Accepted Manuscript version: May differ from published paper

Is sexism a gender issue?

A motivated social cognition perspective on men's and women's sexist attitudes

toward own and other gender

Arne Roets, Alain Van Hiel, & Kristof Dhont

Ghent University; Department of Developmental, Personality, and Social Psychology

WORD COUNT: 7765

Running head: A motivated cognition approach to sexism

Author's Note:

This research was supported by a post-doctoral research grant from the National Fund for

Scientific Research-Flanders (Belgium) awarded to the first author. Correspondence

should be addressed to Arne Roets, Department of Developmental, Personality and Social

Psychology, Henri Dunantlaan 2, B-9000, Ghent, Belgium. Arne.Roets@Ugent.be

ABSTRACT

The present research investigated the antecedents of ambivalent sexism (i.e., hostile and benevolent forms) in both men and women toward own and other gender. In two heterogeneous adult samples (Study 1: N = 179 and Study 2: N = 222), it was revealed that gender itself was only a minor predictor of sexist attitudes compared to the substantial impact of individual differences in general motivated cognition (i.e., Need for closure). Analyses further showed that the relationship between Need for closure and sexism was mediated by social attitudes (i.e., right-wing authoritarianism and social dominance orientation), which were differently related to benevolent and hostile forms of sexism. In the discussion it is argued that sexism primarily stems from individual differences in motivated cognitive style, which relates to peoples' perspective on the social world, rather than from group differences between men and women.

In the last two decades, research on sexism and its psychological antecedents has gained a prominent place in psychological research. The bulk of these studies have focused on sexist attitudes of men toward women (e.g., Glick & Fiske, 1996; Glick et al., 2000; Sibley, Wilson, & Duckitt, 2007), but in recent years, research on sexism has expanded in two directions. On the one hand, there has been an increasing interest in sexist attitudes of women toward men (e.g., Glick & Fiske, 1999; Glick et al., 2004). On the other hand, various researchers have investigated sexist attitudes of women toward their own gender (e.g., Coleman, 2008; Sibley, Overall, & Duckitt, 2007). However, a comprehensive investigation combining these new directions, while also considering the precursors of sexism on different levels, is still lacking. As a result, it remains unclear to what degree sexism is determined at the group level (i.e., being a man or a woman) and/or at the personal level (i.e., individual differences), and how sexism toward the own and other gender group relate to each other.

Allport (1954) already asserted that "a person's prejudice is unlikely to be merely a specific attitude to a specific group; it is more likely to be a reflection of his whole habit of thinking about the world" (p. 170). This assertion speaks for the hypothesis that sexism may be primarily an expression of a particular mode of thinking that is not necessarily gender-dependent (the actor being a man or a woman) or gender-specific (the target being men or women). In other words, this motivated cognitive style may be associated with a general inclination to have prejudiced attitudes, regardless of the targeted group, as such predicting prejudice toward men and toward women alike.

The present research aimed to delineate the role of gender on the one hand, and individual differences in motivated cognition on the other, in explaining sexism in men

and woman toward both the other and own gender group. In addition, we investigated how general motivated cognitive style may affect sexism through its effect on right-wing authoritarianism and social dominance orientation, and how these social attitudes are differently related to hostile and benevolent forms of sexism.

Ambivalent sexism toward woman and toward men

Glick and Fiske (1996, 1999) argued that sexism differs from other types of prejudice, in particular racism, because of the dyadic interdependence and close intimacy between men and women. According to these authors, gender prejudices are therefore characterized by ambivalent (i.e., "both valences") attitudes, reflected in two complementary dimensions of sexism, labeled hostile sexism and benevolent sexism.

This distinction was first introduced to understand and measure men's sexist attitudes toward women (Glick & Fiske, 1996). Hostile sexism refers to Allport's (1954) traditional conception of prejudice as "an antipathy based upon a faulty and inflexible generalization" (p. 9). Benevolent sexism within men on the other hand was defined by Glick and Fiske (1996) as "a set of interrelated attitudes toward women that are sexist in terms of viewing women stereotypically and in restricted roles but that are subjectively positive in feeling tone (to the perceiver) and also tend to elicit behaviors typically categorized as prosocial (e.g., helping) or intimacy-seeking (e.g., self-disclosure)" (p. 491). In analogy with the ambivalent nature of sexism toward women, Glick and Fiske (1999) proposed that women are also ambivalent toward men, which results in hostile and benevolent forms of sexism toward men as well. To measure ambivalent sexism toward women and ambivalent sexism toward men, Glick and Fiske (1996, 1999) developed the Ambivalent Sexism Inventory (ASI) and Ambivalence toward Men Inventory (AMI)

respectively, which both have been validated in large-scale cross-national studies (Glick et al., 2000, Glick et al., 2004, respectively).

Although they have opposite targets, Glick and Fiske (1999) asserted that ambivalent sexism toward women and toward men both are based on a hostile and a benevolent side of three core aspects: paternalism/maternalism, gender differentiation, and heterosexuality. In particular, hostile sexism toward the other gender is characterized by dominant paternalism in men and resentment to dominant paternalism in women, whereas benevolent sexism is characterized by protective paternalism in men and maternalism in women. For both men and women, hostile sexism is also characterized by competitive gender differentiation, whereas benevolent sexism is characterized by complementary gender differentiation. Finally, hostile forms of sexism are characterized by heterosexual hostility, whereas benevolent sexism is based on heterosexual intimacy and attraction (see Glick & Fiske, 1999).

The ambivalent nature of sexism toward women as well as toward men thus refers to the opposite evaluative feeling tones of hostile (negative) and benevolent (positive) sexism rather than implying that these forms of sexism are conflicting. Indeed, hostile and benevolent sexism usually show high positive correlations (e.g., Glick & Fiske, 1996, 1999; Glick, et al. 2000, 2004).

