

# Your Sexism Predicts My Sexism: Perceptions of Men's (but not Women's) Sexism Affects One's Own Sexism Over Time

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**Abstract** The effects of perceived normative (societal) levels of benevolent (BS) and hostile sexism (HS) on one's own sexist attitudes were examined over a four-month period in an undergraduate New Zealand sample (76 women, 26 men). Perceptions of normative levels of men's BS produced longitudinal change in one's own BS, and this effect was invariant across gender. However, contrary to previous research suggesting that women endorse BS when men are high in HS for its protective benefits, women instead expressed subjectively positive paternalistic attitudes toward their gender to the extent that they perceived BS as normative in men. The transmission of patriarchal-defined ideologies is tempered by the degree to which such ideologies espouse benevolent versus more overtly hostile attitudes toward women.

**Keywords** Ambivalent sexism · Hostile sexism · Benevolent sexism · System-justification theory · Longitudinal

## Introduction

The ideas of the dominant tend to become the ideas of the dominated.

—Jost and Banaji (1994, p. 10)

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Amongst the many forms of prejudice and negative outgroup attitudes observed in society, the expression and context of sexist ideology is unique. This uniqueness arises because of the mutual interdependencies between men and women at the *interpersonal level*, such as the needs for heterosexual intimacy, pair-bonding, and sexual reproduction (Glick and Fiske 1996). On the basis of these observations, Glick and Fiske (1996) posited that sexist ideology about women is organized along two complementary dimensions. One dimension reflects levels of *Hostile Sexism* (HS), which is consistent with notions of sexism-as-antipathy, and according to Glick et al. (2004, p. 715) reflects “hostility toward women who challenge male power, whether directly (e.g., feminists) or through ‘feminine wiles.’” The other dimension, termed *Benevolent Sexism* (BS), is somewhat different in tone, and is defined as attitudes toward women that are “subjectively benevolent but patronising, casting women as wonderful but fragile creatures who ought to be protected and provided for by men” (Glick et al. 2004, p. 715).

Ambivalent Sexism Theory states that these two ideologies form an integrated ideological system that justifies and maintains men's greater status and power in society by emphasizing both subjectively positive (BS) and subjectively negative (HS) evaluations of women depending upon their social role (Glick and Fiske 1996). Benevolent sexist attitudes are typically expressed toward social categories of women who are seen as socially desirable mates (e.g., the good housewife and nurturing mother), whereas hostile sexist attitudes are typically expressed toward women who do not conform to these prescriptive patriarchal-defined social roles (e.g., feminists, sexually promiscuous women; Glick et al. 1997; Sibley and Wilson 2004). As the opening quote by Jost and Banaji (1994) implies, patriarchal social

systems should therefore be stable to the extent that the ideologies that perpetuate the system are accepted (albeit to varying degrees) by members of *both* the dominant (men) and disadvantaged (women) group (Glick and Fiske 1996; Glick et al. 2000, 2004; Jost and Kay 2005). This system-justifying process is thought to occur, in part, because men's levels of sexism, both hostile and benevolent, form an important social referent that determines women's endorsement of sexist beliefs toward their gender (Glick et al. 2000; Jost and Banaji 1994; Jackman 1994).

The present study explores this possibility by examining the extent to which perceived normative (societal) levels of sexism held by one's own gender and the other gender affect one's own (self-referent) agreement with BS and HS ideology over time. We test this model in a sample of male and female New Zealand undergraduates using a longitudinal panel design.

#### Ambivalent Sexism and the Transmission of Sexist Ideology

System Justification Theory (Jost and Banaji 1994) and Social Dominance Theory (Sidanius and Pratto 1999) both predict that the ideologies espoused by dominant groups within society have enduring effects on society as a whole (and thus help to legitimate social inequality and hierarchical social stratifications) because they tend to also be adopted by disadvantaged groups. The reverse process in which the ideologies endorsed by disadvantaged groups tend to be consensually adopted by dominant groups within society is a far rarer occurrence. Indeed, the centrality of ideologies espoused by the dominant group for determining social representations held by society as a whole can be traced back to Marxism, which first proposed that those who control the means of production (and hence have greater status and power) maintain their position by promoting false consciousness (a form of ideological control) within the working class (Marx and Engels 1846/1970).

Within the context of gender relations, Jackman (1994) has convincingly argued that commonly held stereotypes of women as warm and caring (but not competent) help to maintain gender inequality because they 'sweeten the deal'—that is, these positive stereotyped ascriptions of women's warmth help to encourage women's active participation in the patriarchal system by emphasizing the subjectively positive benefits of the system to women (see also Fiske et al. 1999; Glick and Fiske 1996; Jost and Kay 2005). Accordingly, BS complements HS and thus aids in the maintenance of gender inequality because it is regarded as subjectively positive and caring by a large number of men *but also* women (Kilianski and Rudman, 1998). In her founding analysis of research on paternalistic

ideology and social control, Jackman (1994) for instance argued that:

In relations that are structured intimately, dominant-group members gravitate to a paternalistic ideology that permits them to practice coercive love. Subordinates' attributes and needs are defined by the dominant group in ways that are consistent with their ascribed role in the unequal relationship, and subordinates are offered love and affection if they comply with the terms of that relationship. This moral framework constrains subordinates' options tightly at the same time as it swathes the expropriation with the warm and binding ties of mutual affection. (p. 92)

Jackman's (1994) analysis suggests that patriarchy is maintained by ideologies espoused by the dominant group (in this case men) that emphasise not only negative and hostile attitudes toward women, but more importantly by those that emphasize benevolent and subjectively positive attitudes characterizing women as warm, but also weaker than men (Eagly and Mladinic 1994; Glick et al. 2004; Jackman 1994; Jost and Kay 2005). It is the combination of these two ideologies it seems, that seals the deal, and elicits consensual agreement and active participation by women in the patriarchal system, thus maintaining its stability. Jackman (1994) argued that ideologies such as BS are crucial in this regard because they disarm resistance to gender inequality by shaping perceptions of what women's social roles are and should be. Although these social roles do not allow direct access to resources and status to the same extent as men's roles; BS provides a seductive pull by emphasizing subjectively positive stereotypes of women as warm and wonderful delicate creatures that should be cherished and protected by men. BS thus promises rewards for women who conform to prescribed roles—rewards that are provided by men with whom women have formed interpersonal bonds. Expressions of highly coercive and antipathetic HS attitudes may therefore be seen (by both dominant and subordinates alike) as an aberrant case in which deviant subordinate group members rebel against the system and need to be brought into line (Jackman 1994). Social control and inequality, according to this perspective, cannot maintain a long and healthy existence simply by recourse to hostile and coercive ideologies.

