

Group differences in the legitimization of inequality: Questioning the role of social dominance
orientation

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ABSTRACT

Social dominance orientation (SDO) is conceived as an individual's level of support for group-based hierarchy in general that causes support for more specific group hierarchies. According to social dominance theory, group differences in SDO underpin ideological and behavioural group differences related to specific group hierarchies. Using representative 5-year longitudinal panel data from New Zealand (N=3384), we test whether SDO mediates effects of sex and ethnicity on legitimising myths (LMs) relating to gender and ethnic hierarchy over time. The SDO mediation hypothesis is supported in the case of hostile sexism. However, it is unsupported in the case of benevolent sexism and LMs relating to ethnic hierarchy, where there was no cross-lagged effect on SDO. Moreover, being in the dominant ethnic group is associated with more legitimization of ethnic hierarchy but less legitimisation of gender hierarchy, which is inconsistent with the notion of a general orientation underpinning group differences in legitimization. There was mixed evidence for a reverse path whereby specific LMs mediate group differences in SDO across time. We argue for the need to find alternative ways to theorise ideological consensus and difference between groups.

Group differences in the legitimization of equality: Questioning the role of social dominance orientation

Intergroup relations are often characterised by differences of opinion about the legitimacy of status and power hierarchies within which groups are embedded. On the one hand, disadvantaged groups may reject the status quo and engage in various kinds of ideological and practical resistance, while dominant groups may resist perceived threats to their supremacy by legitimizing inequality (e.g. Leach, Snider & Iyer, 2002; Sidanius & Pratto, 1999; Tajfel, 1978). On the other hand, group based inequalities can also be marked by a level of consensus and cooperation, whereby their stability is a function, at least in part, of being accepted even by those disadvantaged by it (e.g. Dixon, Levine, Reicher & Durrheim, 2012; Jackman, 1994; Jost & Banaji, 1994). As such, an adequate account of ideological dissension versus consensus between social groups is an important part of any social scientific understanding of intergroup inequality.

Within psychology, social dominance theory (SDT) is perhaps the most influential attempt to understand the nature of ideological consensus and divergence underpinning domination and inequality (Sidanius & Pratto, 1999). Central to the theory is the construct of social dominance orientation (SDO), defined as ‘a very general individual differences orientation expressing the value that people place on non-egalitarian and hierarchically structured relationships among social groups’ (Sidanius & Pratto, 1999, p. 61). In what might be termed a generality hypothesis regarding support for hierarchy, SDT proposes that people’s endorsement of ideologies that legitimize particular kinds of hierarchies - so-called ‘legitimising myths’ (LMs) such as sexism and racism - are understood as outcomes of this general orientation. Accordingly, high-SDO individuals endorse and legitimise a variety of different kinds of

intergroup hierarchy (for a review see Pratto, Sidanius & Levin, 2006), and people who support one kind of subjugation tend to support other kinds as well (Zick, Wolf, Küpper, Davidov, Schmidt & Heitmeyer, 2008). Indeed, the construct of SDO has been considered general enough to drive support for human domination over animals in addition to domination between human groups (Dhont, Hodson, Costello & MacInnes, 2014). SDO is considered, along with right-wing authoritarianism (Altemeyer, 1988), as one of the two key individual difference variables associated with prejudice (see Duckitt, 2010).

The claim that support for specific group hierarchies stems from a general underlying psychological orientation has proved controversial, however. Critics argue that SDO is an outcome or even a measurement artefact arising from attitudes about specific intergroup relationships rather than a cause of them (e.g. Schmitt, Branscombe & Kappen, 2003; see also Turner & Reynolds, 2003). For their part, defenders of the construct point to longitudinal evidence demonstrating cross-lagged effects of SDO on specific attitudes over time (Kteily, Sidanius & Levin, 2011; Sibley, Wilson & Duckitt, 2007; Sibley & Liu, 2010). We will argue here that such evidence for the causality of SDO over time does not in itself constitute evidence for an important *particular* causal role it is theorised to have within SDT: that is, as a driver of ideological and behavioural asymmetries between groups, and not just individual differences within them. In the current study, we examine the extent to which the generality hypothesis of SDT is as applicable to group differences as it is to individual differences.