Individual differences in motivated cognition underlying prejudice

In his work on lay epistemics, Kruglanski (1989; 2004) argued that subjective knowledge about social reality has a motivational basis, captured by the concept of Need for (cognitive) Closure (Kruglanski, 1990; Kruglanski & Webster 1996). This Need for Closure (NFC) refers to an individual's desire for firm answers and an aversion towards

ambiguity. According to Kruglanski and Webster (1996), the desire for closure affects (social) judgments, decisions, and knowledge construction by promoting the inclination to *seize* quickly on closure and to *freeze* on, or protect, existing or previously acquired knowledge structures.

Although NFC can be temporarily heightened by situational forces such as time pressure and noise (e.g., Roets, Van Hiel, Cornelis & Soetens, 2008), NFC is also an individual trait variable as people substantially differ in their overall level of dispositional NFC (see, Kruglanski & Webster, 1996). To measure individual differences in NFC, Webster and Kruglanski (1994) developed the NFC scale (revised by Roets & Van Hiel, 2007), which is composed of five facet scales. Individuals high in dispositional NFC prefer order and structure in their lives, abhorring chaos and disorder. They also prefer predictability, as reflected in a desire for secure and stable knowledge that is reliable across circumstances and unchallenged by exceptions. High NFC individuals also experience an urgent desire to reach firm decisions, reflected in their need for decisiveness, and they feel discomfort with ambiguity, experiencing situations as aversive when they are devoid of closure. Finally, they are closed-minded, reflected by the unwillingness to have their knowledge challenged.

Remarkably, the facets of the NFC scale show striking similarities with Allport's (1954) writings on the general cognitive style of prejudice-prone people. Indeed, Allport also described the prejudice-prone individual in terms of needs and demands for clear-cut structure, for (social) order, for firm answers and definiteness, and intolerance for ambiguity (see, Dhont, Roets, & Van Hiel, 2011; Roets & Van Hiel, 2011a).

In the past few years, various studies have demonstrated a substantial relationship between NFC as a general motivated cognitive style and racial prejudice (e.g., Dhont, et al., 2011; Cornelis & Van Hiel, 2006; Rangel & Keller, in press; Roets & Van Hiel, 2006, 2011a; Van Hiel, Pandelaere & Duriez, 2004). Many of these studies also demonstrated that the relationship between NFC and prejudice is mediated by the social attitudes Right-Wing Authoritarianism (RWA, Altemeyer, 1981) and Social Dominance Orientation (SDO, Pratto, Sidanius, Stallworth, & Malle, 1994). According to Duckitt (2001), RWA and SDO are typical indicators of two attitudinal dimensions underlying ideology. RWA pertains to the dimension reflecting cultural conservatism and traditionalism versus openness, autonomy, and liberalism, with the underlying goals being social cohesion and collective security. SDO, on the other hand, pertains to the dimension reflecting power and beliefs in hierarchy or inequality versus egalitarianism, based on superiority and group-based dominance goals (Duckitt, 2001, 2006). Numerous studies have established that RWA and SDO are highly and uniquely predictive of racial prejudice (e.g., Altemeyer, 1998; Duckitt & Sibley, 2010a, b; Roets & Van Hiel, 2006; Roets, Van Hiel, & Cornelis, 2006; Van Hiel & Mervielde, 2005).

The influence of individual differences in NFC and social attitudes on sexism

Research on the impact of individual differences in motivated cognition has predominantly focused on racial or ethnic prejudice (e.g., Roets & Van Hiel, 2006, 2011a; Van Hiel, et al., 2004). Studies on the role of motivated cognition in sexism are however surprisingly lacking in the literature, although such research may certainly be valuable to delineate to what degree sexist attitudes are determined by individual differences in a gender-neutral and even "non-social" motivated cognitive style, directly

referring to Allport's (1954) assumption that "a person's prejudice is unlikely to be merely a specific attitude to a specific group" (p. 170).

Similarly, research on social attitudes as proximal predictors of prejudice has also often focused on racial prejudice (for an overview, see Sibley & Duckitt, 2008). Recently, however, Christopher and Mull (2006) and Sibley, Wilson, et al. (2007) have demonstrated that RWA and SDO are also related to men's sexism toward women. Moreover, it was revealed that RWA is primarily associated with benevolent sexism toward women, whereas SDO is primarily associated with hostile sexism. According to Sibley, Wilson, et al. (2007), men high in RWA endorse benevolent sexism toward women because it "reflects a prescriptive ideology that positions women's ideal role relative to men within the ingroup... and ...strengthens and preserves traditional roles and promotes social cohesion, order and ingroup stability" (p. 163). On the other hand, men high in SDO perceive women as competitively challenging male dominance, which results in reactions of hostile sexism.

These findings provide an interesting perspective on the social attitudes underlying sexism, but at the same time raise some important questions. In particular, it is unclear whether the differential impact of RWA and SDO on hostile and ambivalent sexism found for the specific case of men's sexist attitudes toward women can be generalized to women's sexism toward men and to men's and women's attitudes toward the own gender group.

The present research

_

¹ Note that in their first study, Sibley, Wilson et al. (2007) also provided some data on women's sexism toward their own gender, which was however inconclusive with regard to their model. In their subsequent studies, the authors therefore focused on further investigating the model for men's sexism toward women.

This research aimed to investigate several questions that emerge from the recent literature. First, we assessed the relative contribution of group membership (i.e., the respondents' own gender) and individual differences in general, motivated cognitive style (i.e., NFC) to explain sexism. Additionally, we investigated whether the impact of NFC on sexism occurs through the same mechanisms as its impact on racial prejudice.

Therefore we tested a mediation model analogous to racism models of Van Hiel, et al. (2004) and Roets and Van Hiel (2006), in which NFC affects prejudice through social attitudes.

The second main research aim pertained to a comprehensive assessment of Sibley, Wilson, et al.'s (2007) dual-process model. In particular, we tested whether the authors' assertion that RWA is primarily linked to benevolent sexism, whereas SDO is primarily linked to hostile sexism, can be generalized from men's sexism toward women to different actor-target combinations (i.e., women's sexism toward men and men's and women's sexism toward the own gender).