Jackman (1994) and Glick et al. (2000) have argued that the transmission of sexist ideology can occur in two key ways, both of which share a common genesis in that ideologies espoused by the dominant group are consensually endorsed by subordinates. On the one hand, Jackman (1994) argued that paternalistic ideologies are promoted by the dominant group as a method of social control. According to this perspective, subordinates are offered love and affection for adhering to prescribed social roles that

limit their access to power and complement rather than compete with men. In order to function effectively, such ideologies must necessarily be accepted by the subordinate group. Thus, predictions derived from Jackman (1994) suggest that the subordinate groups' acceptance of paternalistic BS-like ideologies provides a critical method of ideological transmission and social control. Indeed, the use of paternalistic or BS-like ideologies should be preferred as a method of ideological control by the dominant group for a number of reasons. For a start, the expression of BS ideologies toward accepting subordinates allows dominant group members to position themselves in a positive and socially desirable light as benevolent protectors and providers. Furthermore, as Jackman (1994) convincingly argued, paternalistic ideologies should be more effective than hostile and coercive methods of social control because, quite simply, they avoid explicit conflict. Social control through coercion and overt force, according to this perspective, only becomes necessary when control via paternalistic ideologies fails.

On the other hand, Glick et al. (2000) proposed that in certain contexts, women may endorse BS in response to men's HS, perhaps because of the protection that this seemingly benevolent and protective ideology provides from more hostile and overtly aggressive forms of sexism. Glick (2006), for instance, reported that at the nation-level, men's and women's mean levels of *both* HS and BS were strongly positively associated with national differences in power distance (the preference for hierarchically organized interpersonal and social role relations), and strongly negatively associated with national levels of gender empowerment (an index reflecting women's representation in high status roles within society). These findings indicate that BS and HS may be most strongly embraced by men (and also women) in those nations with the highest levels of gender inequality, and in which the gender gap in domains such as income and education is most pronounced.

Furthermore, Glick et al.'s (2000, 2004) cross-cultural analyses indicate that men's and women's mean levels of sexism tend to covary at the societal level. In nations where men had a high national mean level of HS and BS women also tended to have a high national mean level of HS and BS, and vice-versa. Impressively, across 19 nations, Glick et al. (2000) reported that national mean levels of men's HS was strongly positively correlated with both women's BS ( $r=.92$ ) and HS ( $r=.84$ ). Likewise, men's BS was also strongly correlated with women's BS ( $r=.97$ ) and HS ( $r=.84$ ). As Glick and Fiske (2001b) concluded when summarizing these concurrent correlational findings,

These results support the system-justification notion; when men are more sexist, women are more likely to embrace sexist ideologies, both hostile and benevo-

lent. Although an alternative is that men take their lead from women's sexism, system-justification theories presume (as do we) that dominant groups are in a better position to propagate ideologies. (p. 136)

Extending this analysis, Glick et al. (2000) observed that women (relative to men) tended to express low levels of support for HS across nations. The trend for women's national mean level of BS was more complex, however. Glick et al. (2000) observed that in nations where men were relatively low in HS, women also tended to express low levels of both BS and HS, and the means of women's endorsement for both ideologies was lower than that observed in men. However, in nations where men were extremely high in HS (namely, Cuba, South Africa, Nigeria, and Botswana) women displayed heightened levels of BS, which were in fact higher than men's levels of BS. Glick et al. (2000) suggested that this cross-national trend occurred because women are motivated to embrace BS in nations with high levels of gender inequality and in which men tend to be high in HS. In such conditions, Glick et al. (2000) argued, BS becomes extremely important for women because of its protective benefits from high societal HS (a "protection racket" perspective). Consistent with this premise, Fischer (2006) also reported that women who were informed that men held generally hostile and had negative attitudes toward women tended to express heightened levels of BS relative to a control condition.

Importantly, the correlations reported by Glick et al. (2000) are also consistent with the premise that men's BS should predict women's BS. For instance, the strongest of the cross-national correlations reported by Glick et al. (2000) was that in which national levels of men's BS were correlated with national mean levels of women's BS. Using the data presented by Glick et al. (2000, p. 771), we extended this analysis by calculating partial correlations between men's and women's sexism controlling in turn for BS and HS. Results indicated that men's BS remained a strong and significant predictor of women's BS when controlling for national levels of men's HS ( $r(16)=.85$ ,  $p<.01$ ). The association between national levels of men's HS and women's BS, in contrast, was considerably weaker when controlling for men's BS ( $r(16)=.51$ ,  $p=.03$ ). Consistent with predictions derived from Jackman's (1994) analysis, these results suggest that women's endorsement of BS might also occur as a function of men's BS (and not just HS, as Glick et al. 2000, emphasized). Indeed, these data indicate that, all things being equal, the transmission of ideologies espoused by the dominant group to subordinates may be stronger for BS than HS.

This makes sense given that men's BS should be a more appealing social referent than men's HS in all but the most extreme patriarchal societies where women's promotion

of BS becomes necessary for its protective benefits from otherwise hostile men.

