This suggests that both sexist and non-sexist women find different 'types' of women threatening and worthy of hostility. Thus, we extend these literatures by examining the extent to which women's endorsement of HS and BS moderate their experience of collective threat and subsequent hostility when evaluating traditional or non-traditional female subtypes.

The Influence of Sexist Attitudes on Collective Threat Toward Traditional and Non-Traditional Women

HS is an adversarial ideology in which women are perceived as seeking to control men and subvert their structural power via female sexuality or feminist ideology (Glick & Fiske, 1996). In contrast, BS is a subjectively favorable ideology that offers protection and affection towards women who embrace traditional gender roles (Glick & Fiske, 1996). Although HS and BS offer seemingly contradictory views of women, they tend to be moderately positively correlated (Glick et al., 2000), indicating that endorsement of negative attitudes about women co-occurs with subjectively positive attitudes.

Among women, HS predicts less favorable evaluations of non-traditional women who threaten men's status (e.g. feminists, career women; Glick et al., 1997; Masser & Abrams, 2004). In contrast, BS predicts less favorable evaluations of women who violate specific prescriptive elements of the traditional feminine stereotype (e.g. nurturing behavior; Viki, Massey, & Masser, 2005). Further, Becker (2010) demonstrated that women endorse hostile sexist beliefs when thinking about non-traditional female subtypes (i.e. career women, feminists) and are more inclined to endorse benevolent sexist beliefs when thinking about traditional women (i.e. homemakers). This indicates that women are more positive toward

female subtypes who conform to traditional gender stereotypes and are hostile toward those who deviate from these roles.

However, less is known about how women's endorsement of sexist beliefs influences their perceptions of collective threat from and evaluations of different subtypes. Women higher in sexism may find *non-traditional* subtypes collectively threatening because they worry these stereotypes may jeopardize women's safety and security. That is, if the behaviors and beliefs associated with these subtypes (such as violating traditional gender roles and attempting to destabilize the gender-related status hierarchy) are generalized to all women, men may view them as undeserving of protection and affection. Indeed, men are more likely to sexually harass (Begany & Milburn, 2002; Maass, Cadinu, Guarnieri, & Grasselli, 2003), act aggressively toward (Reidy, Sloan, & Zeichner, 2009), and negatively evaluate women who violate traditional gender roles (Glick et al., 1997; Sibley & Wilson, 2004).

In contrast, women lower in sexism may experience heightened collective threat when exposed to *traditional* female subtypes. Cichocka et al. (2013), for example, found that when self-identified feminists experienced social identity threat, they perceived a subsequent instance of gender discrimination as more prejudiced and felt more sympathy for the victim when she was portrayed as having feminist (versus conservative) views. Extrapolating from this work, it can be predicted that women lower in sexism may experience collective threat when they encounter traditional women who they see as restricting the range of acceptable roles for women in society and reinforcing gender inequality.

The Present Research

Two studies were conducted to determine whether sexist attitudes shape the extent to which women find non-traditional and traditional female subtypes collectively threatening, and therefore deserving targets of intra-gender hostility. In each study, participants reported their endorsement of HS and BS, and then read a vignette which described a female target

who confirmed a traditional or non-traditional stereotype related to women's competence, sexuality, or emotional dependence on men (Study 1) or sexuality only (Study 2). In Study 2, the subtype also expressed either prescriptive beliefs about female sexuality or provided no prescriptive statement. This manipulation was included in Study 2 to examine whether the target's explicit support for or rejection of (non)traditional gender stereotypes would heighten more sexist and less sexist women's experience of collective threat and subsequent hostility, respectively. Dependent variables included participants' self-reported levels of collective threat and intra-gender hostility toward the target.

Study 1

Participants read a scenario in which a woman behaved in a traditional or non-traditional way. The scenarios varied across three dimensions of stereotype content—competence, sexuality, and emotional dependence—so that we could assess the generalizability of results across relevant stereotypes. Women's collective threat and intra-gender hostility were then assessed. Based on common behavioral and attitudinal manifestations identified in prior work, we operationalized women's intra-gender hostility in terms of women's self-reported willingness to publicly show their disapproval of the target's behaviour (e.g. by making negative comments and facial expressions; Shute, Owens, & Slee, 2002; Vaillancourt & Sharma, 2011), to share their disapproval with other women and men (Buss & Dedden, 1990; Vaillancourt & Sharma, 2011), and their general negative attitudes toward the target (Lonsway & Fitzgerald, 1995).

While collective threat has primarily been studied in relation to stereotypical views of women's competence, HS and BS influence women's evaluations of other women in regards to sexuality (Zaikman & Marks, 2014) and relationship ideals (Lee, Fiske, Glick, & Chen, 2010), and partner preferences (Travaglia, Overall, & Sibley, 2009). Thus, there are multiple salient stereotypes other than competence that women might find collectively threatening.

For women higher in sexism, competent, sexually available, and emotionally independent women might activate collective threat because they violate traditional roles and expectations of women. That is, competent and emotionally independent women challenge paternalistic beliefs that women are incompetent and in need of men for guidance (Glick & Fiske, 1996; Peplau, 1983), while sexually available women are perceived as controlling men via their sexuality and violating prescriptive beliefs that women ought to be chaste (Glick & Fiske, 1996; Abrams, Viki, Masser, & Bohner, 2003).

For women lower in sexism, incompetent, sexually conservative, and emotionally dependent subtypes might activate collective threat because they are perceived as reinforcing gender inequality. Specifically, incompetent and emotionally dependent women justify men's structural power and higher status by reinforcing paternalistic beliefs that women are less competent than and need to be provided for and protected by men (Glick & Fiske, 1996). Further, sexually conservative women reinforce the sexual double standard, with women negatively evaluated - and men positively evaluated - for engaging in identical sexual behaviors (Marks & Fraley, 2005).

Hypotheses

It was hypothesized that women higher in sexism would report greater intra-gender hostility toward the non-traditional targets than women lower in sexism (H1). In contrast, we predicted that women lower in sexism would report greater intra-gender hostility toward the traditional targets than women higher in sexism (H2). Finally, it was predicted that these effects would be mediated through collective threat (H3; see Figure 1). No *a priori* predictions were made about whether effects of stereotype content would be stronger on some dimensions than others, or whether the effects of sexism would be more or less pronounced when operationalized as HS or BS.

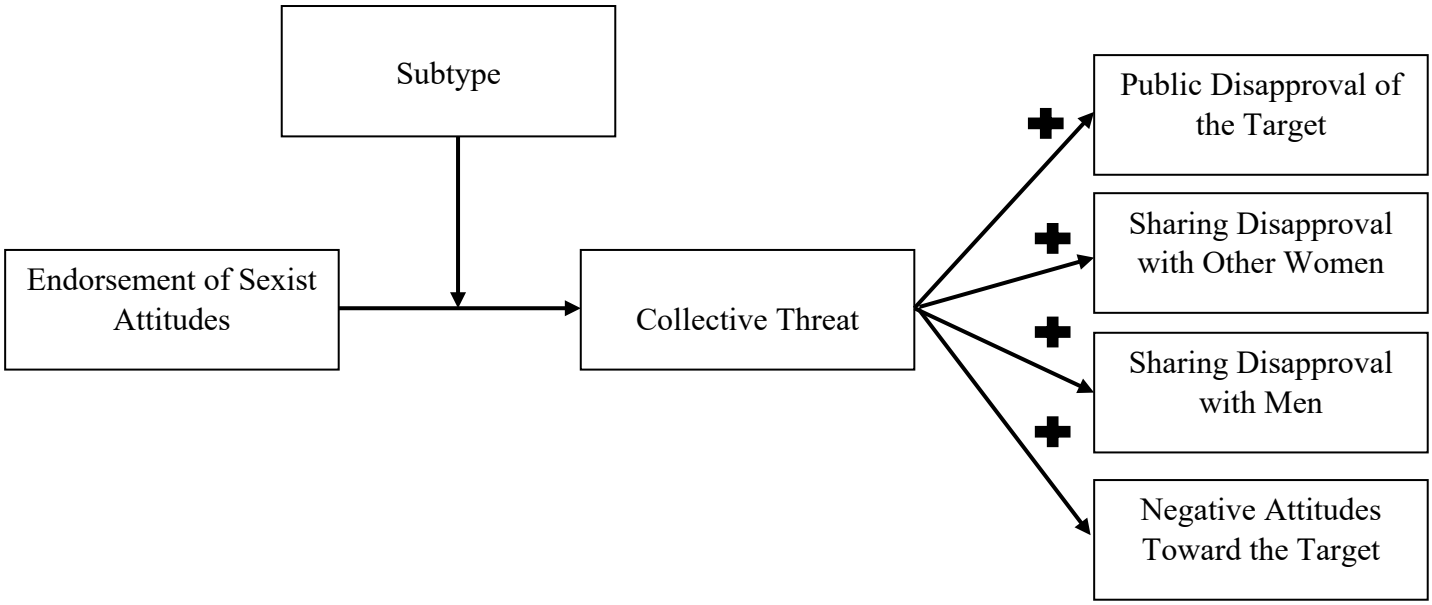

Figure 1. Proposed moderated mediation model in Study 1.

Method

Participants

Two hundred and sixty-five female first-year psychology students (M_{age} = 19.58, *SD* = 4.09) participated for course credit. The racial breakdown of the sample was 61.13% White, 21.13% Asian, 15.09% other, and 1.89% mixed-race (0.01% did not respond).

Design

A 2 (subtype: non-traditional, traditional) x 3 (stereotype content: competence, sexuality, emotional dependence) independent-groups design was employed, with participants' endorsement of HS and BS as measured variables.

Procedure, Materials, and Measures

Ambivalent Sexism Inventory. Prior to the manipulation, participants completed the 22-item Ambivalent Sexism Inventory (Glick & Fiske, 1996) measuring participants' personal endorsement of HS (e.g. *Once a woman gets a man to commit to her, she usually tries to put him on a tight leash;* α = .88) and BS (e.g. *Many women have a quality of purity that few men possess;* α = .82). Responses were provided on a 6-point scale (1 = *strongly*

disagree, 6 = *strongly agree*), with higher scores indicating more sexist responses (see Table 1 for reliability statistics).

Subtype and Stereotype Content Manipulations. Participants were randomly assigned to read one of six vignettes describing a woman's (Alana) behavior at a social gathering where both men and women were present. To ensure that Alana's behavior was salient to participants, she was the only person given a name in the vignette. Her behavior was manipulated in each scenario to confirm one of six stereotypes: (1) traditional (low) competence, (2) non-traditional (high) competence, (3) traditional (low) sexuality, (4) non-traditional (high) sexuality, (5) traditional (high) emotional dependence, (6) non-traditional (low) emotional dependence. Full vignettes are included in the online supplementary materials.

Dependent Measures. After reading the scenario, participants completed four measures of intra-gender hostility and one measure of collective threat, which were presented in a random sequence.