To investigate these research questions, we recruited two heterogeneous adult samples rather than relying on data of undergraduate students as in most previous psychological research on sexism.

Study 1

In this first study, we investigated the relative contribution of gender and motivated cognitive style (i.e., NFC) in explaining the variance in hostile and benevolent sexism toward women.

Method

Participants

A heterogeneous sample of 179 working adults was recruited in two large, national companies (i.e., a gas and electricity company and a health insurance firm) by a research assistant through contact persons within each company. Respondents anonymously completed the questionnaire online on a secure university website. The sample consisted of 46.9% men and 53.1% women between 20 and 68 years old, with a mean age of 40.79 years (SD = 11.76). Of this sample, 42.5% finished school at the age of 18 or before, and 57.5% had completed higher education.

Measures

All participants completed the Ambivalent Sexism Inventory (ASI, Glick & Fiske, 1996), measuring general sexism toward women (i.e., total ASI score; $\alpha = .78$, M = 2.55, SD = .35), as well as hostile and benevolent forms of sexism towards women (i.e., ASI subscales; $\alpha = .71$, M = 2.50, SD = .50 and $\alpha = .67$, M = 2.60, SD = .57, respectively). Additionally, they completed the 15-item version (Roets & Van Hiel, 2011b) of the revised NFC scale (Webster & Kruglanski, 1994; adapted by Roets & Van Hiel, 2007); $\alpha = .89$, M = 3.28, SD = .58. Finally, we also included a 15-item measure of organizational citizenship behavior (OCB, Lievens & Anseel, 2004) as a theoretically unrelated variable to control for common method variance in the relationship between NFC and sexism. This measure ($\alpha = .74$, M = 3.84, SD = .35) includes items about extra role behavior in the work setting. NFC and OCB scales were rated on 5-point likert scales and sexism on a 6-point likert scale ranging from 1 or 0 (Completely disagree), to 5 (Completely agree).

Results

Hierarchical regression analyses were conducted for the total ASI score as well as for the hostile and benevolent sexism subscales separately. Gender was entered as predictor in the first step of the regression, NFC in the second step, and their centered interaction score in the third step (see, Aiken & West, 1991). This analysis revealed that the impact of gender on general and benevolent sexism was non-significant, F(1,177) = 2.65, $\beta = .12$, and F(1,177) = .29, $\beta = .04$, explaining only 1.5% and 0.2% of the variance, respectively. For hostile sexism, gender was a significant (although relatively weak) predictor, F(1,177) = 5.28, $\beta = .17$, p < .05, explaining 2.9% of the variance, with higher scores for men (M = 2.61, SD = .59) compared to women (M = 2.42, SD = .55).

NFC on the other hand explained an additional 21.2%, 9.8%, and 22.3 % of the variance in general sexism, F(1,176) = 48.17, $\beta = .48$, hostile sexism, F(1,176) = 19.66, $\beta = .33$, and benevolent sexism, F(1,176) = 50.72, $\beta = .50$, respectively, all p < .001, indicating higher sexism scores with increasing levels of NFC². No significant interaction effects were found, all F(1,175) < 2.35, all $\beta < .11$, ns.

Supplementary analyses were conducted to test whether part of the relationship between NFC and sexism was due to common method variance. To control for common method variance we used the marker variable technique (Lindell & Whitney, 2001) and included OCB as a variable that is theoretically unrelated to (at least one of) the focal variables. We compared the zero-order correlation between NFC and general sexism with the partial correlation controlled for OCB. No decrease in relationship strength (r = .31, p

_

² Controlling for age and education level in the regression analyses yielded no substantial change in the findings; gender remained only significant for hostile sexism, whereas NFC was strongly predictive of general, hostile, and benevolent sexism, still explaining 19.4%, 9.3% and 19.9% of the variance in addition to gender, age and education.

< .001 in both cases) was found, demonstrating that the relationship between NFC and sexism cannot be attributed to common method variance.

Study 2

In the second study, we broadened our research scope in several ways to answer three important questions. First, we aimed to replicate the findings from Study 1 showing a superior predictive value of NFC compared to gender in explaining sexism toward women and expand these findings to sexism toward men. Second, we investigated a general mediation model for sexism, similar to the one that has been repeatedly demonstrated for racial prejudice with the effects of NFC being mediated by RWA and SDO (see, Roets & Van Hiel, 2006; Van Hiel, et al., 2004). Finally, we focused on Sibley, Wilson, et al.'s (2007) dual-process model regarding the differential effects of RWA and SDO as proximal determinants of benevolent and hostile sexism, respectively.

Method

Participants

A heterogeneous sample of 222 adults was recruited by research students who contacted their own and their parents' extended social network. Respondents who agreed to participate in the study were provided with a paper and pencil questionnaire, which they returned in a blank, sealed envelope to ensure anonymity and confidentiality of the data. The sample consisted of 40.1% men and 59.9% women between 18 and 79 years old, with a mean age of 43.80 years (SD = 12.16). Of this sample, 41.9% finished school at the age of 18 or before and 57.1% had completed higher education.

Measures

Table 1 presents the scale reliabilities and descriptive statistics for all variables in the total sample and the male and female subsamples separately.

Need for Closure. Participants completed the full revised NFC scale (Webster & Kruglanski, 1994; adapted by Roets & Van Hiel, 2007). All 41 items were rated on a sixpoint Likert scale anchored by 1 ('Completely disagree') and 6 ('Completely agree').

Social attitudes. Participants completed an 11-item version of Altemeyer's (1981) Right-Wing Authoritarianism scale (see e.g., Roets et al., 2006; Van Hiel, Cornelis, & Roets, 2007) and the 14-item Social Dominance Orientation scale (Pratto et al., 1994) on five-point scales anchored by 1 ('Completely disagree') and 5 ('Completely agree').

Sexism. As in Study 1, Glick and Fiske's (1996) ASI scale was administered to measure sexism towards women. To assess sexism towards men, we administered the Ambivalence towards Men Inventory (AMI, Glick & Fiske, 1999). The 22 items from the ASI and the 20 items from the AMI were rated on a 6-point Likert scale anchored by 0 ('Completely disagree') and 5 ('Completely agree'). Both ASI and AMI are composed of two facet scales, measuring hostile and benevolent forms of sexism toward women and men, respectively.