The Controversial Causal Status of SDO

Critics of SDT argue that SDO reflects participants' attitudes about the specific hierarchies they have in mind at any point in time rather than causing them (Schmitt et al., 2003).

In line with this, SDO correlates differently with sexism, racism, conservatism, heterosexism, religious fundamentalism and support for war, depending on the particular form of oppression participants are thinking about whilst completing the SDO scale (Lehmiller & Schmitt, 2007; Schmitt et al., 2003). The challenge posed by such studies is not merely that SDO is sensitive to immediate social context or experimental manipulations (points that are uncontested), but that the meaning of the construct might need to be reconsidered: If SDO is effectively a composite or even a *measure* of specific attitudes, then in what meaningful sense can it be said to cause them (Schmitt & Branscombe 2003; Turner & Reynolds, 2003)?

The view of SDO as a mere outcome or artefact of specific attitudes is contradicted by evidence from longitudinal studies in which cross-lagged analysis is used to indicate causal effects of SDO on a variety of attitudes and ideologies: hostile sexism (Sibley, Wilson & Duckitt, 2007), negative affect towards ethnic outgroups and preferences for ethnic ingroup friendships (Kteilly et al., 2011), equality positioning (Sibley & Duckitt, 2010) and perceived ethnic victimisation (Thomsen et al., 2010). In a further longitudinal panel study, participants completed the standard SDO scale along with an adapted version in which references to groups in general were replaced with references to ethnicity, age and gender (Sibley & Liu, 2010). General SDO exerted a cross-lagged effect on ethnic prejudice over and above that of the ethnicity-specific adapted version of the scale, strongly suggesting that the scale does indeed measure a general orientation towards group-based hierarchy that is not reducible to attitudes about specific hierarchies (i.e. a 'true' SDO). The authors suggest that the development of this general orientation is shaped by a person's attitudes about specific groups, specific ideologies and so forth but that once formed, the general orientation is relatively stable and is causally effective in its own right. Even so, it remains plausible that SDO scores reflect specific attitudes

as well as true SDO. As such, the scale may tap a genuine general orientation in addition to some of the specific LMs that SDO is supposed to cause, and thus correlations could be inflated.

Moreover, cross-lagged evidence does not completely resolve questions of causality, because there remains the possibility of spurious effects arising from common covariates. In the case of SDO, this is a very real possibility because SDO is understood to be shaped by a number of socio-demographic factors including gender, but also age, education, socioeconomic status and so forth (Carvacho et al., 2013). To the extent that these variables affect both SDO and specific LMs but are not included in the statistical analysis, then apparent cross-lagged effects of SDO may be attributable to the continued effect of these stable factors across time rather than to the causal efficacy of SDO itself: SDO scores would in effect be functioning as a proxy measure of demographic causes of ideological variation. Thus, robust tests of the causal effect of SDO on specific LMs should account as comprehensively as possible for such demographic covariates. In the case of group memberships relevant to group-based hierarchy, such as gender and ethnicity, these are not just potential sources of spurious results to be controlled but are of substantive theoretical importance to SDT itself.

Distinguishing Individual and Group Levels of Analysis

According to SDT, SDO drives both individual variation and systematic group differences in pro-hierarchy attitudes. Individual and group differences in SDO have been respectively termed consensual and dissensual SDO, with level of dissensual SDO compared to consensual SDO being indicative of ideological conflict between dominant and subordinate groups (Sidanius & Pratto, 1999; see also Lee, Pratto & Johnson). Members of dominant groups are generally expected to have higher SDO than subordinates due to self-interest and the need to

legitimise their superior power and status (Pratto, Sidanius & Levin, 2006; Sidanius & Pratto, 1999), although extent of group differences varies according to socio-structural and cultural factors (Lee, Pratto & Johnson, 2011). That is, SDT proposes dominant group status as a distal cause of SDO, and attitudes about specific hierarchies as outcomes, implying a mediation of group differences in attitudes by SDO (Guimond, Dambrun, Michinov & Duarte, 2003; Sidanius & Pratto, 1999; Jetten & Iyer, 2010). The generality hypothesis should thus apply to group differences as well as individual differences. That is, we would expect dominant status to affect support for hierarchy in relation to all dimensions of inequality, not just to those dimensions on which that dominant status is enjoyed. For example, if White people have higher SDO (a general orientation) than Black people, then they should also be more sexist. Men should not only be more sexist than women, but also more racist and so forth. In short, a general mechanism would be similarly general in its results.