### Overview and Guiding Hypotheses

The present research elaborated on previous cross-cultural (i.e., Glick et al. 2000, 2004) and experimental research (i.e., Fischer 2006) on the transmission of sexist ideology by directly examining participants' perceptions of the normative levels of sexism held by men and women in society. System Justification Theory (Jost and Banaji 1994) and Social Dominance Theory (Sidanius and Pratto 1999) both state that the ideologies espoused by dominant group members form the proximal referent for both dominant and disadvantaged group members' attitudes and values. In the context of patriarchal society, we therefore predicted that perceptions of the normative level of men's sexist ideologies should predict cross-lagged changes in one's own (self-referent) endorsement of sexist ideology over time. Importantly, if System Justification Theory and Social Dominance Theory hold, then such effects should occur for both men *but also women*. For men, we expected that the transmission of sexist ideology would occur as a function of perceived *ingroup* norms. For women, however, we expected that the transmission of sexist ideology would occur as a function of perceived *outgroup* norms, and thus also occur as a function of perceptions of the ideologies espoused by the dominant (male) referent group. The reverse effects, however, where ideologies espoused by disadvantaged groups form a referent that shapes societal attitudes and values, should be a far rarer occurrence, and we did not expect to observe such effects in the present study.

Extending the aforementioned reasoning to the domain of gender relations, Ambivalent Sexism Theory offers specific predictions regarding the types of sexist ideology that will be most readily transmitted from dominant (male) to disadvantaged (female) groups. As both Glick and Fiske (1996) and Jackman (1994) have compellingly argued, the benevolent and subjectively positive and cherishing ideology expressed by BS should be more amenable to women than overtly coercive, negative and aggressive sexist ideologies expressed by HS in nations where gender inequality is relatively low and women do not need to endorse BS *specifically for its protective benefits* from men.

New Zealand is one such nation, in which gender equality is relatively high, and thus women should not have to endorse BS as a protection-motivated response. New Zealand is much like the United States in this regard, and has strong anti-discrimination laws promoting women and men's equal opportunity and participation in all areas of life. For instance, according to the

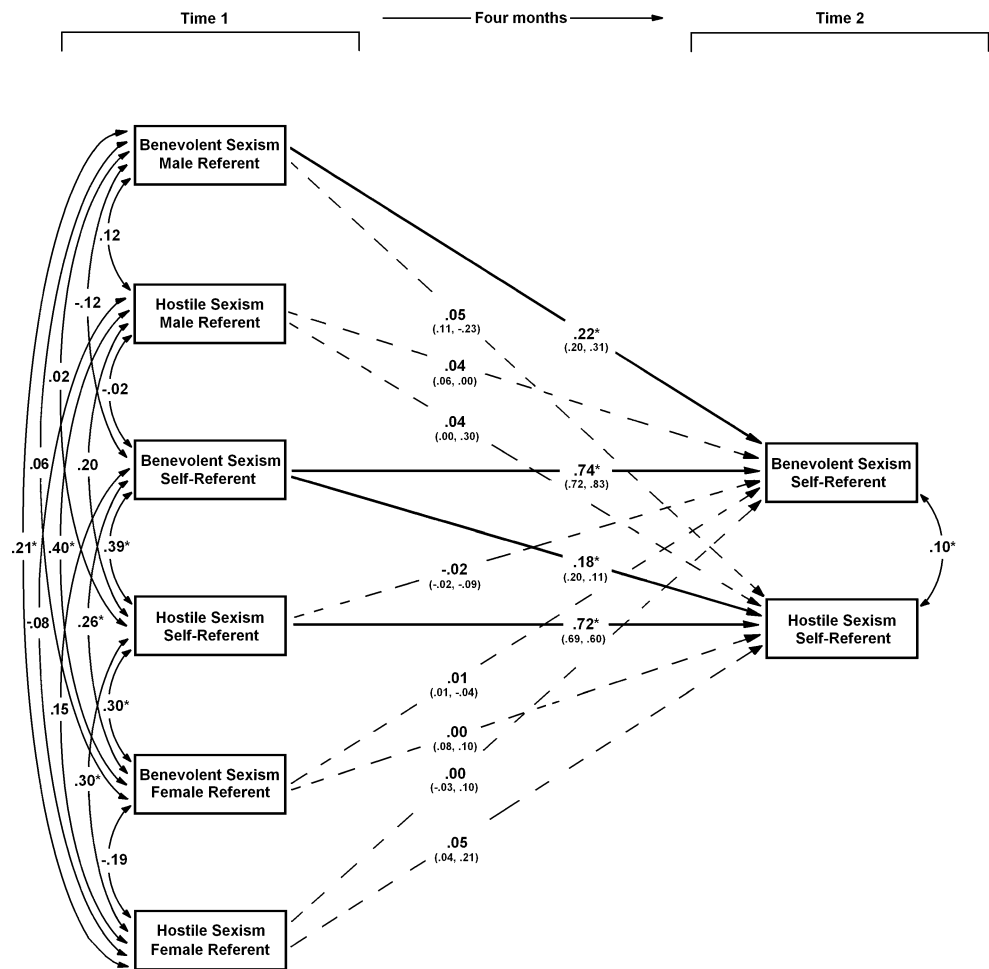
United Nations Human Development Report (2007/2008) New Zealand had a Gender-related Development Index (GDI) of .935 (18th out of 157 nations). Likewise, the Gender Empowerment Measure (GEM) for New Zealand was .811 (the 11th highest of 93 nations). These statistics indicate that New Zealand is a relatively gender egalitarian nation, and although women continue to earn less than men (approx. 70% of men according to the 2007/2008 Human Development Report); the nation is nevertheless amongst those with the highest level of gender equality.