Results

Preliminary analyses (Table 1) showed no gender differences in our predictor variables RWA, SDO, and NFC and in general and benevolent sexism toward men, whereas significant, although modest, gender differences emerged for general, hostile and benevolent sexism towards women, and hostile sexism towards men. Correlation analyses showed strong relationships among all variables (Table 1).

Predictive value of gender and NFC in explaining sexism

Similar to Study 1, hierarchical regression analyses were conducted, entering gender, NFC, and their centered interaction term as predictors in step one, two and three, respectively. The results, reported in Table 2, showed that in general, gender was a relatively weak predictor of the various forms of sexism and even not significant for general and benevolent sexism toward men. Conversely, NFC demonstrated to be a strong, significant predictor of all forms of sexism, explaining a considerably larger proportion of the variance compared to gender (see Table 2). Overall, no significant interaction effects between gender and NFC were found, except for hostile and benevolent sexism toward men. In particular, NFC was a stronger predictor of hostile sexism toward men in women compared to men, whereas NFC was a stronger predictor of benevolent sexism toward men in men compared to women.

Mediation analyses for the NFC effects on sexism

Next, for the second research question, we conducted mediation analyses investigating whether the relationships between NFC and sexism were mediated by social attitudes. Using Structural Equation Modeling³, we first tested a basic model including NFC as the independent variable, RWA and SDO as the mediators, and total AMI and ASI scores as outcome variables (Figure 1). Additionally, a second, more detailed model was tested in which the benevolent and hostile forms of sexism toward women and toward men were included as four separate outcome variables. Latent variables were computed using random item parcels for RWA and SDO, and the subscales for NFC and ASI and AMI. In the detailed model, latent variables for hostile and benevolent sexism toward men and women were computed using random item parcels. RWA and SDO as

_

³ An alternative mediation analysis approach using the bootstrapping procedure with multiple mediators by Preacher and Hayes (2008) on the scale scores yielded similar findings.

well as the different forms of sexism were allowed to correlate in both models. A satisfactory model fit⁴ was obtained for the basic model; $\chi^2(80) = 175.33$, RMSEA = .073, SRMR = .070, CFI = .96, and an excellent model fit emerged for the detailed model; $\chi^2(209) = 367.73$, RMSEA = .059, SRMR = .060, CFI = .97 (see, Hu and Bentler, 1998).

The results of the mediation models, reported in Table 3, showed that the impact of NFC on sexism was fully mediated by social attitudes, with the exception of a partial mediation for hostile sexism toward men. Overall, the mediation effects primarily occurred through RWA whereas the mediating role of SDO was limited and only significant for general and hostile sexism toward women.

Finally, we investigated whether Sibley, Wilson, et al.'s (2007) dual-process model is corroborated not only for men's sexism toward women but, also for women's sexism toward men and for sexism toward the own gender. Regression analyses for the male and female subsamples separately were conducted, entering RWA and SDO together in a single step to investigate their unique predictive power for each form of sexism⁵. The results, presented in Table 4, demonstrated that benevolent sexism was determined by RWA, regardless of the targeted gender group and participants' own gender, whereas SDO was not a significant unique predictor. The results for benevolent sexism are thus in support of Sibley, Wilson, et al.'s (2007) dual-process model. For

_

hostile forms of sexism, however, the hypothesized superior impact of SDO was only

⁴ Note that the fit of the measurement models and the structural models are identical because the structural models tested both direct and indirect effects with correlated mediators and outcome variables.

⁵ Supplementary analyses with the centered interaction term of RWA and SDO entered in a second step of the regression revealed no significant interaction effects on any of the sexism measures: all F(1,85) < 1.86 for the male subsample, and all F(1,129) < .60 for the female subsample.

partially corroborated (see Table 4). Indeed, the results replicated the findings of Sibley, Wilson et al. (2007) that SDO, but not RWA is a strong, unique predictor of men's hostile sexism toward women. Our extended design further showed that SDO was also a stronger predictor of hostile sexism toward women than RWA in the female subsample, but RWA had unique predictive value as well. Furthermore, SDO, but not RWA predicted men's hostile sexism toward their own gender, although this effect was only borderline significant (p < .10). Finally however, women's hostile sexism toward men showed to be strongly related to RWA instead of SDO.

Discussion

The present studies were the first to focus on both men's and women's gender prejudice toward the other as well as the own gender group, as such investigating the antecedents of sexism at the group level (i.e., gender) as well as the individual level (NFC, RWA, SDO). Building upon the ideas of Allport (1954) and recent insights into the role of NFC in racial prejudice (e.g., Roets & Van Hiel, 2006, 2011a; Onraet, Van Hiel, Roets, & Cornelis, in press), we advanced dispositional NFC as a general, motivated cognitive style underlying sexism in both men and women, and we demonstrated its impact on sexism through social attitudes. Moreover, by assessing the full range of sexism (i.e., prejudice toward women as well as men in both gender groups) instead of only focusing on the men's sexism toward women as in most previous studies, we were also able to test the generalizability of Sibley, Wilson, et al.'s (2007) ideas on the differential role of social attitudes in hostile and benevolent forms of sexism.

Group- versus individual-level determinants of sexism

The first important conclusion from the present study pertains to the rather limited impact of the respondents' gender in explaining sexism. In particular, gender yielded only weak relationships with the various forms of sexism in both our studies. Moreover, the strong relationships between the sexism scores revealed that men and women who reported sexist attitudes toward the other gender were also highly likely to endorse sexist attitudes toward their own gender group. The remarkably limited impact of gender on sexism also emerged in the studies by Glick and colleagues (2000, 2004) and seems to indicate that sexism is not a simple matter of men displaying sexist attitudes toward women and vice versa, and gender group interests thus seem to play only a minor role in the occurrence of sexism. Instead, individual differences in the epistemic need for closure (reflecting personal interests of a non-social nature and unrelated to gender) were demonstrated to explain a substantial portion of the variance in sexism toward both the own and the other gender in both samples of the present study.