Publicly sharing disapproval. Participants indicated their willingness to publicly show their disapproval of the target using three items adapted from previous research on deviance and women's intra-gender hostility (Chekroun & Brauer, 2002; Shute et al., 2002; Vaillancourt & Sharma, 2011): *I would show my disapproval non-verbally (e.g. by a disapproving look); I would show my disapproval by politely telling her at the time; I would show my disapproval by directly criticising her at the time*. Ratings were provided on a 7-point likert scale (1 = *not at all likely*, 7 = *very likely*).

Willingness to share disapproval with men and women. Two items assessed the extent to which participants were willing to share their disapproval with the men and women present in the vignette, respectively (*I would show my disapproval by connecting non-verbally with the men* [other women] *present (e.g. sharing a glance); I would show my*

disapproval by talking about it later with men [other women]). Responses were provided on a 7-point likert scale (1 = *not at all likely*, 7 = *very likely*).

Negative attitudes toward the target. Participants' negative attitudes toward the target were assessed using an adapted version of the female subscale of the Gender Hostility Scale (Straus & Mouradian, 1999). Five items assessed participants' negative affect toward and beliefs about the target (e.g. *I feel resentful of Alana; Alana is rude; Alana treats men badly; Alana irritates me a lot*), and their propensity to view Alana as a source of frustration (e.g. *I am easily frustrated by Alana*) on a 4-point scale (1 = *strongly disagree*, 4 = *strongly agree*).

Collective threat. Two items adapted from Cohen and Garcia (2005) assessed the extent to which participants perceived that the target's behavior would negatively influence perceptions of women as a group (*To what extent could Alana's behavior damage people's perceptions of women as a group?; To what extent could Alana's behavior threaten the status of women as a group?*). Participants' responses were measured on a 7-point likert scale (1 = *not at all*, 7 = *very much*).

Results

Women's Intra-Gender Hostility as a Function of Sexist Attitudes, Subtype, And Stereotype Content

A series of Moderated Multiple Regressions were conducted on the four measures of intra-gender hostility (see Table 1 for descriptive statistics and correlations). Subtype was effect coded: 1 = non-traditional stereotype conditions, -1 = traditional stereotype conditions. Stereotype content was effect coded into two variables: one comparing competence and sexuality (1 = competence conditions, -1 = sexuality conditions) and one comparing

emotionality and sexuality (1 = emotionality conditions, -1 = sexuality conditions). The sexuality condition was the reference category for both dummy variables.[1] HS and BS scores were mean centred prior to analyses. Higher and lower HS/BS were calculated at 1 SD above and below the mean.

Given that HS and BS are moderately positively correlated (see Table 1; Glick et al., 2000), each analysis involving one type of sexism (e.g. HS) included the other type (e.g. BS) as a control variable in Step 1. In Step 2, all the direct effects of sexism (HS or BS depending on analyses), subtype, and the two content dummies were included. The five two-way interactions were entered in at Step 3. Finally, the HS/BS x Subtype x Competence, and the HS/BS x Subtype x Emotionality interactions were entered at Step 4 (see Tables 2 and 3 for R^2 change, Betas, semi-partial correlations, and 95% confidence intervals).

Table 1

	Variables	M (SD)	1	2	3	4	5	6	7
1.	HS	2.84	(.88)						

Descriptive Statistics and Correlations Among Measured Variables (Study 1).

[1] As we did not conduct any within group comparisons (e.g. comparing higher HS women's evaluations of the emotionally independent and sexually available targets) the outcomes of our analyses would be the same regardless of which condition served as the reference category.

		(0.92)							
2.	BS	3.04	.53***	(.82)					
		(0.84)							
3.	Public disapproval of the target	1.92	.46***	.30*	(.75)				
		(1.12)							
4.	Desire to share disapproval with women	2.48	.51***	.26*	.76***	(.78)			
		(1.63)							
5.	Desire to share disapproval with men	2.07	.41**	.29*	.77***	.78***	(.75)		
		(1.35)							
6.	Negative attitudes toward the target	1.66	.47***	.22***	.44***	.49***	.41***	(.91)	
		(0.62)							
7.	Collective threat	3.43	.19***	.20**	.44***	.49***	.39***	.47***	(.73)
		(1.54)							

Note. *$p < .05$ ** $p < .01$ ***$p < .001$. Negative attitudes toward the target was assessed using a 1-4 scale. Sexism was assessed using a 1-6 scale. All other variables were assessed using a 1-7 scale. Reliability statistics are presented in parentheses along the diagonal.

Table 2

Hierarchical Multiple Regression Analyses Testing Interaction Models for HS on Intra-Gender Hostility (Study 1).

	Public Disapproval				Sharing Disapproval with Women				Sharing Disapproval with Men				Negative Attitudes				Collective Threat			
	ΔR^2	β	sr^2	95% CI	ΔR^2	β	sr^2	95% CI	ΔR^2	β	sr^2	95% CI	ΔR^2	β	sr^2	95% CI	ΔR^2	β	sr^2	95% CI
Step 1	.09**				.07**				.09**				.05**				.04*			
BS		.30**	.09	[.24, .55]		.26**	.07	[.29, .74]		.29**	.09	[.28, .66]		.22**	.05	[.07, .25]		.19*	.04	[.13, .56]
Step 2	.04*				.05**				.04*				.08**				.03			
HS		.24**	.03	[.10, .47]		.25**	.04	[.20, .68]		.23**	.04	[.14, .54]		.31**	.07	[.12, .30]		.15*	.02	[.01, .47]
Subtype		.01	< .01	[-.11, .14]		-.01	< .01	[-.20, .17]		.03	< .01	[-.12, .19]		.05	< .01	[.-.04, .10]		-.11	.01	[-.34, .02]
Competence		.02	< .01	[-.14, .18]		-.03	< .01	[-.29, .18]		-.01	< .01	[-.21, .17]		.04	< .01	[-.06, .12]		.02	< .01	[-.19, .25]
Emotionality		.03	< .01	[-.12, .20]		.06	< .01	[-.13, .34]		.02	< .01	[-.17, .21]		.10	< .01	[-.03, .15]		.10	< .01	[-.06, .38]
Step 3	.07**				.12**				.08**				.13**				.25**			
HS x Subtype		.12*	.01	[.01, .28]		.11*	.01	[.01, .39]		.04	.01	[-.01, .32]		.19**	.04	[.06, .20]		.19**	.03	[.14, .47]
HS x Competence		-.04	< .01	[-.21, .12]		< -.01	< .01	[-.24, .23]		.01	< .01	[-.18, .21]		.04	< .01	[-.06, .11]		-.05	< .01	[-.29, .12]
HS x Emotionality		.01	< .01	[-.16, .19]		-.01	< .01	-.26, .23]		.01	< .01	[-.19, .22]		-.02	< .01	[-.10, .08]		.02	< .01	[-.17, .25]
Subtype x Competence		-.20**	.03	[-.37, -.07]		-.29**	.05	[-.68, -.25]		-.28**	.05	[-.56, -.19]		-.31**	.06	[-.28, -.11]		-.46**	.14	[-.88, -.50]
Subtype x Emotionality		-.29**	.06	[-.48, -.18]		-.39**	.10	[-.86, -.42]		-.29**	.06	[-.57, -.21]		-.38**	.09	[-.32, -.15]		-.55**	.20	[-1.02, -.64]
Step 4	.01				.01				.01				< .01				< .01			
HS x Subtype x Competence		-.06	< .01	[-.23, .10]		-.11	.01	[-.42, .04]		-.13	.01	[-.39, .01]		-.02	< .01	[-.10, .08]		-.03	< .01	[-.25, .16]
HS x Subtype x Emotionality		-.08	< .01	[-.27, .07]		-.05	< .01	[-.33, .16]		-.08	< .01	[-.33, .09]		-.06	< .01	[-.13, .05]		-.02	< .01	[-.24, .19]

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

Table 3

	Public Disapproval	Sharing Disapproval with Women	Sharing Disapproval with Men	Negative Attitudes	Collective Threat

Hierarchical Multiple Regression Analyses Testing Interaction Models for BS on Intra-Gender Hostility (Study 1).

	ΔR^2	β	sr^2	95% CI	ΔR^2	β	sr^2	95% CI	ΔR^2	β	sr^2	95% CI	ΔR^2	β	sr^2	95% CI	ΔR^2	β	sr^2	95% CI
Step 1	.11**				.10**				.10**				.11**				.04**			
HS		.33**	.11	[.27, .54]		.31**	.10	[.35, .76]		.32**	.10	[.31, .64]		.34**	.11	[.15, .31]		.20**	.04	[.13, .52]
Step 2	.02				.02				.02				.01				.03			
BS		.16**	.02	[.04, .40]		.13	.01	[-.02, .51]		.17*	.02	[.05, .49]		.04	< .01	[-.07, .13]		.10	.01	[-.08, .43]
Subtype		.01	< .01	[-.11, .14]		-.01	< .01	[-.20, .17]		.03	< .01	[-.12, .19]		.05	< .01	[-.04, .10]		-.11	.01	[-.34, .02]
Competence		.02	< .01	[-.14, .18]		-.03	< .01	[-.29, .18]		-.01	< .01	[-.21, .17]		.04	< .01	[-.06, .12]		.02	.01	[-.19, .25]
Emotionality		.03	< .01	[-.12, .20]		.06	< .01	[-.13, .34]		.02	< .01	[-.17, .21]		.10	< .01	[-.03, .15]		.10	.01	[-.06, .38]
Step 3	.06**				.11**				.07*				.12**				.22**			
BS x Subtype		.04	.01	[.01, .28]		.03	.01	[-.17, .27]		.01	.01	[-.16, .21]		.13*	.02	[.01, .18]		.08	.01	[-.05, .34]
BS x Competence		.07	< .01	[-.21, .12]		.06	< .01	[-.14, .38]		.04	< .01	[-.16, .28]		-.01	< .01	[-.11, .09]		-.07	< .01	[-.36, .10]
BS x Emotionality		.05	< .01	[-.16, .19]		-.02	< .01	-.31, .25]		< .01	< .01	[-.23, .24]		-.11	< .01	[-.19, .02]		-.06	< .01	[-.36, .10]
Subtype x Competence		-.19**	.02	[-.37, -.07]		-.27**	.05	[-.66, -.23]		-.27**	.05	[-.54, -.17]		-.30**	.06	[-.27, -.10]		-.45**	.13	[-.87, -.48]
Subtype x Emotionality		-.29**	.06	[-.48, -.17]		-.39**	.10	[-.85, -.41]		-.28**	.05	[-.56, -.19]		-.38**	.09	[-.32, -.15]		-.54**	.19	[-1.01, -.62]
Step 4	.01				.02				.03*				< .01				.01			
BS x Subtype x Competence		-.08	< .01	[-.30, .07]		-.16	.02	[-.56, -.04]		-.18*	.02	[-.50, -.07]		-.06	< .01	[-.14, .06]		.06	< .01	[-.12, .35]
BS x Subtype x Emotionality		-.10	< .01	[-.33, .06]		-.12	.01	[-.51, .04]		-.19*	.02	[-.54, -.08]		-.05	< .01	[-.15, .07]		-.03	< .01	[-.30, .20]

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

There were significant direct effects of HS on each dependent measure, such that intra-gender hostility was associated with greater endorsement of HS. There was also a tendency for intra-gender hostility to be higher with endorsement of BS, but this effect was only significant on publicly sharing disapproval, and willingness to share disapproval with men. There were no direct effects of subtype or stereotype content.