In the New Zealand context, we therefore expected that women's acceptance of BS may be more likely to change as a result of perceived normative levels of men's BS (Hypothesis 1), rather than resulting from a protection-driven motivation in response to men's HS as it might in nations with extremely high levels of gender inequality. We tested this hypothesis using path analysis in which we examined the cross-lagged effects of self-referent, male-referent, and female-referent BS and HS on participants' own (self-referent) levels of BS and HS over a four month period. In order to examine possible gender differences and consistencies we adopted a multi-sample path analytic approach, in which we tested the extent to which our longitudinal path model was equivalent for both men and women (this model is presented in Fig. 1). To reiterate, we expected that the effect of male-referent BS on self-referent BS would occur equally in both male and female samples, and thus should be invariant across gender. This should occur because, consistent with a System Justification Theory perspective, perceptions of normative levels of BS in the dominant (male) group should act as the key social referent for both men's and women's endorsement of BS.

Finally, our design also allowed us to examine the cross-lagged effects of self-referent BS and HS on one another over time for both men and women. Previous longitudinal research has shown that BS predicts changes in HS over time, and not the reverse (Sibley and Perry 2008, manuscript submitted for publication; Sibley et al. 2007a, b). The causal effect of one's endorsement of BS on the subsequent acceptance of HS likely occurs because adherence to an ideology espousing that women fulfill the important and valued social roles of homemakers and caregivers (for which they should be protected and cherished by men) results in high levels of dissonance when other women are perceived as resisting or rejecting such roles and therefore threatening the validity and legitimacy of the social system (Glick and Fiske 1996). This in turn results in hostile and negative attitudes toward women who fail to conform, and this system-justifying process occurs for both genders. Thus, Hypothesis 2 predicted that self-referent BS would predict longitudinal change in self-referent HS.



**Fig. 1** Cross-lagged effects of one’s own (self-referent) levels of BS and HS, and perceptions of the normative level of male-referent and female-referent BS and HS on self-referent BS and HS over a four-month period with standardized path coefficients. (\* $p < .05$ . Non-significant paths shown by dashed lines. Paths were pooled across genders. Numbers in brackets represent path coefficients for women and men, respectively).



**Method**

**Participants and Procedure**

Participants were female and male undergraduate psychology students at a New Zealand (NZ) university who participated for partial course credit. Data were collected from 190 people (136 women, 54 men;  $M_{age}=21.17$ ,  $SD_{age}=4.84$ ) at Time 1 (137 NZ European, 19 Maori/Pacific Nations, 16 Asian, four Indian, 14 non-NZ European). One hundred and two people (76 women, 26 men) also participated at Time 2 4 months later, also for partial course credit (74 NZ European, 12 Maori/Pacific Nations, six Asian, three Indian, seven non-NZ European). Participants were recruited via advertisements posted in tutorial sessions.

**Materials**

Participants own (self-referent) levels of Benevolent Sexism (BS) and Hostile Sexism (HS) were assessed at both times using the Ambivalent Sexism Inventory (Glick and Fiske 1996). The scale assessing BS contained 11 items,

such as: “Many women have a quality of purity that few men possess” (protrait) and “In a disaster women ought not necessarily to be rescued before men” (contrait). The scale assessing HS contained 11 items, such as: “When women lose to men in a fair competition, they typically complain about being discriminated against” (protrait), and “There are actually very few women who get a kick out of teasing men by seeming sexually available and then refusing male advances” (contrait). In order to assess self-referent (own) attitudes, items were administered using the following instructions (adapted from Glick and Fiske 1996):

Below are a series of statements regarding men and women and their relationships in contemporary society. Please circle a number that indicates the extent to which **YOU PERSONALLY** agree or disagree with each statement. Please remember that there are no right or wrong answers. The best answer is **YOUR OWN OPINION**.

Perceived normative levels of men’s and women’s sexism in society were assessed only at Time 1. Perceived normative levels of men’s BS and HS (male-referent) were

assessed using a version of the Ambivalent Sexism Inventory administered with the following instructions:

Please try and give your best guess about how you think **MOST MEN** in contemporary New Zealand society would respond to these statements. We are not interested in your own personal opinion, but rather the extent to which you think **MOST MEN IN NEW ZEALAND** would, on average, agree or disagree with the following statements.

Similarly, perceived normative levels of women's BS and HS in society (female-referent) were assessed using a version of the Ambivalent Sexism Inventory administered with the following instructions:

Please try and give your best guess about how you think **MOST WOMEN** in contemporary New Zealand society would respond to these statements. We are not interested in your own personal opinion, but rather the extent to which you think **MOST WOMEN IN NEW ZEALAND** would, on average, agree or disagree with the following statements.

All items were rated on a scale ranging from 1 (strongly disagree) to 9 (strongly agree). The order in which participants completed these three versions of the Ambiv-

alent Sexism Inventory during Time 1 was randomized. Data were matched using confidential student identification numbers. Students received partial course credit for participation during both phases. Items were averaged to create an overall score ranging from 1 (low) to 9 (high) for each scale. Descriptive statistics and internal reliabilities for all scales are presented in Table 1.

As shown in Table 1, the scales assessing self-referent, male-referent and female-referent BS and HS generally evidenced acceptable internal reliability at both time points for men and women, with Cronbach's alphas closely approaching or above .70. There was one exception: women's ratings of women's normative BS, which had an alpha value of .61. These internal reliability estimates are generally consistent with those reported by Glick et al. (2000) in their analysis of BS and HS in 19 nations. Glick et al. (2000), for instance, reported that the internal reliability estimates for HS (range .68 to .89) were generally higher than those reported for BS (range .53 to .84). Our New Zealand data fall in the middle of this cross-national range. As Glick et al. (2000) noted the slightly lower internal reliability estimates for BS likely arise because BS contains three interrelated sub-factors: protective paternalism, heterosexual intimacy, and complementary gender differentiation. HS, in contrast, appears more unidimensional

**Table 1** Descriptive statistics and correlations between self-referent, male-referent, and female-referent BS and HS for men (lower diagonal) and women (upper diagonal).