The mediation analyses further showed that to understand the role of NFC in sexism, it is important to consider its connection with social attitudes that foster prejudice. High levels of NFC refer to the strong desire for order, predictability, and definite answers as opposed to ambiguity. This desire makes people high in NFC especially eager to adopt social attitudes that provide structure, stability and clearness in their social world (Roets & Van Hiel, 2006; Van Hiel, et al., 2004).

Various recent studies have shown that people high in NFC more strongly endorse authoritarian views on society to fulfill and protect their epistemic needs (see, Jugert, Cohrs, & Duckitt, 2009; Roets & Van Hiel, 2006; Van Hiel, et al., 2004). Moreover, early research on NFC provided strong indications for the causal nature of the relationship

between NFC and RWA. In particular, Kruglanki and Webster (1991) revealed in a series of experiments that people tend to derogate opinion deviants within their group more when high NFC is experimentally induced. Another study by Pierro, Mannetti, De Grada, Livi, and Kruglanski (2003) showed that in groups consisting of members high in dispositional NFC as well as in groups in which NFC was experimentally induced, autocratic group structures wherein influence emanates from a centralized authority are more readily formed and preferred by the group members. Moreover, the experimental induction of NFC increases people's need for agreement with others (Kruglanski, Webster & Klem, 1993) and groups consisting of members with high dispositional NFC have been shown to develop more conformity pressure (De Grada, Kruglanski, Mannetti, and Pierro, 1999). Notably, derogation of deviants, obedience to authorities, and conformity/conventionalism are the three central aspects of authoritarianism (Altemeyer, 1981; Stellmacher & Petzel, 2005). Hence, these studies attest to NFC being a source rather than merely a correlate of the endorsement of authoritarian attitudes.

Their desire to maintain epistemic order, stability and security in the social domain also makes high NFC individuals motivated to support ideologies that explain and justify existing social structures and group inequalities within social systems (Jost & Hunyady, 2005). As such, people high in NFC are motivated to endorse the idea that the existing hierarchy and inequalities in society reflect the natural order (hence being definite and permanent) rather than artificial (hence fleeting) social constructions, and the belief that groups are best kept in their place. Such convictions are highly characteristic of SDO.

-

⁶ NFC effects on derogation of deviance have even been found at very abstract levels (see, Rubin, Poalini, & Crisp, in press).

In sum, the present research demonstrated that high levels of NFC foster sexism through the endorsement of social attitudes that have been well-established as proximal determinants of general prejudice (see, Duckitt & Sibley, 2007). Moreover, the present findings also attest to the idea that in addition to different worldviews lying at the basis of RWA and SDO (see e.g., Duckitt, 2001; Sibley, Wilson et al., 2007), these social attitudes also have a common underlying antecedent in the form of basic motivated cognition. Importantly, although all knowledge construction may to some extent be considered "suffused with social significance" (Kruglanski & Webster, 1996, p. 263), in contrast to RWA and SDO, the NFC concept refers to a general, motivated cognitive style without explicit reference to social groups or gender content. As such, the NFC construct seems to capture Allport's (1954) concept of a "general way of thinking about the world", which he assumed to lie at the basis of (all) prejudice (see, Dhont et al., 2011; Roets & Van Hiel, 2011a).

The differential role of RWA and SDO in benevolent and hostile sexism

The second aim of this research was to provide a test of the generalizability of the dual-process model for benevolent and hostile sexism recently proposed by Sibley, Wilson, et al. (2007). These authors investigated men's sexist attitudes toward women and demonstrated differential relationships with RWA and SDO (see also, Christopher & Mull, 2006). In particular, in their studies, RWA proved to be the primary determinant of men's benevolent sexism toward women, whereas SDO was a slightly better predictor of men's hostile sexism toward women. The present research provided further insight into the differential role of RWA and SDO as the proximal determinants of sexism by

_

⁷ Recent work by Onraet, et al. (in press) also showed that that NFC has little content overlap with specific social attitudes like RWA, thereby further corroborating their conceptual distinctiveness.

investigating this dual-process model for sexism in both men and women toward the other as well as the own gender.

RWA and benevolent sexism. The present results corroborated the exclusive link between RWA and benevolent sexism and provided convincing support for its general validity across actor and target. Indeed, for both men and women, RWA (but not SDO) showed unique predictive value in explaining benevolent sexism toward women as well as toward men. According to the dual-process model, RWA expresses a motivation to "establish and maintain social or group security in the form of social order, control, stability, and cohesion and to preserve traditional values and mores" (Sibley, Wilson, et al, 2007, p. 162). Because benevolent sexism reflects endorsement of traditional, restricted gender roles (for women as well as for men, see Lee, Fiske, & Glick, 2010) in which both gender groups are clearly differentiated but complementary (Glick & Fiske, 1996, 1999), it serves social cohesion, stability and order especially well.

Remarkably, the results also showed that the impact of RWA on benevolent sexism was particularly strong when actor and target belonged to the same gender group. Although maybe surprising at first, this finding is in line with previous theorizing stating that the RWA primarily pertains to attitudes toward ingroup members, emphasizing ingroup norms and rules, and intolerance of 'deviant' ingroup members (see Duckitt, 1989, 2001; Roets & Van Hiel, 2006; Stellmacher & Petzel, 2005). Therefore, people high in RWA would indeed not only demand members of the other gender to submit to their traditional social roles in order to maintain social cohesion and stability, but they even more strongly demand such submission in members of their own gender ingroup.