Of particular interest was whether the effects of sexism were moderated by subtype. Significant HS x Subtype interactions emerged on negative attitudes about the target, public disapproval, and willingness to share disapproval with women (see Figure 2). Consistent with H1, analysis of simple slopes revealed that when evaluating a non-traditional target, higher HS was associated with more hostile attitudes, $b = .31$, $p < .001$, CI [.19, .43], greater willingness to publicly share disapproval, $b = .41$, $p < .001$, CI [.20, .62], and sharing disapproval with other women, $b = .56$, $p = .001$, CI [.25, .88]. Contrary to H2, HS was unrelated to intra-gender when participants evaluated a traditional target, all bs $\leq .30$, all $ps \geq .063$. No HS x Subtype interaction emerged on willingness to share hostility with men, and there were no significant HS x Subtype x Content interactions.

Although a significant BS x Subtype interaction was found on negative attitudes about the target, follow up analyses indicated that there were no significant simple slopes when evaluating a traditional, $b = < .01$, $p \geq .960$, CI [-.13, .13], or non-traditional targets, $b = .09$, $p = .205$, CI [-.05, .22]. No other significant BS x Subtype interactions were found.

Significant BS x Subtype x Competence interactions were observed on both willingness to share hostility with women and men (see Figure 3). A significant BS x Subtype x Emotionality interaction was also found on willingness to share hostility with men. No other significant three-way interactions were observed. These interactions were followed up with more targeted analyses of the BS x Subtype interactions at each level of stereotype content (i.e. for competence, sexuality, and emotionality separately).

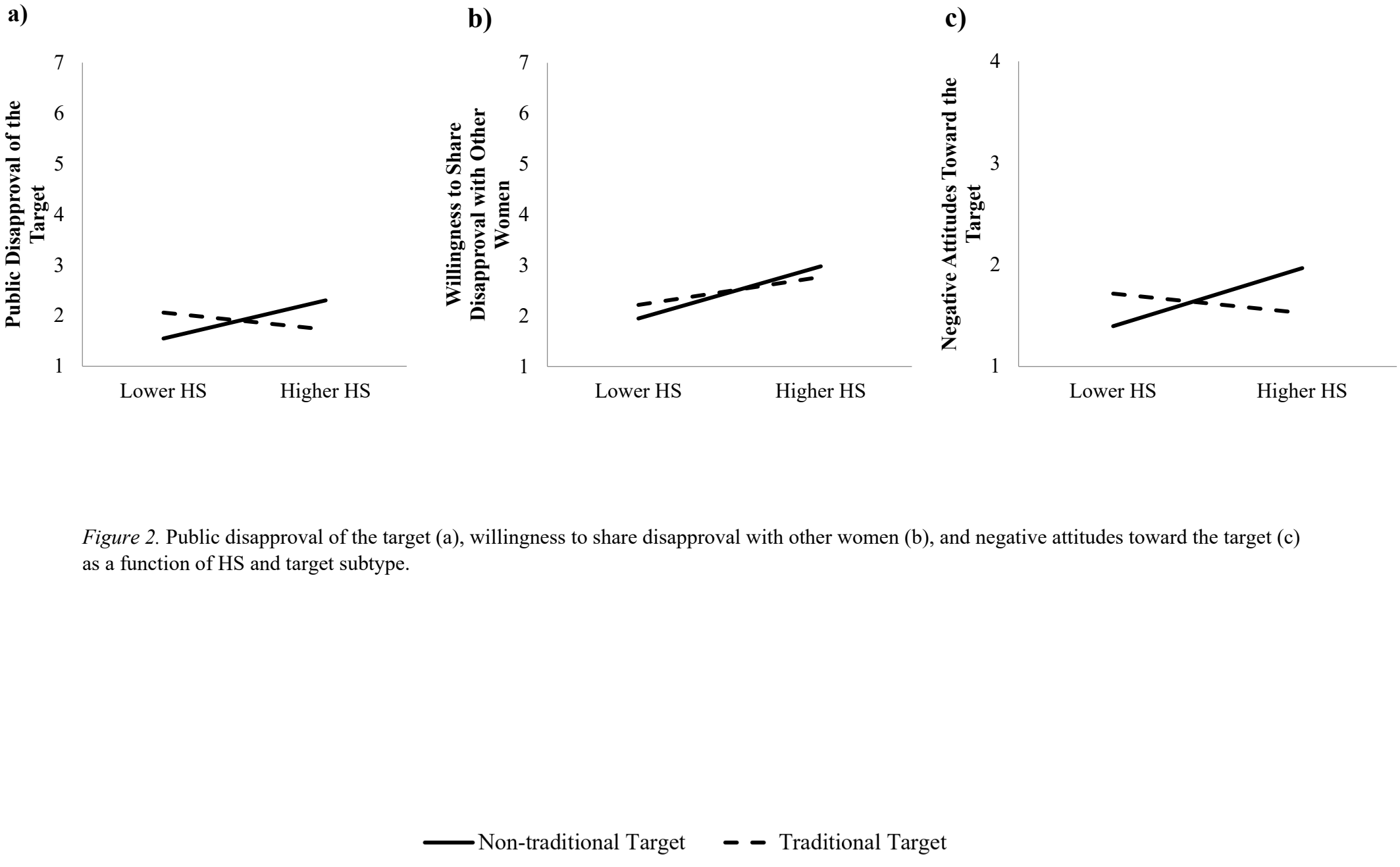

Figure 2. Public disapproval of the target (a), willingness to share disapproval with other women (b), and negative attitudes toward the target (c) as a function of HS and target subtype.

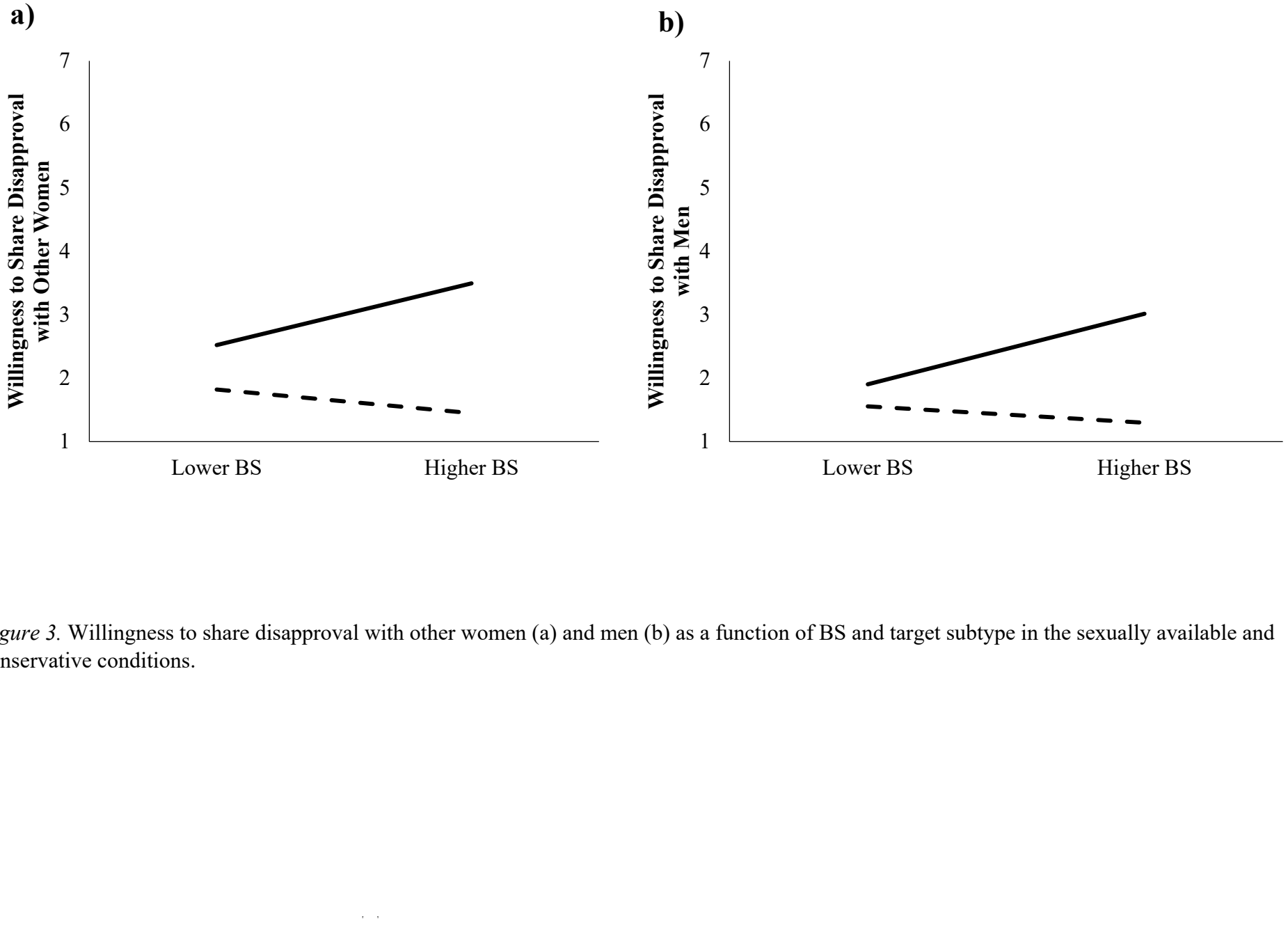

Figure 3. Willingness to share disapproval with other women (a) and men (b) as a function of BS and target subtype in the sexually available and conservative conditions.

These analyses showed that the three-way interactions were driven by significant BS x Subtype interactions in the sexuality condition only on willingness to share disapproval with women, b = .42, p = .025, CI [.06, .80], and willingness to share disapproval with men, b = .43, p = .006, CI [.13, .74]. Consistent with H1, BS was positively associated with willingness to share disapproval with women, b = .62, p = .045, CI [.15, .22], and men, b = .71, p = .006, CI [.21, 1.20] when evaluating the sexually available target. However, contrary to H2, BS was unrelated to willingness to share disapproval with women, b = -24, p = .371, CI [-.76, .29], and men, b = -.16, p = .450, CI [-.59, .27] when evaluating the sexually conservative target.