However, just as the causal status of SDO has been challenged, so has its mediating role. Schmitt et al. (2003, study 4), for example, report path models suggesting that indirect paths from dominant status to SDO via specific LMs are at least as plausible as the status-SDO-LM pathway suggested by SDT, if not more so. The hypothesised relation between status and SDO is also affected by the salience of the relevant hierarchy when the SDO scale is completed, which again is more consistent with the specific attitudes mediating group differences in SDO rather than the reverse (Huang & Liu, 2005). While the longitudinal evidence described previously is supportive of SDO having causal effects, it does not demonstrate that these causal effects account for group differences, just as factors that account for variation in prejudice within groups do not necessarily account for differences between them (Pettigrew, 1958; Pettigrew, 2006; see also Pehrson, Vignoles & Brown, 2009). That is, the factors that make some men more sexist

than other men, for example, are not necessarily the same factors that make men more sexist than women. To date, longitudinal studies on the causal status of SDO have examined only within-group variance, such as variance in men's levels of sexism (Sibley et al., 2007), or ethnic preferences of White American students (Kteily et al., 2011). Thomsen et al. (2010) test cross-lagged effects of SDO separately in White and Latino student subsamples without testing whether group differences are mediated by SDO. In each case, it is within-group variance that is examined, rather than group differences related to status.

Ideological legitimization of gender and ethnic hierarchy

The current study assesses the extent to which SDO accounts for group differences in LMs, taking the case of gender and ethnic hierarchies in New Zealand. The ideological underpinnings of contemporary gender hierarchy have been examined by social psychologists primarily within the framework of 'ambivalent sexism', which theorises modern sexism as comprising both 'benevolent' and 'hostile' aspects (Glick & Fiske, 1996). Hostile sexism entails enmity primarily towards women who resist or fail to conform to the roles defined for them by traditional patriarchal relations, depicting them as illegitimately trying to control men and extract power from them. In contrast, benevolent sexism is superficially affectionate and complementary about women in general, but on terms that serve to perpetuate an unequal and dependent relation by portraying them as being in need of male protection and as best suited to low status roles. Hostile and benevolent sexism operate together to both punish women who resist patriarchy and to reward those who concede to it (Glick & Fiske, 2001). In general, men have been found to endorse HS substantially more than women, while benevolent sexism is relatively acceptable to both men and women, which is understood to be a large part of the reason for latter's

effectiveness in legitimating the status quo. For example, leading women to believe that benevolent sexism is widespread can have the effect of reducing their willingness to challenge inequality by providing them with a subjectively positive female identity within a sexist world (Becker & Wright, 2011). The legitimization of gender inequality, then, comprises both dissensual and relatively consensual ideological components. Existing survey evidence from New Zealand, which is the specific context of our present study, finds SDO to be correlated with both hostile and benevolent sexism, although it only shows a cross-lagged effect on the former, while the latter is driven more by right-wing authoritarianism (Sibley et al., 2007). The role of benevolent sexism in legitimizing inequality appears to be rather complex in that women high in benevolent sexism tend to support equal opportunities (Sibley & Perry, 2010). Nonetheless, the fact that benevolent sexism is related to SDO and predicts increases in women's hostile sexism over time indicate that it forms part of an ideological system that support gender inequality in this context (Sibley, Overall & Duckitt, 2007).