SDO and hostile sexism. In addition to the relationship between RWA and benevolent sexism, Sibley, Wilson et al.'s (2007) dual-process model also stated that SDO is most strongly linked to hostile sexism. The present results supported the original findings of Sibley, Wilson, et al. (2007) with respect to men's sexism toward women. Moreover, the present study demonstrated that women's hostile sexism toward their own gender group was primarily associated with SDO as well. To better understand the role of SDO in women's hostile sexism toward their own gender, it should be noted that a substantial part of hostile sexism toward women refers to resistance to women (feminists) seeking more power and making 'unreasonable' demands or special favors to get ahead. Given that SDO refers to beliefs in a natural, hierarchical order, women who endorse these beliefs may see attempts to change any power structure as conflicting with the natural order and therefore undesirable, even if in their own interest. Indeed, not only dominant groups often resist challenges to the hierarchical social structure, underprivileged groups have also been repeatedly shown to endorse justification of an unfavorable hierarchical system (see, Jost & Banaji, 1994) and SDO has been identified as an important source of such system justification (Jost & Hunyady, 2005).

However, it should be recognized that women's hostile sexism toward their own gender was to some degree also predicted by RWA in our sample. This finding suggests that demands for special favors and more power for women might also be seen as threats to general social stability and, therefore, are likely to be contested by those high in RWA as well. Moreover, Sibley, Overall et al. (2007) demonstrated that for women high in RWA, endorsement of benevolent sexism disarms resistance to and increases their endorsement of more hostile forms of sexism toward their own gender.

In sum, with regard to sexism toward women, the present results corroborated Sibley, Wilson, et al.'s (2007) assertion that SDO rather than RWA is the primary antecedent of hostile sexism. However, this effect of SDO could not be as easily generalized across target as was the case for the link between RWA and benevolent sexism. Indeed, SDO was not a significant predictor of hostile sexism toward men (although in the male subsample, the relationship was borderline significant). The very limited predictive power of SDO to explain sexism toward men compared to its strong predictive power for hostile sexism toward women could nevertheless be expected because SDO primarily elicits prejudice toward subordinate and derogated groups (Duckitt & Sibley, 2007). Given that men are still holding the dominant position in most societies (including Western societies), they are less likely to be the target of SDO-based prejudice.

Remarkably, women's hostile sexism toward men was strongly predicted by RWA. Although the strength of this relationship was somewhat unexpected, an explanation might be found in the content of the hostile sexism toward men scale, which partially refers to immoral and lawless behavior of men toward women (for example, 'men have no morals when they are attracted to a woman', and 'most men sexually harass women when in a position of power'). As such, the scale includes the perception of men threatening the harmony between sexes and social cohesion, which may explain why women report hostile attitudes toward men especially when they have high levels RWA.

Conclusion

The present research provided a general framework for sexism, demonstrating that in modern Western society, it is warranted to (also) consider sexism at the individual level

in terms of differences in general motivated cognitive style and specific social attitudes, rather than merely in terms of a group phenomenon or a 'battle between sexes'. Need for closure was shown to be a general underlying source of different forms of sexism toward both men and women, regardless of the individual's gender. This finding corroborates Allport's (1954) statement that prejudice is the reflection of a general motivated cognitive style, rather than a specific attitude toward a specific group. Although it may be assumed that in (non-Western) societies with greater gender inequality, gender itself would have more predictive power in explaining sexism, future research will need to reveal whether in these societies gender merely provides additive predictive power for explaining sexism, or whether it reduces the influence of individual differences.

References

- Aiken, L. S., & West, S. G. (1991). *Multiple Regression: Testing and interpreting interactions*. Thousand Oaks: Sage.
- Allport, G. (1954). The nature of prejudice. Reading, MA: Addison-Wesley.
- Altemeyer, B. (1981). *Right-Wing Authoritarianism*. Manitoba: University of Manitoba Press.
- Altemeyer, B. (1998). The other "authoritarian personality". In M. P. Zanna (Ed.), Advances in Experimental Social Psychology (Vol.30, pp.47-92). San Diego: Academic Press.
- Christopher, A. N., & Mull, M. S. (2006). Conservative ideology and ambivalent sexism.

 *Psychology of Women Quarterly, 30, 223-230.
- Coleman J. M. (2008). Beyond nature and nurture: The influence of lay gender theories on self-stereotyping. *Self and Identity*, 7, 34-53.
- Cornelis, I., & Van Hiel, A. (2006). The impact of cognitive styles on authoritarianism based conservatism and racism. *Basic and Applied Social Psychology*, 28, 37-50.
- De Grada, E., Kruglanski, A. W., Mannetti, L, & Pierro, A. (1999). Motivated cognition and Group interaction: Need for clsoure affects contents and processes of collective negotiations. *Journal of Experimental Social Psychology*, *35*, 346-365.
- Dhont, K., Roets, A., & Van Hiel A. (2011). Opening Closed Minds: The Combined Effects of Intergroup Contact and Need for Closure on Prejudice. *Personality and Social Psychology Bulletin*, 37, 514-528.

- Duckitt, J. & Sibley, C. G. (2010a). Right-Wing Authoritarianism and Social Dominance

 Orientation Differentially Moderate Intergroup Effects on Prejudice. *European*Journal of Personality, 24, 583-601.
- Duckitt, J. & Sibley, C. G. (2010b). Personality, Ideology, Prejudice, and Politics: A dual-process motivational model. *Journal of Personality*, 78, 1861-1893.
- Duckitt, J. & Sibley, C. G. (2007). Right-wing authoritarianism, social dominance orientation and the dimensions of generalized prejudice. *European Journal of Personality*, 21, 113-130.
- Duckitt, J. (2001). A dual-process cognitive-motivational theory of ideology and prejudice. In M. P. Zanna (Ed.), *Advances in Experimental Social Psychology* (Vol. 33, pp. 41-113). San Diego, CA: Academic Press.
- Duckitt, J. (1989). Authoritarianism and group identification: A new view of an old construct. *Political Psychology*, *10*, 63-84.
- Duckitt, J. (2006). Differential effects of right wing authoritarianism and social dominance orientation on outgroup attitudes and their mediation by threat from competitiveness to outgroups. *Personality and Social Psychology Bulletin, 32*, 684-696.
- Glick, P. & Fiske, S. T. (1996). The ambivalent sexism inventory: differentiating hostile and benevolent sexism. *Journal of Personality and Social Psychology*, 70, 491-512.
- Glick, P. & Fiske, S. T. (1999). The ambivalence toward men inventory: differentiating between hostile and benevolent beliefs about men. *Psychology of Women Quarterly*, 23, 519-536.