Scale	1.	2.	3.	4.	5.	6.	7.	8.
1. Time 1 BS self-referent		.42*	.27*	-.02	.30*	.18	.77*	.55*
2. Time 1 HS self-referent	.28		.07	.23*	.43*	.30*	.31*	.83*
3. Time 1 BS male-referent	-.04	-.16		-.28*	.01	.24*	.37*	.23*
4. Time 1 HS male-referent	-.04	.08	.32		.44*	-.02	-.01	.16
5. Time 1 BS female-referent	.15	-.20	.17	.29		-.14	.25*	.43*
6. Time 1 HS female-referent	.06	.33	.13	-.29	-.38*		.14	.30*
7. Time 2 BS self-referent	.79*	.14	.30	.02	.12	.17		.54*
8. Time 2 HS self-referent	.27	.77*	-.21	.19	-.21	.32	.21	
Women								
<i>M</i>	4.69	4.14	4.66	6.79	6.20	3.85	4.48	4.12
<i>SD</i>	.93	1.22	.89	1.00	.85	1.14	1.05	1.17
Skewness	-.38	.08	.44	-.55	.29	-.24	-.27	-.17
Kurtosis	-.19	-.14	.62	.10	1.48	.48	-.22	-.36
$\alpha$	.69	.86	.71	.85	.73	.87	.77	.86
Men								
<i>M</i>	4.97	4.76	5.58	6.68	6.27	3.14	4.72	4.40
<i>SD</i>	.97	.93	1.01	1.01	.83	1.03	.93	1.15
Skewness	.10	-.70	.05	-1.03	.35	.81	.07	-.44
Kurtosis	.46	1.33	-.50	1.20	-.10	-.12	-1.20	.56
$\alpha$	.68	.73	.77	.87	.61	.86	.67	.85

All scores ranged from 1 (low levels of sexism) to 9 (high levels of sexism).  $n=26$  males and 76 females. Self-referent scores refer to the individual's levels of BS and HS. Male-referent scores refer to the individual's perceptions of the normative levels of BS and HS held by men in society. Female-referent scores refer to the individual's perceptions of the normative levels of BS and HS held by women in society

BS benevolent Sexism, HS hostile sexism

\* $p < .05$

and does not contain more narrow-bandwidth sub-factors (Glick and Fiske 1996). Although the Cronbach's alpha for women's perceptions of the normative level of BS exhibited by other women was within the range of alpha values observed for general measures of BS in Glick et al. (2000), it is somewhat lower than ideal according to conventional criteria. Interestingly, the alpha for the corresponding scale assessing men's perceptions of the normative level of BS exhibited by women was higher, with a value of .73. Moreover, consistent with Glick et al. (2000), item-level analysis indicated that the low alpha for this scale was not due to any particular items. This raises the possibility that perhaps women's (but not men's) perceptions of women's normative levels of BS in society are more multifaceted, which might result in a slightly lower internal consistency for the overall scale assessing female-referent BS in female samples. We opted to retain our analyses of the full scale in this study given that (a) the alpha was within the range of those reported in other BS scales cross-nationally, and (b) Glick and Fiske's (1996) measure of BS is well established, and the use of the full scale therefore allowed us to remain consistent with numerous other studies using this measure.

#### Sample Attrition

The sample who participated during both phases did not differ in proportion of men and women ( $\chi^2(1, n=190)=.65, p=.42$ ), mean age at Time 1 ( $F(1,186)=3.56, p=.06$ , partial  $\eta^2=.02$ ), or ethnic composition ( $\chi^2(6, n=190)=5.28, p=.51$ ) from those who participated only at Time 1. In addition, people who participated during both phases did not differ in Time 1 levels of self-referent BS and HS, male-referent BS and HS, or female-referent BS and HS compared to those who participated only at Time 1 ( $F_s(1,188)<1.4, p_s>.05$ ). Thus sample attrition did not occur because of demographic differences or individual differences in gender- or self-referent ambivalent sexist attitudes.

## Results

### Longitudinal Effects of BS and HS

Correlations between self-referent BS and HS and perceived normative levels of men's and women's BS and HS at Time 1, and self-referent BS and HS four months later are presented in Table 1. Correlations for female participants are shown on the top diagonal and correlations for male participants are shown on the bottom diagonal. As shown, men's and women's BS and HS both displayed high test-retest correlations over the four-month period ( $r_s>.75$ ). During both phases, BS and HS were also moderately positively correlated.

In order to examine the hypothesized transmission of sexist ideology from the dominant group (men) to the disadvantaged group (women), and vice-versa, we tested whether self-referent, and perceived normative levels of men's (male-referent) and women's (female-referent) BS and HS at Time 1 exerted cross-lagged effects on self-referent levels of BS and HS measured four months later (Time 2). The cross-lagged paths testing the longitudinal effects of self-referent, and perceived normative levels of men's and women's BS and HS on self-referent BS and HS are represented by the diagonal paths in Fig. 1. This analytic strategy allows us to test these cross-lagged associations while (a) simultaneously calculating the direct within-measure longitudinal paths for self-referent BS and HS (represented by the horizontal paths) and also (b) controlling for the concurrent associations between measures at Time 1 and the disturbances between measures at Time 2. Thus, if the cross-lagged path between Time 1 self-referent BS and Time 2 self-referent HS is significant, for example, this would provide evidence that self-referent BS produced change in levels of self-referent HS measured four months later.

We first calculated path models separately for both men and women, and then examined whether these models were equivalent (that is, produced comparable effects in both samples) by testing for model invariance across genders. When testing for model invariance we constrained all paths to be equal across samples, including the concurrent associations between Time 1 measures, the paths from Time 1 to Time 2 measures, and the association between Time 2 measures (i.e., the correlated disturbance of Time 2 self-referent BS and HS). Thus we tested for full invariance of the path model. As the model was saturated (that is, all paths were included in the model), a non-significant model  $\chi^2$  would indicate that the model did not differ significantly across genders. This hypothesis was supported as the  $\chi^2$  for differences between the model for men and women was non-significant, thus indicating that all paths included in the model were comparable for men and women ( $\chi^2(36)=46.39, p=.11$ ). We therefore report results for the model in which all paths were pooled across genders, as presented in Fig. 1. This analysis had the added benefit of allowing us to estimate standardized path coefficients based upon the combined sample of men and women ( $n=102$ ), thus increasing statistical power. We also report separate standardized path coefficients for women and men, respectively, which are included in brackets under each path in Fig. 1.