Ethnic relations in New Zealand are shaped by the legacy of settler-colonialism: the indigenous Maori, making up 15 percent of the population, live alongside a majority population descended from European settlers. The history of relations between these groups, as in other settler-colonial contexts, is characterised by profound injustices experienced by the indigenous population, and the persistence of economic inequality to the present that can be attributed in large part to these injustices. According to the 'Dark Duo' account of post-colonial ideology, ethnic inequalities in former settler-colonial contexts such as New Zealand are also legitimised by two complementary ideologies (Sibley, 2010). First, in order to manage the legacy of undeniable historical injustices, an ideology of *historical negation* serves to assert that these injustices are irrelevant to contemporary society. It manifests as opposition to restitution for

wrongs committed in the past and a denial that present generations should feel accountable for them or that they have any bearing on the legitimacy of existing status relationships. Second, an ideology of *symbolic exclusion* serves to undermine indigenous groups' claims for symbolic or cultural recognition as part of the nation. The two constructs are positively related at the individual level and are associated with voting and policy preferences concerning ethnic inequality in New Zealand (Sibley, 2010; Sibley, Liu, Duckitt & Khan, 2008), while similar notions of symbolic inclusion versus exclusion predict support for indigenous group rights in the Chilean context (Pehrson, Gonzalez & Brown, 2011).

Our aim in the present study is to examine the extent to which any group differences in the endorsement of these forms of legitimation are a function of differences in support for group-based hierarchy in general. According to SDT, being in a dominant ethnic or gender group should lead to more support for hierarchies in general and not just a particular hierarchy. Thus dominant groups would be expected to score higher on LMs relating to gender (hostile and benevolent sexism) and those relating to ethnicity (historical negation and symbolic exclusion). Moreover, SDO would be expected to mediate any cross-lagged effects of group status on support for various specific LMs because it is the causal mechanism for them.

Method

Sample

The data for this study come from the 2009 and 2014 waves of the New Zealand Attitudes and Values Study (NZAVS), which we will refer to here as time 1 and time 2 respectively. The earliest and most recent available waves were selected to allow for a sufficiently large lag between time 1 and time 2 responses, given that SDO and support for LMs

can be rather stable and some change in scores is necessary for the cross-lag analysis.

Participants for the NZAVS are randomly selected from the electoral roll with steps taken to boost the sample from the indigenous minority Maori population. Of the 40,500 individuals selected in this way, 6518 participants (16.6 percent) responded to the questionnaire at time 1, with 3627 remaining in the sample at time 2 (a retention rate of 55.6 percent). Existing analysis of attrition in the NZAVS suggests slight demographic and personality differences between constant responders and those lost from the panel, with women, Europeans and individuals with high consciousness and honesty-humility more likely to be retained. The differences are slight, however, and thus not a substantial threat to the representativeness of the matched sample analysed here (Satherley et al., 2015). For the purposes of this study, we selected participants belonging to either of the two largest ethnic groups in New Zealand: European and Maori. The present study uses data only from individuals who participated in both waves, which included 2868 European and 516 Maori participants. Sixty-one percent of the European sample, and 63 percent of the Maori sample were female. The age range at time 1 was 18 to 90 years and the mean age was 50 years (S.D. = 14.5).¹

Measures

Group status. Participants indicated which ethnic group they belonged to, selecting from a list of eight. Only those identifying themselves as either New Zealand European (hereafter ‘NZ European’) or Maori are included in the current study, indicating high and low ethnic group status respectively (longitudinal samples sizes for the other ethnic minority groups were too small for robust analysis). Participants also indicated their sex as male or female.

Education. Participants indicated their highest level of qualification. These qualifications were coded into a continuous variable (-2 = no qualification; -1 = high school; 0 = diploma/certificate; 1 = undergraduate; 2 = postgraduate).

Household income. Participants estimated their total pre-tax household income.

Urban versus rural residential area. Participants' residential addresses were coded into a dichotomous variable indicating either an urban or rural location.