- Glick, P., Fiske, S. T., Masser, B., Manganelli, A. M., Huang, L., Castro, Y. R., et al. (2004). Bad but bold: ambivalent attitudes toward men predict gender inequality in 16 nations. *Journal of Personality and Social Psychology*, 86, 713–728.
- Glick, P., Fiske, S. T., Mladinic, A., Saiz, J. L., Abrams, D., Masser, B., et al. (2000).

 Beyond prejudice as simple antipathy: hostile and benevolent sexism across cultures. *Journal of Personality and Social Psychology*, 79, 763–775.
- Hu, L., & Bentler, P.M. (1998). Fit indices in covariance structure modeling: sensitivity to underparameterized model misspecification. *Psychological Methods*, 3, 424 453.
- Jost, J. T., & Banaji, M. R. (1994). The role of stereotyping in system-justification and the production of a false consciousness. *British Journal of Social Psychology*, *33*, 1-27.
- Jost, J. T., & Hunyady, O. (2005). Antecedents and consequences of system-justifying ideologies. *Current directions in Psychological Science*, 14, 260-265.
- Jugert, P., Cohrs, J. C., & Duckitt, J. (2009). Inter- and intrapersonal processes underlying authoritarianism: The role of social conformity and personal need for structure. *European Journal of Personality*, 23, 607-621.
- Kruglanski, A. W. (1989). Lay epistemic and human knowledge: Cognitive and motivational bases. New York: Plenum.
- Kruglanski, A. W. (1990). Motivations for judging and knowing: Implications for causal attribution. In E. T. Higgins & R. M. Sorrentino (Eds.), *The handbook of motivation and cognition: Foundation of social behavior* (Vol. 2, pp. 333–368). New York: Guilford Press.

- Kruglanski, A. W. (2004). *The psychology of Closed Mindedness*. New York: Psychology Press.
- Kruglanski, A. W, & Webster, D. M. (1991). Group members' reactions to opinion deviates and conformists at varying degrees of proximity to decision deadline and environmental noise. *Journal of Personality and Social Psychology*, 61, 212-225.
- Kruglanski, A. W., & Webster, D. M. (1996). Motivated closing of the mind: "Seizing" and "Freezing". *Psychological Review*, 103, 263-283.
- Lievens, F. & Anseel, F. (2004). Confirmatory factor analysis and invariance of an organizational citizenship behaviour measure across samples in a Dutch-speaking context. *Journal of Occupational and Organizational Psychology*, 77, 299-306.
- Lee, T. L., Fiske, S. T., & Glick, P. (2010). Next gen ambivalent sexism: Converging correlates, causality in context, and converse causality, an introduction to the special issue. *Sex Roles*, 62, 395-404.
- Lindell, M. K. & Whitney, D. J. (2001). Accounting for common method variance in cross-sectional research designs. *Journal of Applied Psychology*, 86, 114-121.
- Onraet, E., Van Hiel, A., Roets, A., & Cornelis, I. (in press). The closed mind: 'Experience' and 'cognition' aspects of openness to experience and need for closure as psychological bases for right-wing attitudes. *European Journal of Personality*.
- Pierro, A., Mannetti, L., De Grada, E, Livi, S, & Kruglanski, A. W. (2003). Autocracy bias in informal groups under need for closure. *Personality and Social Psychology Bulletin*, 29, 405-417.
- Pratto, F., Sidanius, J., Stallworth, L. M., & Malle, B. F. (1994). Social Dominance Orientation: A personality variable predicting social and political attitudes. *Journal of*

- Personality and Social Psychology, 67, 741-763.
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in simple and multiple mediator models. *Behavior Research Methods*, 40, 879-891.
- Rangel, U. & Keller, J. (in press). Essentialism goes social: Belief in social determinism as a component of psychological essentialism. *Journal of Personality and Social Psychology*.
- Roets, A. & Van Hiel, A. (2011a). The role of need for closure in essentialist entitativity beliefs and prejudice: An epistemic needs approach to racial categorization. *British Journal of Social Psychology*, 50, 52-73.
- Roets, A. & Van Hiel, A. (2011b). Item selection and validation of a brief, 15-item version of the need for closure scale. *Personality and Individual Differences*, 50, 90-94.
- Roets, A., & Van Hiel, A. (2006). Need for closure relations with authoritarianism, conservative beliefs and racism: The impact of urgency and permanence tendencies. *Psychologica Belgica*, 46, 235-252.
- Roets, A., & Van Hiel, A. (2007). Separating ability from need: Clarifying the dimensional structure of the need for closure scale. *Personality and Social Psychology Bulletin*, 33, 266-280.
- Roets, A., Van Hiel, A., & Cornelis, I. (2006). Does materialism predict racism?

 Materialism as a distinctive social attitude and a predictor of prejudice. *European Journal of Personality*, 20, 155-168.

- Roets, A., Van Hiel, A., Cornelis, I., & Soetens, B. (2008). Determinants of performance and invested effort. A need for closure by cognitive capacity interaction analysis. Personality and Social Psychology Bulletin, 34, 779-792.
- Rubin, M., Paolini, S., & Crisp, R. J. (in press). The relationship between need for closure and deviant bias: An investigation of generality and process. *International Journal of Psychology*.
- Sibley, C. G., & Duckitt, J. (2008). Personality and prejudice: A meta-analysis and theoretical review. *Personality and Social Psychology Review*, 12, 248-279.
- Sibley, C. G., Overall, N. C., & Duckitt, J. (2007). When women become more hostilely sexist toward their gender: The system-justifying effect of benevolent sexism. *Sex Roles*, 57, 743-754.
- Sibley, C. G., Wilson, M. S., & Duckitt, J. (2007). Antecedents of men's hostile and benevolent sexism: The dual roles of social dominance orientation and right-wing authoritarianism. *Personality and Social Psychology Bulletin*, *33*, 160–172.
- Stellmacher, J., & Petzel, T. (2005). Authoritarianism as a group phenomenon. *Political Psychology*, 26, 245-274.
- Van Hiel, A., & Mervielde, I. (2005). Authoritarianism and social dominance orientation: Relationships with various forms of racism. *Journal of Applied Social Psychology*, 35, 2323-2344.
- Van Hiel, A., Pandelaere, M., & Duriez, B. (2004). The impact of need for closure on conservative beliefs and racism: Differential mediation by authoritarian submission and authoritarian dominance. *Personality and Social Psychology Bulletin*, 30, 824-837.