Collective Threat as a Function of Sexist Attitudes, Subtype, and Stereotype Content

To test H3, a series of Moderated Multiple Regressions was first performed to determine whether there was a significant relationship between HS/BS, subtype, stereotype content, and women's experience of collective threat. The effect coding procedures and the order of entry for the control variables, direct effects, and interaction terms were the same as the main analyses.

As expected, a significant HS x Subtype interaction emerged on collective threat (see Table 2). Simple slopes analysis revealed that HS was positively associated with collective threat when evaluating the non-traditional subtypes, b = .45, p = .004, CI [.15, 75], but unrelated to collective threat when evaluating the traditional subtypes, b =.03, p = .862, CI [-.27, .33].

There were no BS x Subtype or BS x Subtype x Stereotype Content interactions on collective threat (see Table 3). Thus, it was not appropriate to test whether collective threat mediated the BS x Subtype interactions observed in the sexuality conditions.

Collective Threat as a Moderated Mediator of Women's Intra-Gender Hostility

Because the HS x Subtype interaction only emerged on negative attitudes about the

target, public disapproval, and willingness to share disapproval with other women, the mediating role of collective threat was tested only for these dependent variables. Mediation analysis was conducted using Hayes' (2012) PROCESS computational model (Model 7 testing moderated mediation) with 10,000 bootstrapped samples and 95% confidence intervals (see Table 4 for unstandardized *b*s, standard errors, 95% confidence intervals, and index of moderated mediation).

Consistent with H3, when participants evaluated the non-traditional targets, the relationship between HS and negative attitudes about the target, public disapproval, and willingness to share disapproval with other women, were mediated through collective threat. However, there were no significant indirect effects between HS and intra-gender hostility when evaluating the traditional targets.

Table 4

Conditional Indirect Effects of HS on Intra-Gender Hostility via Collective Threat as a Function of Subtype (Study 1).

	Public Disapproval			Sharing Disapproval with Women			Negative Attitudes		
	Effect	SE	95% CI	Effect	SE	95% CI	Effect	SE	95% CI
Collective threat (*bc* path)	.29	.04	[.21, .37]	.50	.06	[.38, .61]	.17	.02	[.13, .22]
Non-traditional target	.13	.04	[.05, .22]	.22	.08	[.08, .37]	.08	.03	[.03, .13]
Traditional target	.01	.05	[-.09, .11]	.01	.08	[-.16, .17]	< .01	.03	[-.05, .06]
Index of Moderated Mediation	.12	.06	[.01, .24]	.21	.10	[.02, .43]	.07	.04	[.01, .15]

Note. Effects represent unstandardized *b*s.

Discussion

Our predictions were partially supported. As expected, women who more strongly endorsed HS demonstrated greater intra-gender hostility toward the non-traditional subtypes, regardless of the specific stereotype they confirmed. Importantly, these effects were explained by collective threat. Also in line with predictions, women higher in BS were also more judgemental of non-traditional subtypes. However, this effect only emerged on their desire to share their disapproval of the sexually available target with men and women. This may be because the sexually available subtype violated prescriptive elements of traditional feminine stereotypes (Viki et al., 2005), which is threatening to women higher in BS. In contrast, the other subtypes may have been perceived as threatening the gender-related status hierarchy by challenging paternalistic beliefs that women are not fully competent adults in need of men's guidance (Glick & Fiske, 1996; Peplau, 1983) or as attempting to control men via their sexuality (Glick & Fiske, 1996). Thus, they only elicited more negative evaluations from women higher in HS (Glick et al., 1997; Masser & Abrams, 2004; Becker, 2010). Further, these effects were not explained by collective threat.

However, there was no evidence of equivalent hostility or collective threat toward the traditional targets among women who less strongly endorsed HS. This is inconsistent with Cichocka et al.'s (2013) finding that self-identified feminists under social identity threat were less sympathetic toward conservative (versus feminist) women who experienced discrimination. However, this may be due to methodological differences between the studies. Cichocka and colleagues explicitly manipulated social identity threat by asking participants to read excerpts from internet forum discussions where women openly derogated and rejected feminism, while the women in our study had to infer the target's beliefs based solely on her behavior. Thus, our finding that lower HS and BS women are non-judgemental toward women who act traditionally may change if the target had endorsed prescriptive beliefs about

women's gender appropriate behavior. We addressed this possibility in Study 2 by manipulating whether the target endorsed prescriptive gender beliefs about female sexuality.

Study 2

In Study 2, participants read a scenario in which a woman confirmed a traditional or non-traditional stereotype related to female sexuality. Further, the target either expressed a prescriptive statement about how all women should behave regarding their sexuality or did not provide any statement. The two manipulations were crossed, such that the target stated that all women should be either sexually conservative or sexually expressive. Women's collective threat and intra-gender hostility were assessed using the measures from Study 1. To investigate whether women's intra-gender hostility might manifest in more subtle ways, we also included measures assessing the extent to which participants privately disapproved of the target's behavior, their perceptions of her moral character, and their moral concern for her. These operationalizations were chosen because they reflect subtle but commonplace manifestations of women's (and men's) biases against sexually available women (Gramazio, Cadinu, Pagliaro, & Pacilli, 2018; Pagliaro et al., 2018).

To simplify the design of this study, we omitted the stereotype content manipulation and focused solely on the sexuality subtypes. We chose this stereotype dimension because sexuality is a particularly divisive issue: women higher in HS and BS are more likely to endorse the sexual double standard (Zaikman & Marks, 2014), while feminist women are more likely to view self-sexualization as enjoyable and empowering (Erchull & Liss, 2013). Thus, sexuality subtypes provided an ideal context to examine the influence of sexist attitudes on women's experience of collective threat and subsequent hostility.

Hypotheses

Compared to women lower in sexism, we expected women higher in sexism to be more hostile towards the non-traditional subtype, regardless of whether the target endorsed

prescriptive gender beliefs (H1). Furthermore, we predicted that women lower in sexism would be more hostile toward the traditional target than women higher in sexism, but only when the target expressed prescriptive gender beliefs (H2). Finally, it was predicted that these effects would be mediated by collective threat (H3; see Figure 4). Once again, we made no *a priori* predictions as to whether the effects of sexism would be more or less pronounced when operationalized as HS or BS.

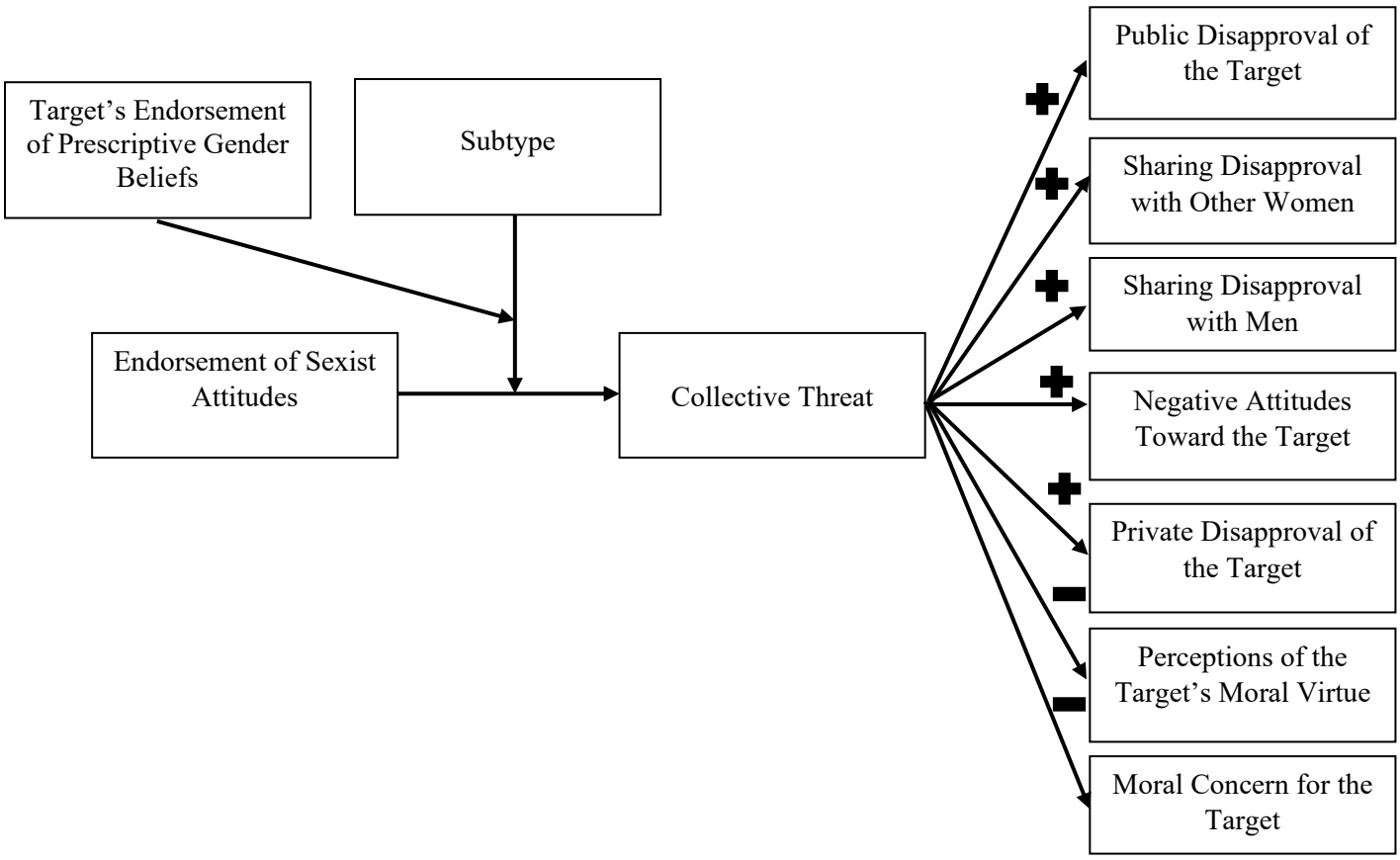

Figure 4. Proposed moderated mediation model in Study 2.

Method

Participants

An *a priori* power analysis using G*Power (Faul, Erdfelder, Lang, & Buchner, 2007) indicated that a minimum sample of 725 participants was required to detect a small effect (f = .02) at 80% power. We included an additional 25 participants in case we needed to exclude

individuals who failed the attention check or provided incomplete data. The size of this buffer was determined by financial constraints.

We initially recruited 754 participants via Amazon Mechanical Turk. Four MTurk workers' HITs timed-out before they could submit their completion codes, meaning that those HITs were able to be completed by additional workers. Thus, we recruited four extra workers on top of our initial buffer. All participants who submitted questionnaires provided complete data. Nineteen participants were then excluded for failing an attention check (described below). The final sample thus consisted of 735 American women (M_{age} = 43.12, SD_{age} = 13.14). The racial breakdown of the sample was 78.20% White, 11.40% African American/Black, 4.20% Asian, 3.20% other, and 2.70% mixed-race (0.30% did not respond).