As shown in Fig. 1, self-referent BS ( $\beta=.74, z=10.52, p<.01$ ) and HS ( $\beta=.72, z=10.62, p<.01$ ) were highly stable over time. As also shown in Fig. 1, perceptions of the normative level of men's BS exerted a significant cross-lagged effect on participant's own (self-referent) levels of

BS measured four months later ( $\beta=.22$ ,  $z=3.37$ ,  $p<.01$ ). This effect was comparable for both men and women ( $\chi^2_{LM}(1)=1.20$ ,  $p>.05$ ). This finding supported Hypothesis 1, and indicated that people—both men and women—who perceived BS to be more normative amongst men within society (i.e., perceived men as generally higher in BS) tended to become higher in benevolent sexist attitudes toward women over time. Additional analyses demonstrated that this cross-lagged effect was also significant when tested separately in the sample of male-only participants ( $\beta=.31$ ,  $z=2.30$ ,  $p<.05$ ) and female-only participants ( $\beta=.20$ ,  $z=2.41$ ,  $p<.05$ ).

These effects were limited to perceptions of the normative level of men's BS. Perceptions of the normative level of women's BS in society did not predict changes in participants own (self-referent) levels of sexism. Moreover, perceptions of the normative level of men's and women's average levels of HS within society did not predict significant changes in self-referent BS or HS. As with the previous analyses, these results were comparable for both men and women ( $\chi^2_{LMS}(1)$  ranged from .48 to 1.83,  $ps>.05$ ).

Finally, consistent with Hypothesis 2, and replicating previous research (Sibley et al. 2007a, b), participants' self-referent BS exerted a significant cross-lagged effect on self-referent HS assessed four months later ( $\beta=.18$ ,  $z=2.86$ ,  $p<.01$ ). However, and also as predicted, self-referent HS did *not* produce reciprocal changes in participant's BS over time ( $\beta=-.02$ ,  $z=-.30$ ,  $p>.05$ ). These findings indicate that, for both men and women, the endorsement of benevolent sexist attitudes toward women produces increases in more hostile and overly negative attitudes toward women, even over a relatively short timeframe. To reiterate our point regarding invariance across genders, the univariate Lagrange Multiplier test for the specific cross-lagged path from Time 1 self-referent BS to Time 2 self-referent HS did not differ significantly for men and women ( $\chi^2_{LM}(1)=.67$ ,  $p>.05$ ), nor did the cross-lagged path from Time 1 self-referent HS to Time 2 self-referent BS ( $\chi^2_{LM}(1)=.32$ ,  $p>.05$ ).

#### Additional Analyses of Gender Differences in Perceived BS and HS

Table 1 also presents means and standard deviations for self-referent, male-referent and female-referent BS and HS. Consistent with prior research (e.g., Glick et al. 2000, 2004), men were higher in self-referent HS at Time 1 than women ( $F(1,100)=5.49$ ,  $p=.02$ , partial  $\eta^2=.05$ ); although the two groups did not differ significantly in mean levels of self-referent BS at Time 1 ( $F(1,100)=1.69$ ,  $p=.20$ , partial  $\eta^2=.02$ ).

A MANOVA also suggested that there were gender differences in perceived normative levels of men's and

women's BS and HS in society ( $F(4,97)=8.30$ ,  $p<.01$ , Pillai's trace=.26). Post-hoc univariate analyses indicated that this difference was attributable to differences in two specific effects. First, there was a significant and very strong effect in which male participants perceived men's societal levels of BS ( $M=5.58$ ,  $SD=1.01$ ) as being far higher than did female participants ( $M=4.66$ ,  $SD=.89$ ) ( $F(1,100)=19.31$ ,  $p<.01$ , partial  $\eta^2=.16$ ). Men, it seems, believe in their benevolent paternalism more strongly than do women. Second, there was also a significant although relatively weak effect in which female participants perceived women's societal levels of HS ( $M=3.85$ ,  $SD=1.14$ ) as being higher than did male participants ( $M=3.14$ ,  $SD=1.03$ ) ( $F(1,100)=7.86$ ,  $p<.01$ , partial  $\eta^2=.07$ ). Thus, men viewed men as generally being higher in BS than women, whereas women viewed other women as slightly higher in HS than men viewed them to be. There were no gender differences in perceived levels of men's HS ( $F(1,100)=.23$ ,  $p=.64$ , partial  $\eta^2<.01$ ) or women's BS ( $F(1,100)=.14$ ,  $p=.71$ , partial  $\eta^2<.01$ ), however. We discuss the implications of these gender differences in the discussion.

## Discussion

This study examined the effects of perceived normative levels of men's and women's BS and HS within society on longitudinal changes in one's own (self-referent) BS and HS over a four-month period using a sample of male and female New Zealand undergraduates. For men, longitudinal changes in BS occurred as a function of the perceived normative level of BS of the male *ingroup*. For women, changes in BS also occurred as a function of the perceived normative level of men's BS (i.e., the male *outgroup*). In other words, perceptions of men's normative endorsement of BS in society functioned as the primary referent for determining one's own levels of BS for both men and women. This effect was limited to perceptions of normative levels of men's BS however, as perceptions of men's levels of more hostile and overtly negative sexist attitudes indexed by HS did not predict changes in one's own levels of BS and HS for either gender. In addition, perceptions of normative levels of women's sexism (both BS and HS) did not produce changes in either gender's level of BS over time.