- Van Hiel, A., Cornelis, I., & Roets, A. (2007). The intervening role of social worldviews in the relationship between the five-factor model of personality and social attitudes. *European Journal of Personality*, 21, 131-148.
- Webster, D. M., & Kruglanski, A. W. (1994). Individual differences in need for cognitive closure. *Journal of Personality and Social Psychology*, 67, 1049-1062.

Table 1. Reliability, Mean and SD in the total and the gender subsamples, and intercorrelations between variables.

	α	M (SD)	M♂ (SD)	M♀ (SD)	t(220)	2	3	4	5	6	7	8	9
1. NFC	.90	3.88 (.56)	3.88 (.58)	3.87 (.54)	.10	.56 ***	.27 ***	.32 ***	.30 ***	.23	.33	.31 ***	.25 ***
2. RWA	.81	2.93 (.69)	3.01 (.71)	2.87 (.67)	1.46		.34 ***	.47 ***	.37 ***	.42 ***	.45 ***	.31 ***	.43 ***
3. SDO	.86	2.13 (.67)	2.13 (.67)	2.13 (.68)	04			.39 ***	.43 ***	.23	.27 ***	.19 **	.27 ***
4. ASI	.85	2.66 (.54)	2.80 (.52)	2.57 (.53)	3.26**				.82 ***	.75 ***	.72 ***	.49 ***	.72 ***
5. Hostile ♀	.82	2.62 (.62)	2.79 (.70)	2.50 (.54)	3.52**					.40 ***	.52 ***	.34 ***	.54 ***
6. Benevolent ♀	.79	2.71 (.67)	2.82 (.61)	2.64 (.70)	2.00*						.67 ***	.47 ***	.65 ***
7. AMI	.87	2.70 (.63)	2.63 (.66)	2.74 (.60)	-1.30							.84 ***	.85 ***
8. Hostile ♂	.84	2.86 (.73)	2.61 (.70)	3.02 (.70)	-4.35***								.42 ***
9. Benevolent ♂	.85	2.54 (.76)	2.66 (.82)	2.46 (.71)	1.93								-

Note: *** p < .001, ** p < .01, * p < .05

Table 2.

Hierarchical regression analyses for gender and NFC as general source of various forms of sexism.

		ASI	Hostile toward ♀	Benevolent toward ♀	AMI	Hostile toward ♂	Benevolent toward 3
Gender	F_{change}						
	(1, 220)	10.61**	12.40**	4.01*	1.68	18.95***	3.71
	% variance	4.6	5.3	1.8	.80	7.9	1.7
	β	.21**	.23***	.13*	09	28***	.13
NFC	F_{change}						
	(1, 219)	25.14***	23.37***	11.79**	27.01***	25.58***	14.52***
	% variance	9.8	9.1	5.0	10.9	9.6	6.1
	β	.31***	.31***	.21**	.33***	.28***	.27***
Interaction	F_{change}						
	(1, 218)	.19	.36	1.40	.04	9.91**	6.47*
	% variance	.10	.10	.60	.00	3.6	2.7
	β	03	.04	08	012	19**	.17*

Note: *** p < .001, ** p < .01, * p < .05

Table 3.

Mediation analyses for the impact of NFC on sexism through social attitudes

Basic Model			Detailed Model					
	ASI	AMI	Hostile toward ♀	Benevolent toward ♀	Hostile toward ♂	Benevolent toward ♂		
Total	.44***	.43***	.34***	.31***	.39***	.31***		
effect	(.10)	(.10)	(.08)	(.08)	(.08)	(.08)		
Direct effect	03	.03	.06	08	.22*	05		
	(.12)	(.12)	(.10)	(.11)	(.11)	(.10)		
Total indirect	.47***	.39***	.28***	.39***	.16*	.36***		
	(.10)	(.10)	(.08)	(.09)	(.07)	(.08)		
RWA indirect	.38***	.35***	.16*	.37***	.15 †	.34***		
	(.11)	(.11)	(.08)	(.10)	(.08)	(.09)		
SDO indirect	.08*	.03	.12**	.02	.01	.03		
	(.04)	(.03)	(.04)	(.02)	(.02)	(.02)		

Note: *** p < .001, ** p < .01, * p < .05, † p < .10

Table 4.

Regression analyses for RWA and SDO as proximal determinants of various forms of sexism in men and women.

		ASI	Hostile toward ♀	Benevolent toward ♀	AMI	Hostile toward ♂	Benevolent toward ♂
Wome	en (N = 133)			·			
	F_{change} (2, 130)	27.71***	17.94***	21.67***	20.53***	23.03***	8.07***
	%variance	29.9	21.6	25.0	24.0	26.2	11.0
	β RWA	.44***	.26**	.47***	.46***	.51***	.29**
	βSDO	.22**	.39***	.09	.07	.19	.11
Men (1	N = 89)						
	F_{change} $(2, 86)$	17.65***	18.11***	5.07**	12.28***	2.71†	22.37***
	%variance	29.1	29.6	10.5	22.2	5.9	34.2
	β RWA	.25*	.18	.22*	.33**	.05	.49***
	βSDO	.39***	.45***	.16	.23*	.22†	.18

Note: *** p < .001, ** p < .01, * p < .05, † p < .10

Figure captions

General mediation model with latent variables for the effects of NFC on general sexism toward men and toward women through RWA and SDO.

Figure 1