Design

A 2 (subtype: traditional, non-traditional) x 2 (endorsement of prescriptive gender beliefs: present, absent) independent-groups design was employed, with endorsement of HS and BS as measured variables.

Procedure, Materials, and Measures

The procedure, materials, and measures (see Table 5 for reliability statistics) were identical to those used in Study 1 with the following additions and alterations:[2]

Subtype and prescriptive gender beliefs manipulations. The text comprising the subtype manipulation was identical to that used in Study 1. To manipulate prescriptive gender beliefs, the target (Alana) either provided a prescriptive statement about how all women should behave regarding their sexuality (present condition) or indicated that she was enjoying the party (absent condition). The prescriptive gender beliefs manipulation was crossed with the subtype manipulation, such that Alana either endorsed that all women should constrain

[2] Exploratory analyses were also conducted to examine the specific negative stereotypes that underpinned higher and lower HS/BS women's collective threat. That is, whether concerns about women being perceived as promiscuous or using their sexuality to control men underpinned higher HS/BS women's intra-gender hostility toward the non-traditional target; and concerns that the traditional target might reinforce the sexual double standard explained lower HS/BS women's intra-gender hostility toward her. The measures used and results of these analyses are reported in the online supplementary materials.

their sexuality to committed relationships so as not to 'cheapen' the expression of physical intimacy (traditional subtype) or that women should be free to express and explore their sexuality as men do, and should enjoy and feel empowered by self-sexualizing (non-traditional subtype). The content of this manipulation was based on tenets of the sexual double standard (see Hynie, Lydon, & Taradash, 1997; Lai & Hynie, 2011) and research exploring how and why women construct self-sexualization as an empowering, feminist act (Liss, Erchull, & Ramsey, 2011). Full vignettes are included in the online supplementary materials.

Attention check. Participants were then asked to complete an attention check that required them to name the main character in the vignette (i.e. Alana) and briefly describe her behavior. To be retained in the final sample, participants had to correctly describe whether Alana behaved in a sexually available or conservative manner.

Dependent measures. Responses for the additional measures were provided on a 7-point likert scale (1 = *not at all*, 7 = *very much*). As in Study 1, the order of presentation for all measures was counterbalanced.

Private disapproval. A single item assessed the extent to which participants privately disapproved of Alana's behavior (*To what extent do you disapprove of Alana's behavior in the scenario?*).

Perceptions of the target's moral character. Four items assessed how moral participants perceived Alana to be (*To what extent is Alana trustworthy; honest; sincere; moral;* adapted from Pacilli et al., 2017).

Moral concern for the target. Two items measured participants' concern for Alana's fair treatment (*How bad would you feel if you heard that Alana had been treated unfairly?*; *How bad would you feel if you heard that Alana had been hurt?*; adapted from Loughnan, Pina, Vasquez, & Puvia, 2013).

Results

Women's Intra-Gender Hostility as a Function of Sexist Attitudes, Subtype, and Target's Endorsement of Prescriptive Gender Beliefs

A series of Moderated Multiple Regressions were conducted on the seven measures of intra-gender hostility (see Table 5 for descriptive statistics and correlations). Subtype was effect coded: 1 = non-traditional stereotype conditions, -1 = traditional stereotype conditions. Endorsement of prescriptive gender beliefs was effect coded: 1 = present conditions, -1 = absent conditions. HS and BS scores were mean centred prior to analyses, and higher and lower HS/BS were calculated at 1 SD above and below the mean.

The relationship between HS and BS was controlled for in Step 1; the direct effects of HS/BS, subtype, and endorsement of prescriptive gender beliefs were included in Step 2; the three two-way interactions were entered in at Step 3; and, finally, the HS/BS x Subtype x Prescriptive Gender Beliefs interaction was entered at Step 4 (see Tables 6-9 for R^2 change, Betas, semi-partial correlations, and 95% confidence intervals).[3]

There were significant direct effects of HS on each dependent measure, such that HS was associated with greater endorsement of intra-gender hostility. BS was all associated with greater endorsement of intra-gender hostility except on moral concern for the target. There were also consistent direct effects of subtype, such that women endorsed greater intra-gender hostility toward the non-traditional subtype. Direct effects of prescriptive gender beliefs were also observed on each measure, such that women reported greater intra-gender hostility

[3] We ran additional analyses controlling for how extroverted the target was perceived to be (i.e. *Alana is outgoing, sociable; reserved* [reverse-coded]) because this may have covaried with our subtype manipulation. That is, the sexually available target may have been perceived as more extroverted and comfortable in social situations because she was willing to dance with men and push social boundaries by telling risqué jokes. A preliminary ANOVA indicated that the sexually available target ($M = 4.76$, $SD = 0.46$) was perceived as significantly more extroverted than the sexually conservative target ($M = 2.72$, $SD = 0.83$), $F(1, 731) = 1758.29$, $p < .001$, $\eta^2 = .69$. However, our findings remained the same when controlling for perceived extroversion.

Table 5

Descriptive Statistics and Correlations Among Measured Variables (Study 2).

Variables	*M* (SD)	1	2	3	4	5	6	7	8	9	10
1. HS	2.44 (1.17)	(.93)									
2. BS	2.85 (1.11)	.46***	(.90)								
3. Public disapproval of the target	1.96 (1.32)	.21***	.24***	(.82)							
4. Desire to share disapproval with women	2.62 (1.87)	.22***	.23***	.76***	(.81)						
5. Desire to share disapproval with men	2.04 (1.51)	.24***	.23***	.77***	.81***	(.78)					
6. Negative attitudes toward the target	1.77 (0.78)	.20***	.23***	.58***	.64***	.53***	(.91)				
7. Private disapproval of the target	3.18 (2.18)	.16***	.22***	.53***	.58***	.45***	.69***	-			
8. Perceptions of the target's moral virtue	4.76 (1.60)	-.16***	-.21***	-.49***	-.53***	-.46***	-.69***	-.59***	(.94)		
9. Moral concern for the target	5.52 (1.55)	-.27***	-.18***	-.42***	-.46***	-.40***	-.51***	-.41***	.55***	(.76)	
10. Collective threat	3.24 (1.86)	.17**	.18**	.52***	.58***	.48***	.66***	.58***	-.59***	-.37***	(.81)

Note. *$p < .05$ ** $p < .01$ ***$p < .001$. Negative attitudes toward the target was assessed using a 1-4 scale. Sexism was assessed using a 1-6 scale. All other variables were assessed using a 1-7 scale. Reliability statistics are presented in parentheses along the diagonal. No reliability analyses were performed on private disapproval as this was measured using a single item.

Table 6

Hierarchical Multiple Regression Analyses Testing Interaction Models for HS on Overt Measures of Intra-Gender Hostility (Study 2)

	Public Disapproval				Sharing Disapproval with Women				Sharing Disapproval with Men				Negative Attitudes				Private Disapproval			
	ΔR^2	β	sr^2	95% CI	ΔR^2	β	sr^2	95% CI	ΔR^2	β	sr^2	95% CI	ΔR^2	β	sr^2	95% CI	ΔR^2	β	sr^2	95% CI
Step 1	.06**				.05**				.05**				.05**				.05**			
BS		.24**	.06	[.20, .36]		.23**	.05	[.27, .51]		.23**	.05	[.21, .40]		.23**	.05	[.11, .21]		.22**	.05	[.29, .56]
Step 2	.10*				.14**				.10**				.21**				.14**			
HS		.14**	.01	[.07, .24]		.15**	.02	[.12, .36]		.18**	.02	[.13, .33]		.13**	.01	[.04, .13]		.08*	< .01	[.004, .28]
Subtype		.19**	.04	[.16, .34]		.26**	.07	[.36, .60]		.16**	.03	[.15, .35]		.33**	.11	[.21, .31]		.31**	.09	[.52, .81]
PGB		.23**	.05	[.21, .39]		.24**	.06	[.33, .57]		.22**	.05	[.22, .43]		.30**	.09	[.19, .28]		.22**	.05	[.33, .61]
Step 3	.04**				.05**				.03**				.05**				.05**			
HS x Subtype		.18**	.03	[.13, .27]		.18**	.03	[.01, .39]		.16**	.02	[.12, .29]		.18**	.03	[.08, .16]		.19**	.03	[.24, .47]
HS x PGB		.02	< .01	[-.06, .09]		-.01	< .01	[-.24, .23]		.04	< .01	[-.03, .14]		< -.01	< .01	[-.04, .04]		-.06	< .01	[-.23, .01]
Subtype x PGB		-.09**	.01	[-.21, -.03]		-.13**	.02	[-.86, -.42]		-.08*	< .01	[-.22, -.02]		-.12**	.01	[-.14, -.04]		-.10**	.01	[-.35, -.07]
Step 4	.01**				< .01				.01**				.02**				< .01			
HS x Subtype x PGB		.09**	.01	[.03, .17]		.06	< .01	[-.01, .20]		.09*	.01	[.03, .20]		.15**	.02	[.06, .14]		.06	< .01	[-.003, .23]

Note. * $p < .05$ ** $p < .01$; PGB = Prescriptive Gender Beliefs

Table 7

Hierarchical Multiple Regression Analyses Testing Interaction Models for HS on Subtle Measures of Intra-Gender Hostility and Collective Threat (Study 2).

	Moral Virtue				Moral Concern				Collective Threat			
	ΔR^2	β	sr^2	95% CI	ΔR^2	β	sr^2	95% CI	ΔR^2	β	sr^2	95% CI
Step 1	.05**				.03**				.03**			
BS		-.21**	.04	[-.40, -.19]		-.18**	.03	[-.35, -.15]		.18**	.03	[.18, .42]
Step 2	.24**				.10**				.33**			
HS		-.08*	.01	[-.21, -.02]		-.24**	.05	[-.42, -.22]		.12**	.01	[.08, .29]
Subtype		-.48**	.23	[-.86, -.67]		-.19**	.04	[-.41, -.20]		.53**	.29	[.88, 1.10]
PGB		-.09**	.01	[-.25, -.05]		-.11**	.01	[-.27, -.06]		.19**	.03	[.24, .46]
Step 3	.06**				.03**				.04**			
HS x Subtype		-.23**	.05	[-.39, -.23]		-.15*	.02	[-.29, -.11]		.18**	.03	[.20, .38]
HS x PGB		.01	< .01	[-.07, .09]		-.02	< .01	[-.12, .06]		-.01	< .01	[-.18, .21]
Subtype x PGB		.08*	.01	[.03, .22]		.07	< .01	[.00, .21]		-.11**	.01	[-.30, -.09]
Step 4	.01*				< .01				.01*			
HS x Subtype x PGB		-.08*	.01	[-.19, -.03]		-.05	< .01	[-.15, .03]		.07*	.01	[.03, .20]

Note. * p < .05 ** p < .01; PGB = Prescriptive Gender Beliefs

Table 8

Hierarchical Multiple Regression Analyses Testing Interaction Models for BS on Overt Measures of Intra-Gender Hostility (Study 2).