These findings are consistent with the premise that the ideologies espoused by dominant groups within society have enduring effects on society as a whole (and thus help to maintain social inequality and hierarchical social stratifications) because they tend to also be adopted by disadvantaged groups (Jackman 1994; Jost and Banaji 1994; Sidanius and Pratto 1999). Our results provide insight into one mechanism through which the transmission



of sexist ideologies occurs in the context of intergroup relations between men and women. Namely, perceptions of the normative level of BS attitudes toward women espoused by the dominant male group (in the context of patriarchal society) functioned as the key referent that predicted change in corresponding levels of BS held by both dominant (men) and disadvantaged (women) groups within society. Thus, women's endorsement of benevolent and subjectively positive but patronising attitudes toward their gender occurred at least partially as a function of their perceptions of the degree to which men in society also tended to endorse such attitudes. As expected, perceptions of the normative level of women's sexism in society did not produce changes in men's and women's sexist attitudes, however.

Why might such effects occur? Consistent with predictions derived from Ambivalent Sexism Theory, we suspect that the effect of perceived normative levels of men's but not women's sexism occurred because of men's greater status and power within society (Glick 2006; Glick et al. 2000, 2004). The unequal distribution and ability to gain direct access to resources within society creates a situation where men's attitudes are a more salient referent and carry more weight because they have more power to directly affect outcomes for the individual. As our results indicate, such effects have their limits however; as perceptions of the normative level of men's hostile sexist attitudes toward women within society did not predict changes in one's own (self-referent) HS. This suggests that the transmission of patriarchal-defined system-justifying ideologies from men to women is tempered by the degree to which such ideologies directly espouse more overtly hostile and negative attitudes toward women.

It seems reasonable that women should be more amenable to consensually endorsing seeming benevolent and subjectively positive benevolent sexist attitudes toward their ingroup espoused by society than they are more overtly hostile and negative attitudes (Jackman 1994). The significant cross-lagged effect of male-referent BS on women's self-referent BS provides good support for predictions derived from Jackman's (1994, p. 71) argument that members of dominant groups will seek to maintain expropriative social relations by expressing ideologies that "swathe arrangements in a soft, protective shroud." As long as women accept BS, this would suggest that HS is unnecessary as a form of social control. According to this reasoning, it is only when a woman seeks to resist patriarchal-prescribed gender roles that men should target HS attitudes toward her.

The finding that perceived normative levels of men's BS (but not HS) affected women's endorsement of BS differs in important ways from conclusions regarding the notion of a "protection racket" in which women endorse BS to temper men's HS. To understand this apparent inconsis-

tency it is important to recognize that Glick et al. (2000; Glick 2006) suggested that in nations with *high levels of gender inequality* (operationalized as those nations where women's direct access to status and resources is extremely limited) and where men are extremely high in HS that women may be more strongly motivated to embrace BS for its protective benefits. Consistent with this premise, Fischer (2006) reported that women who were informed that men held generally hostile and had negative attitudes toward women tended to expressed heightened levels of BS relative a control condition. However, we failed to observe comparable trends when assessing the effect of perceived normative levels of men's HS on women's BS at the individual level in both our concurrent and longitudinal analyses in New Zealand. Indeed, separate analyses focusing solely on female participants support this null result, as the cross-lagged effect of male-referent HS on women's self-referent BS remained non-significant in the female-only sample ( $\beta = .06, z = .63, p > .05$ ).

Why might this difference in the causal effect of men's BS versus HS in the present versus previous research have occurred? The present research differed from research conducted by Glick et al. (2000) and Fischer (2006) in two important regards. First, our research was conducted in New Zealand, and secondly, we examined the naturally occurring longitudinal effects of perceived normative levels of men's sexism on one's own sexism using specific questions tapping perceived BS and HS, rather than manipulating participants' perceptions of men's sexism via a global summary of research results (as employed by Fischer 2006). New Zealand is a very egalitarian nation. New Zealand, for example, was the first country in the world to adopt universal suffrage and, at the time this manuscript was written in 2008, had elected a female prime minister for the last three consecutive terms. We suspect that in the extremely gender egalitarian nation of New Zealand, the protective benefits offered by BS may be dramatically less salient than in nations with higher mean levels of gender inequality. Furthermore, comparison of our results with those of Glick et al. (2000) raises the interesting possibility that the tendency for women to endorse BS as a form of protection from men's HS may be curvilinear. It may be that gender inequality (and the high societal levels of men's HS that covary with such inequality) must reach a certain threshold before women will endorse BS and the protective benefits it offers in *direct response* to such societal conditions. If this is the case, then it is likely that this threshold is not reached in the contemporary New Zealand context.

This is not to say, however, that perceptions of the normative levels of men's sexism will not exert *indirect* effects on women's expressions of hostile sexism toward their gender. Indeed our results imply a complex causal

sequence in which (a) perceptions of the normative level of men's BS produced changes in both men's and women's own levels of BS over time, and then (b) own levels of BS produced reliable increases in agreement with more hostile sexist attitudes toward women over the same four-month testing period. Importantly, the endorsement of HS did not predict longitudinal changes in BS, indicating that the endorsement of BS caused both men and women to express, or at least offer less resistance to, more hostile forms of sexist ideology, whereas the endorsement of HS did not entail endorsement of a more subjectively caring and cherishing ideology. These latter results replicate those reported by Sibley et al. (2007a), who have demonstrated that BS produces increases in HS for women over time periods ranging from 6-months to 12-months, and extends these results to show that a similar pattern of cross-lagged effects also occurs for men. Thus, the results from our longitudinal analyses support a mediational model in which perceptions of the normative levels of men's BS (a social referent) exert an indirect effect on one's own levels of HS that should be mediated by self-referent BS. Additional analyses of all available data collected at Time 1 ( $n=190$ ) supported this model, and indicated that—concurrently—one's own levels of BS mediated the association between perceptions of normative levels of men's BS and own HS (Sobel's  $z=2.14$ ,  $p=.03$ ).

This observation raises the troubling implication that by promoting BS men may cause women to also heighten their acceptance of BS, and acceptance of BS may in turn exert pressures for cognitive consistency that cause women to also accept more hostile and coercive attitudes directed toward members of their gender that are seen as resisting or failing to conform to social norms of "good women" dictated by men (Sibley and Perry 2008, manuscript submitted for publication). As far as we are aware, research on the ideological transmission of BS and HS has not yet elaborated upon this disturbing possibility.