	Public Disapproval				Sharing Disapproval with Women				Sharing Disapproval with Men				Negative Attitudes				Private Disapproval			
	ΔR^2	β	sr^2	95% CI	ΔR^2	β	sr^2	95% CI	ΔR^2	β	sr^2	95% CI	ΔR^2	β	sr^2	95% CI	ΔR^2	β	sr^2	95% CI
Step 1	.05**				.05**				.06**				.04**				.02**			
HS		.21**	.05	[.16, .32]		.31**	.05	[.24, .47]		.24**	.06	[.22, .40]		.20**	.04	[.09, .18]		.16**	.02	[.16, .42]
Step 2	.11**				.14**				.09**				.22**				.17**			
BS		.17**	.02	[.11, .29]		.16**	.02	[.14, .39]		.14**	.02	[.09, .30]		.16**	.02	[.06, .16]		.18**	.02	[.20, .49]
Subtype		.19**	.04	[.16, .34]		.26**	.07	[.36, .39]		.16**	.03	[.15, .35]		.33**	.11	[.21, .31]		.31**	.09	[.52, .81]
PGB		.23**	.05	[.21, .39]		.24**	.06	[.33, .57]		.22**	.05	[.22, .43]		.30**	.09	[.19, .28]		.22**	.05	[.33, .61]
Step 3	.02**				.04**				.02**				.03**				.06**			
BS x Subtype		.11**	.01	[.06, .21]		.14**	.02	[.13, .35]		.12**	.01	[.07, .25]		.14**	.02	[.06, .14]		.22**	.05	[.30, .55]
BS x PGB		.03	< .01	[-.04, .12]		.03	< .01	[-.06, .16]		.03	< .01	[-.06, .13]		-.01	< .01	[-.04, .05]		-.02	< .01	[-.17, .08]
Subtype x PGB		-.09**	.01	[-.21, -.04]		-.13**	.02	[-.37, -.13]		-.08*	.01	[-.23, -.02]		-.12**	.01	[-.14, -.04]		-.10**	.01	[-.35, -.08]
Step 4	< .01				< .01*				< .01				.01**				< .01			
BS x Subtype x PGB		.04	< .01	[-.03, .13]		.07*	< .01	[.004, .22]		.03	< .01	[-.04, .14]		.09**	.01	[.02, .10]		.03	< .01	[-.06, .19]

Note. * $p < .05$ ** $p < .01$; PGB = Prescriptive Gender Beliefs

Table 9

Hierarchical Multiple Regression Analyses Testing Interaction Models for BS on Subtle Measures of Intra-Gender Hostility and Collective Threat (Study 2).

	Moral Virtue				Moral Concern				Collective Threat			
	ΔR^2	β	sr^2	95% CI	ΔR^2	β	sr^2	95% CI	ΔR^2	β	sr^2	95% CI
Step 1	.02**				.08**				.03**			
HS		-.16**	.02	[-.31, -.11]		-.27**	.07	[-.45, -.27]		.17**	.03	[.15, .38]
Step 2	.26**				.05**				.33**			
BS		-.15**	.02	[-.32, -.12]		-.07	.01	[-.20, .02]		.11**	.01	[.08, .30]
Subtype		-.48**	.23	[-.86, -.67]		-.19**	.04	[-.41, -.20]		.53**	.29	[.88, 1.10]
PGB		-.09**	.01	[-.25, -.05]		-.11**	.01	[-.27, -.06]		.19**	.04	[.24, .46]
Step 3	.05**				.01*				.02**			
BS x Subtype		-.21**	.05	[-.39, -.22]		-.09*	.01	[-.21, -.02]		.11**	.01	[.08, .28]
BS x PGB		-.01	< .01	[-.10, .07]		-.03	< .01	[-.13, .06]		-.02	< .01	[-.14, .06]
Subtype x PGB		.08*	.01	[.03, .22]		.07*	< .01	[.002, .21]		-.11**	.01	[-.30, -.09]
Step 4	< .01				.01*				< .01			
BS x Subtype x PGB		-.04	< .01	[-.14, .03]		-.09*	.01	[-.21, -.03]		.04	.02	[-.02, .17]

Note. * $p < .05$ ** $p < .01$; PGB = Prescriptive Gender Beliefs

toward the target when she endorsed prescriptive gender beliefs. Replicating the findings from Study 1, significant HS x Subtype interactions emerged on all dependent measures, such that HS was associated with greater intra-gender hostility toward the non-traditional target, all *b*s ≥ .21, all *p*s ≤ .001. Although HS was largely unrelated to intra-gender hostility toward the traditional target, all *b*s ≤ -.05, all *p*s ≥ .059, HS negatively predicted private disapproval of the target's behavior, $b = -.20$, $p = .031$ (see Figure 5), and was positively associated with perceptions of the target's moral virtue, $b = .19$, $p = .002$.

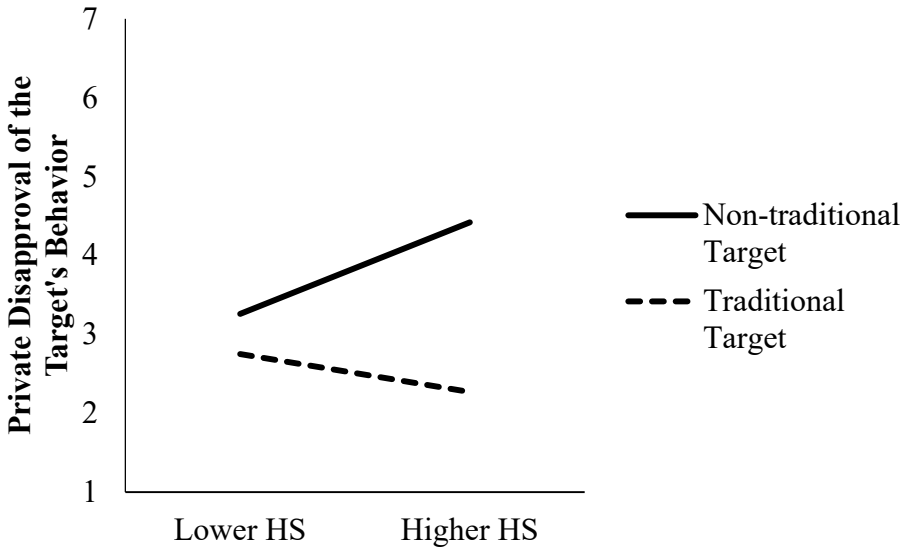

Figure 5. Private disapproval of the target's behavior as a function of HS and target subtype.

Significant BS x Subtype interactions also emerged, such that BS was associated with greater intra-gender hostility toward the non-traditional target, all *b*s ≥ .20, all *p*s ≤ .006, and unrelated to intra- gender hostility toward the traditional target, all *b*s ≤ .10, all *p*s ≥ .139.

Of greater relevance was whether the effects of sexism and subtype were moderated by the target's endorsement of prescriptive gender beliefs. As predicted, significant HS x Subtype x Prescriptive Gender Beliefs interactions emerged on public disapproval of the target, willingness to share disapproval with men, negative attitudes toward the target, and perceptions of the target's moral virtue (see Figure 6).

Consistent with H1, when evaluating the non-traditional target, HS was positively associated with a greater willingness to publicly disapprove of the target, all *b*s ≥ .24, all *p*s ≤ .004, share disapproval with men, all *b*s ≥ .09, all *p*s ≤ .005, more negative attitudes toward the target, all *b*s ≥ .30, all *p*s ≤ .015, and negatively associated with perceptions of the target's moral virtue, all *b*s ≥ -.33, all *p*s ≤ .001, regardless of the target's endorsement of prescriptive gender beliefs.

Partially consistent with H2, when evaluating the traditional target, HS was negatively associated with negative attitudes toward the target, $b = -.13$, $p = .002$, CI [-.21, -.05] and perceptions of the target's moral virtue, $b = .31$, $p < .001$, CI [.14, .47], but only when the target endorsed prescriptive gender beliefs about female sexuality. When the traditional subtype expressed no prescriptive beliefs, HS was unrelated to intra-gender hostility, all *b*s ≤ .08, *p*s ≥ .337. Further, HS was unrelated to willingness to show disapproval and share disapproval with men when evaluating the traditional subtype, all *b*s ≤ .12, *p*s ≥ .117.

Significant BS x Subtype x Prescriptive Gender Beliefs interactions emerged on willingness to share disapproval with women, negative attitudes toward the target, and moral concern for the target (see Figure 7). Consistent with H1, BS was positively associated with willingness to share disapproval with women, all *b*s ≥ .32, all *p*s ≤ .005, and negative attitudes toward the target, all *b*s ≥ .13, all *p*s ≤ .003, regardless of her endorsement of prescriptive gender beliefs. However, BS was unrelated to intra-gender hostility when participants evaluated the traditional target, all *b*s ≤ .07, all *p*s ≥ .175. Interestingly, BS was negatively associated with moral concern for the non-traditional target, but only when she endorsed prescriptive beliefs about female sexuality, $b = -.34$, $p < .001$, CI [-.52, -.16]. BS was unrelated to moral concern in the other conditions, all *b*s ≤ .04, all *p*s ≥ .201.

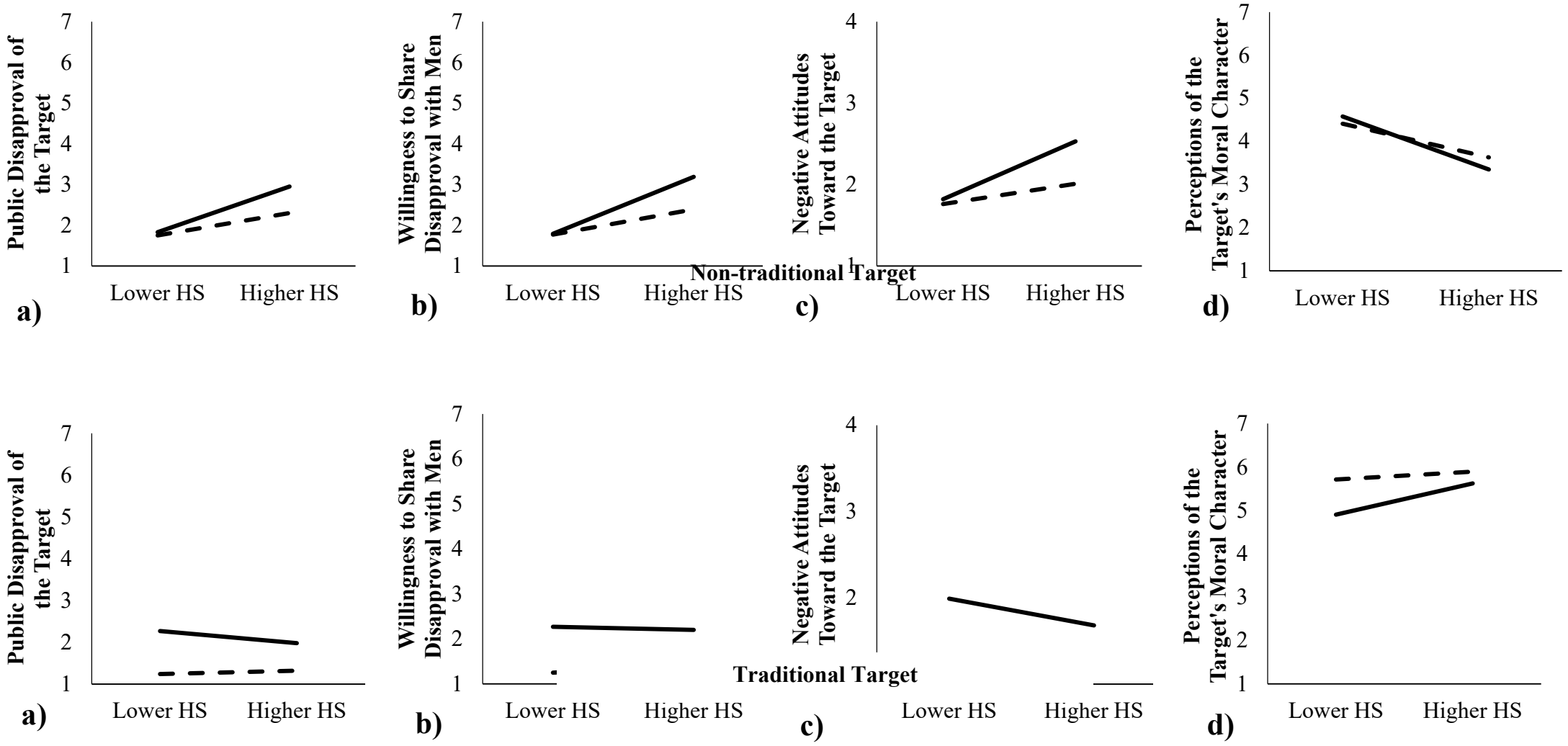

Figure 6. Public disapproval of the target (a),

willingness to share disapproval with men (b), negative attitudes toward (c), and perceptions of the target's moral character (d) as a function of HS, target subtype, and the target's endorsement of prescriptive gender beliefs.

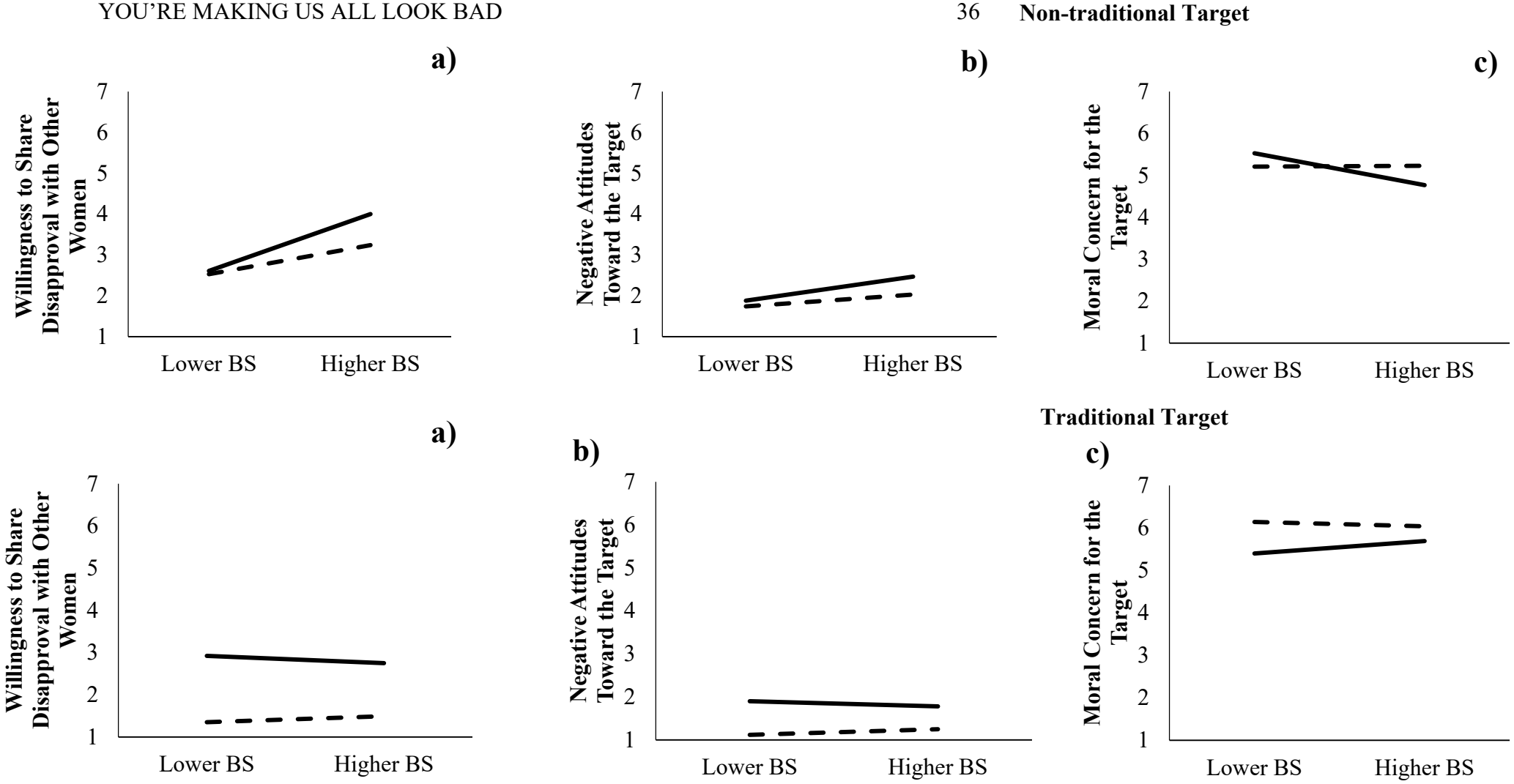

Figure 7. Willingness to share disapproval with other women (a), negative attitudes toward (b), and moral concern for the target (c) as a function of BS, target subtype, and the target's endorsement of prescriptive gender beliefs.

Collective Threat as a Function of Sexist Attitudes, Subtype, and the Target's Endorsement of Prescriptive Gender Beliefs

We first performed a series of Moderated Multiple Regressions to determine whether there was a significant relationship between HS/BS, subtype, prescriptive gender beliefs, and women's experience of collective threat. The effect coding procedures and the order of entry for the control variables, direct effects, and interaction terms were the same as the main analyses.

Consistent with H3, a significant HS x Subtype x Prescriptive Gender Beliefs interaction emerged on collective threat (see Table 7). Simple slopes analyses indicated that HS was positively associated with collective threat when evaluating the non-traditional subtype, regardless of her endorsement of prescriptive gender beliefs, all *b*s ≥ .38, all *p*s ≤ .001. Further, HS was negatively associated with collective threat toward the traditional subtype, but only when she endorsed prescriptive beliefs about female sexuality, $b = -.23$, $p = .013$, CI [-.42, -.05]. HS was unrelated to collective threat when the traditional target did not endorse prescriptive beliefs, $b = .03$, $p = .705$, CI [-.14, .21]. We also replicated the HS x Subtype interaction from Study 1, such that HS was positively associated with collective threat when evaluating the non-traditional subtype, $b = .48$, $p < .001$, and unrelated to collective threat when evaluating the traditional subtype, $b = -.10$, $p = .166$.

Although the BS x Subtype x Prescriptive Gender Beliefs interaction was not significant, a significant BS x Subtype interaction was observed (see Table 9). Follow up analyses revealed that BS was positively associated with collective threat when evaluating the non-traditional target, $b = .35$, $p < .001$, CI [.20, .49], and unrelated to collective threat when evaluating the traditional target, $b = .01$, $p = .893$, CI [-.14, .16]. Thus, we tested whether collective threat mediated the BS x Subtype interactions observed on the dependent measures.

Collective Threat as a Moderated Mediator of Women's Intra-Gender Hostility

As the HS x Subtype x Prescriptive Gender Beliefs interaction only emerged on publicly sharing disapproval of the target, willingness to share disapproval with men, negative attitudes toward the target, and perceptions of the target's moral virtue, we only tested for the mediating role of collective threat on these dependent variables. As the BS x Subtype interaction emerged on all dependent measures, we tested for the mediating role of collective threat on all variables. Moderated mediation analyses were conducted using Hayes (2012) PROCESS computation model (Model 7 testing 2-way moderated mediation and Model 11 testing 3-way moderated mediation) with 10,000 bootstrapped samples and 95% confidence intervals (see Tables 10 and 11 for unstandardized *b*s, standard errors, 95% confidence intervals, and index of moderated mediation).

Consistent with H3, when participants evaluated the non-traditional target, the relationship between HS and public disapproval, willingness to share disapproval with men, negative attitudes toward the target, and perceptions of the target's moral virtue were mediated through collective threat, regardless of the target's endorsement of prescriptive gender beliefs.

In line with H3, when evaluating the traditional target, the association between HS and negative attitudes toward the target and perceptions of the target's moral virtue were mediated through collective threat, but only when the target endorsed prescriptive gender beliefs. Interestingly, there were significant conditional indirect effects of HS and intra-gender hostility toward the traditional target via collective threat on public disapproval and willingness to share disapproval with men, but only when the target endorsed prescriptive gender beliefs. However, there were no significant indirect effects between HS and intra-gender hostility when the traditional target did not endorse prescriptive gender beliefs (see Table 10).

Table 10

Conditional Indirect Effects of HS on Intra-gender Hostility via Collective Threat as a Function of Subtype and the Target's Endorsement of Prescriptive Gender Beliefs (Study 2).

	Public Disapproval			Sharing Disapproval with Men			Negative Attitudes			Moral Virtue		
	Effect	SE	95% CI	Effect	SE	95% CI	Effect	SE	95% CI	Effect	SE	95% CI
Collective threat (*bc* path)	.34	.02	[.05, .22]	.36	.03	[.31, .41]	.27	.01	[.24, .29]	-.49	.03	[-.55, -.44]
Non-traditional target/PGB Present	.20	.04	[.12, .28]	.20	.04	[.13, .28]	.15	.03	[.10, .21]	-.28	.05	[-.39, -.18]
Non-traditional target/PGB Absent	.13	.04	[.06, .20]	.14	.04	[.06, .21]	.10	.03	[.05, .15]	-.19	.05	[-.29, -.09]
Traditional target/PGB Present	-.08	.04	[-.15, -.01	-.08	.04	[-.16, -.01]	-.06	.03	[-.11, -.01]	.12	.05	[.01, .22]
Traditional target/PGB Absent	.01	.02	[-.03, .06]	.01	.02	[-.03, .06]	.01	.02	[-.03, .05]	-.02	.03	[-.08, .05]
Index of Moderated-Moderated Mediation	.04	.02	[.01, .07]	.04	.02	[.01, .07]	.03	.01	[.01, .06]	-.06	.02	[-.10, -.01]

Note. Effects represent unstandardized *b*s.