#### Caveats, Research Directions, and Conclusions

The present research suggests that both the concurrent and longitudinal associations tested in Fig. 1 were invariant across gender. This conclusion was further strengthened by tests of the univariate Lagrange Multipliers for specific paths, which were also all non-significant. Thus, consistent with a general System Justification Theory perspective, the present research emphasizes that perceptions of the dominant group's BS and one's own level of BS operate in a similar manner to justify gender inequality for both men and women. This is not to say, however, that all aspects of the system justification process are invariant across dominant and subordinate groups. Although there are striking similarities between groups, research has also identified

important differences in other aspects of the relationship between, and the causes of BS and HS in men and women (Sibley and Perry 2008, manuscript submitted for publication). For instance, men's endorsement of HS attitudes toward women results directly from the motivation for group-based dominance and superiority indexed by Social Dominance Orientation; whereas for women we argue that the motivation for social cohesion and collective security indexed by Right-Wing Authoritarianism may play a more proximal role (Sibley et al. 2007a, b). We wish to note at this point that it is always difficult to propose a strong invariance hypothesis. Other studies with greater statistical power may well find significant yet subtle differences between these processes in men and women. However, on the basis of our results, and consistent with both Social Dominance Theory and System Justification Theory, we maintain that the trends in ideological transmission, and in particular the effect of ideologies seen as normative in male referent groups should exert significant and relatively comparable effects in both male and female samples.

Additional post-hoc analyses indicated that there were also interesting differences in the normative societal levels of sexism perceived by male and female participants (we thank Peter Glick for suggesting this analysis). An extremely strong gender difference was observed in perceived levels of men's societal BS, with men perceiving their ingroup (other men in society) as far higher in benevolent and paternalistic motivations toward women expressed by BS than female participants perceived them to be. The partial  $\eta^2$  for this effect indicated that this gender difference accounted for 16% of the variation in male-referent BS. Although we did not predict it, this gender difference in perceptions of men's societal BS does seem quite consistent with Jackman's (1994) argument that in order to convincingly promote the patriarchal system the dominant group must believe in their own benevolence. This result certainly suggests that men believe in their own benevolence more than women do in the New Zealand context.

The unexpected finding that female participants tended to perceive other women as higher in HS than did male participants is also extremely interesting. This is clearly contrary to gender differences in observed mean levels of HS (in which men were significantly higher) in both the current data, and in numerous previous studies both internationally (e.g., Glick et al. 2000, 2004) and in representative samples of the New Zealand population (Sibley and Perry 2008, manuscript submitted for publication). This finding thus seems to indicate that women may perceive *other women* as key regulators of the patriarchal system, much more so than men perceive them to be. Consistent with a System Justification Theory perspective, this implies that once such ideologies are in place, the disadvantaged group may subjectively perceive its own

societal group as actively regulating the negative and hostile evaluations of non-conforming group members. This may leave the dominant group free to focus on expressing paternalistic attitudes and thus further strengthen their claims of legitimacy. It is thus possible that social inequality will be most stable when such perceptions occur. Future research is needed to explore these unexpected and intriguing gender differences, and if replicated, to examine the implications of changing women's perceptions of their ingroups' levels of HS for promoting social change.

Future research could also extend our findings by further exploring the system-justifying effects of self-referent and perceived normative levels of BS on HS. For example, research could examine whether gender identification and Right-Wing Authoritarianism moderate the effect of male-referent BS on one's own BS, and if found, whether these moderated effects are similar for men and women. It is also important to recognize that our analyses were based on a sample of undergraduates with a mean age of roughly 21. Subordinates' acceptance and internalization of ideologies espoused by the dominant group may be more likely to occur during critical developmental periods. Young adulthood and adolescence are likely candidates for one such critical period, as it is during this phase that people are forming and anchoring their political ideologies and opinions. It remains to be seen whether the ideological transmission effects we observed here occur across the lifespan or are more pronounced in specific developmental periods.

As Glick and Fiske (1996) observed in their founding research, differences between sexism and many other forms of prejudice are due, in part, to mutual interdependencies between men and women at the interpersonal level. Research is also needed to explore the implications of this founding observation by examining interpersonal manifestation of processes through which ideologies of BS and HS occur within, and are altered by, experiences in intimate relationships. For instance, research could extend our design and measurement of perceived normative levels of men's and women's sexism to examine the effects that one's romantic partner's level of BS and HS have on one's own endorsement of BS and HS over time. Finally, research could also examine the effects of self-referent sexist attitudes on subsequent perceptions of societal levels of sexism: That is, do people that are higher in BS tend to perceive higher levels of societal consensus with their personal attitudes within this domain? Unfortunately, we did not assess perceived normative levels of BS and HS during the second testing phase due to time constraints.

To conclude, our results indicate that people who perceived BS as more normative amongst men in society became more benevolently sexist toward women over time.

This effect was observed in both male and female undergraduate samples, and is consistent with the prediction, derived from System Justification Theory, that ideologies espoused by dominant groups within society legitimate social inequality at least in part because they tend to also be adopted by disadvantaged groups (Jost and Banaji 1994). This effect was limited to perceptions of normative levels of men's BS however, as perceptions of men's levels of the more hostile and overtly negative sexist attitudes indexed by HS did not predict longitudinal change in one's own levels of BS and HS. As suggested by Glick and Fiske (2001a), this indicates that the transmission of patriarchal-defined system-justifying ideologies, and thus women's acceptance of sexist ideology that maintain the status quo, is tempered by the degree to which such ideologies espouse overtly hostile and negative attitudes toward women. These findings elaborate upon previous concurrent research observing associations between men's and women's levels of sexism across nations (Glick et al. 2000, 2004), and indicate that perceptions of the normative levels of men's BS has a proximal role in determining the degree to which women endorse benevolent sexist ideologies directed toward their ingroup.

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