Table 11

Conditional Indirect Effects of HS and BS on Intra-gender Hostility via Collective Threat as a Function of Subtype (Study 2).

	Public Disapproval			Sharing Disapproval with Women			Sharing Disapproval with Men			Negative Attitudes			Private Disapproval			Moral Virtue			Moral Concern		
	Effect	SE	95% CI	Effect	SE	95% CI	Effect	SE	95% CI	Effect	SE	95% CI	Effect	SE	95% CI	Effect	SE	95% CI	Effect	SE	95% CI
Collective threat (*bc* path)	.34	.02	[.30, .39]	.55	.03	[.49, .61]	.36	.03	[.31, .41]	.27	.01	[.24, .29]	.66	.04	[.09, .35]	-.49	.03	[-.55, -.44]	-.28	.03	[-.33, -.22]
HS																					
Non-traditional target	.16	.03	[.11, .22]	.26	.04	[.17, .35]	.17	.03	[.11, .23]	.13	.02	[.09, .17]	.31	.05	[.21, .42]	-.24	.04	[-.31, -.16]	-.13	.03	[-.19, -.08]
Traditional target	-.03	.02	[-.08, .01]	-.05	.04	[-.13, .02]	-.03	.02	[-.08, .01]	-.03	.02	[-.06, .01]	-.06	.04	[-.15, .02]	.05	.03	[-.02, .11]	.03	.02	[-.01, .06]
Index of Moderated Mediation	.20	.04	[.13, .27]	.31	.05	[.21, .42]	.21	.04	[.14, .28]	.15	.03	[.10, .21]	.38	.06	[.25, .51]	-.28	.05	[-.38, -.19]	-.16	.03	[-.23, -.10]
BS																					
Non-traditional target	.12	.03	[.06, .18]	.19	.05	[.10, .28]	.12	.03	[.06, .19]	.09	.02	[.05, .14]	.23	.06	[.12, .34]	-.17	.04	[-.26, -.09]	-.10	.02	[-.15, -.05]
Traditional target	< .01	.03	[-.05, .06]	.01	.04	[-.08, .09]	< .01	.03	[-.05, .06]	< .01	.02	[-.04, .04]	.01	.05	[-.10, .11	-.01	.04	[-.08, .07]	< -.01	.02	[-.04, .04]
Index of Moderated Mediation	.11	.04	[.04, .19]	.18	.06	[.07, .30]	.12	.04	[.05, .20]	.09	.03	[.03, .15]	.22	.07	[.08, .37]	-.17	.06	[-.28, -.06]	-.09	.03	[-.16, -.03]

Note. Effects represent unstandardized *b*s.

We also replicated the 2-way conditional indirect effects from Study 1, such that when participants evaluated the non-traditional target, the relationship between HS and intra-gender hostility was mediated through collective threat on all dependent measures, while no conditional indirect relationships emerged when evaluating the traditional target (see Table 11).

Further, the relationship between BS and public disapproval, willingness to share disapproval with women, willingness to share disapproval with men, negative attitudes toward the target, private disapproval, perceptions of the target's moral virtue, and moral concern for the target were mediated through collective threat. However, there were no significant indirect effects when evaluating the traditional target (see Table 11).

Discussion

Overall, our predictions were largely supported. Higher (versus lower) HS women reported greater intra-gender hostility toward the non-traditional subtype, and this was not qualified by the target's endorsement of prescriptive gender beliefs. Once again, these effects were mediated by collective threat. Women higher in BS were also more hostile toward the non-traditional target than lower BS women and, contrary to Study 1, these effects were mediated by collective threat. In contrast, lower BS women showed no equivalent hostility toward the traditional female subtypes, and this was not influenced by the target's endorsement of prescriptive gender beliefs.

As expected, women who less strongly endorsed HS reported more negative attitudes toward the traditional target and reported lower perceptions of her moral virtue relative to women higher in HS, but only when she expressed prescriptive gender beliefs about female sexuality. Importantly, these effects were both mediated by collective threat. There were also significant indirect effects of HS on hostility toward the traditional target, such that lower HS women reported more collective threat when the traditional subtype endorsed prescriptive

gender beliefs, which, in turn, predicted a greater willingness to publicly show their disapproval and share their disapproval with men.

Interestingly, lower HS were more privately disapproving of the target's behavior than higher HS women regardless of the target's endorsement of prescriptive gender beliefs (and this was not mediated by collective threat). This suggests that lower HS women are less supportive of traditional women overall, but this only translates into collective threat and more overt forms of intra-gender hostility when traditional women's actions explicitly reinforce inequality.

General Discussion

The aims of this research were to determine: a) if endorsement of sexist attitudes is associated with intra-gender hostility toward non-traditional and traditional female subtypes; and b) whether collective threat explains these effects. Overall, our results provide support for these propositions.

Consistent with prior research, higher HS women were more judgemental of non-traditional subtypes (Glick et al., 1997; Masser & Abrams, 2004; Becker, 2010). Specifically, women higher in HS were more willing to publicly express their disapproval of the target, share their disapproval with other people, endorsed more negative attitudes about the target (Studies 1 and 2), privately disapproved of the target's behavior, and reported lower evaluations of the target's moral character (Study 2). These findings were not qualified by stereotype content (Study 1) or the target's endorsement of prescriptive gender beliefs (Study 2). Importantly, these effects were explained by collective threat.

Women higher in BS were also more judgemental of non-traditional subtypes. This effect emerged on their desire to share their disapproval of the sexually available target with men and women (Studies 1 and 2), their willingness to publicly express their disapproval to the target, negative attitudes toward the target, private disapproval of the target's behavior,

lower evaluations of the target's moral virtue, and lower moral concern for the target (Study 2). However, only the effects observed in Study 2 were underpinned by collective threat. These inconsistencies may be because Study 2 was more adequately powered to detect these effects. Together, these findings are the first to establish that the intra-gender hostility expressed by women who more strongly endorse HS and, to some extent, BS, is underpinned by a concern that non-traditional women reinforce negative perceptions of their gender, and not just their disapproval of the target's gender atypical behavior.

The relationship between sexism, collective threat, and intra-gender hostility toward the traditional subtypes was more complex. When only the traditional subtype's behavior was described, higher and lower HS women reported similar levels of collective threat and intra-gender hostility toward her (Studies 1 and 2). Although lower HS women privately disapproved of the traditional target's behavior more than higher HS women (Study 2), they only reported collective threat and were subsequently more hostile toward her (i.e. in terms of their willingness to publicly show their disapproval, share their disapproval with men, endorse negative attitudes about her, and report lower evaluations of her moral character) when she endorsed prescriptive gender beliefs (Study 2). This indicates that although women lower in HS are less privately approving of traditional women, these targets are only perceived as collectively threatening and worthy of hostility when their actions explicitly reinforce gender inequality. Thus, similar to Cichocka et al. (2013), less sexist women can demonstrate conditional support for traditional women. However, the present findings extend this work by implicating the role of other identity concerns in women's intra-gender hostility (i.e. collective threat), and not just the experience of social identity threat.

Theoretical and Practical Implications

Broadly, these findings confirm and extend the social identity account of women's intra-gender hostility (see Derks, Ellemers, van Laar, & de Groot, 2011; Derks, van Laar,

Ellemers, & de Groot, 2011) by identifying additional identity concerns and mechanisms that affect women's intra-group attitudes and willingness to support other women. Our results also qualify prior work on gender-based collective threat by suggesting that sexist ideology influences the types of behaviors that women find problematic and their experience of collective threat. Thus, women are not an ideologically homogeneous group who all find the same behaviors threatening and worthy of hostility as has been assumed in prior work (Cohen & Garcia, 2005; Duguid, 2011). Rather, the unique identity pressures they face to conform to patriarchal stereotypes leads more and less sexist women to experience threat and enact intra-gender hostility toward different targets. These findings further highlight the importance of considering identity content as a determinant of women's experience of and reactions to social identity processes (see Becker & Wagner, 2009, for further discussion of this point).

Practically, our findings suggest that reducing the occurrence of women's intra-gender hostility involves addressing widely endorsed sexist beliefs that reinforce women's lower status and restrict their acceptable roles and behaviors. Doing so may help reduce the pressure women face to conform to patriarchal stereotypes which, in turn, influences their experience of threat and hostility toward different female subtypes. Further, challenging these attitudes will address the enabling role that men can play in this seemingly intra-group process. That is, addressing sexism would likely reduce men's disparagement of non-traditional women (Begany & Milburn, 2002; Maas et al., 2003; Reidy et al., 2009) and their preference for women in traditional roles (Glick et al., 1997; Sibley & Wilson, 2004) which may (understandably) maintain women's belief that certain behaviors are collectively threatening. Thus, addressing both women's and men's sexist attitudes is key to improving women's intra-group relations and attitudes.

Limitations and Future Directions

Future research should adopt an intersectional feminist approach and examine other

salient stereotypes that may be collectively threatening to particular sub-groups of women, such as the 'angry black woman' (Walley-Jean, 2009) or 'butch lesbian' stereotype (Geiger, Harwood, & Hummert, 2006). This would further our understanding of the specific identity pressures different groups of women face and demonstrate that women's intra-gender hostility can result from multiple intersecting and devalued identities.

Future research should also examine the impact of ideology on collective threat and intra-gender hostility among men. It may be that men's endorsement of sexism influences the subtypes whom they perceive as collectively threatening and deserving of hostility (e.g. stay-at-home fathers versus breadwinners). Examining similar processes in men would provide a fuller understanding of gender-based collective threat and intra-gender hostility and its function for both men and women.

Conclusion

The present investigation is the first to establish that women's endorsement of sexist attitudes influence their experience of collective threat and expression of intra-gender hostility toward different female subtypes. We demonstrate that the intra-gender hostility expressed by women who more strongly endorse HS and BS was motivated by concerns that the target's behavior may be generalized into a negative stereotype of women as a group, and not just because they disapprove of the target's gender atypical behavior. We also find that women who less strongly endorse HS can experience collective threat and enact hostility toward traditional women, but only if the target espouses prescriptive gender beliefs which threaten to reinforce gender inequality. These findings demonstrate that women are not a homogeneous group whose members all find the same behaviors collectively threatening and deserving of hostility as has been implicitly assumed in prior work.

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Declaration of Conflicting Interests

The Authors declare that there is no conflict of interest.

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