SDO. The NZAVS includes a 6-item measure of SDO (time 1 $\alpha = .71$; time 2 $\alpha = .65$). Three items were coded positively such that agreement indicates high SDO ("It is OK if some groups have more of a chance in life than others"; "Inferior groups should stay in their place"; "To get ahead in life, it is sometimes okay to step on other groups"), while three items were reverse-scored such that agreement indicates low SDO ("We should have increased social equality"; "It would be good if groups could be equal"; "We should do what we can to equalise conditions for different groups"). These three positively worded and three negatively worded items were selected randomly from the 16-item SDO₆ scale, which is the most widely used SDO scale (Sidanius & Pratto, 1999). In an independent sample of 338 undergraduates, we found that the 6-item short SDO scale correlates very strongly with the full SDO₆ scale ($r = .93$). When the six items are modelled as indicators of SDO as a latent variable, this correlates perfectly with a second latent factor indicated by the other ten items in the scale. This demonstrates the validity of the short-form scale for our present purposes. In the structural equation models reported in the main analysis, the six SDO items were used to compute three item parcels (labelled 'sdo1', 'sdo2' and 'sdo3').

Hostile and benevolent sexism. Participants responded to ten items from the Ambivalent Sexism Inventory (Glick & Fiske, 1996). Five items measured hostile sexism (time 1 $\alpha = .81$;

time 2 $\alpha = .82$): “Women are too easily offended”; “Women exaggerate problems they have at work”; “Women seek to gain power by getting control over men”; “Once a woman gets a man to commit to her she usually tries to put him on a tight leash”; and “When women lose to men in a fair competition, they typically complain about being discriminated against”. Five items measure benevolent sexism (time 1 $\alpha = .71$; time 2 $\alpha = .76$): “Women, compared to men, tend to have greater moral sensibility”; “Many women have a quality of purity that few men possess”; “Women, as compared to men, tend to have a more refined sense of culture and good taste”; “Women should be cherished and protected by men” and “Every man ought to have a woman whom he adores”. For the purpose of the structural equation models reported below, these items were used to compute three item parcels for each kind of sexism (labelled ‘hs1’, ‘bs1’ and so forth).

Historical negation and symbolic exclusion. The NZAVS includes a short form version of the Post-Colonial Ideology Scale (Sibley, 2010). Three items measure historical recognition versus negation (time 1 $\alpha = .83$; time 2 $\alpha = .81$): “We should all move on as one nation and forget about past differences and conflicts between ethnic groups”; “We should not have to pay for the mistakes of our ancestors”; and “People who weren't around in previous centuries should not feel accountable for the actions of their ancestors”. Three further items measured symbolic projection versus exclusion (time 1 $\alpha = .82$; time 2 $\alpha = .83$): “I think that Māori culture helps to define New Zealand in positive ways”; “I reckon Māori culture should stay where it belongs—with Māori. It doesn't concern other New Zealanders”; and “New Zealand would be a better place to live if we forgot about trying to promote Māori culture to everyone”.

SDO and all of the LM measures were presented on a seven-point Likert scale, where 1 indicates ‘strongly disagree’ and 7 indicates ‘strongly agree’. All LM scales were coded such that high values indicate a more pro-hierarchy position.

The use of short-form scales for all of the constructs that we measured raises the possibility of regression dilution, i.e. the underestimation of relationships due to measurement error. This is a common problem in large omnibus surveys that tend to require abbreviated scales (Bakker & Leukes, 2016). However, as Bakker and Leukes illustrate, this regression dilution is particularly acute when extremely short (e.g. two-item) scales are used to measure complex constructs traditionally measured with much longer scales. By comparison, they find that the selection of six random items from the full scale significantly reduces the extent of dilution with diminishing returns as more items are selected. Our use of latent factors in the main analysis to model the relationships between the constructs of interest also serves to address this problem by removing unsystematic measurement error from the factor scores.

Results

Means, standard deviations and correlations at both time 1 and time 2 are shown in table I along with their stability across time. These support the generality hypothesis of SDT at the level of individual differences in that all four LMs show small to moderate correlations to one another, and each is positively correlated with SDO.

TABLE 1 HERE

FIGURES 1 AND 2 HERE

Figure 1 shows the overall ethnic group differences in the four LMs and SDO at time 1 by plotting the mean scores of NZ European and Maori participants on each. These indicate that Maori participants are more supportive of the LMs concerning gender hierarchy but less supportive of those concerning ethnic hierarchy. The non-overlapping 95 percent confidence intervals confirm the statistical significance of these differences. There is no ethnic group difference in SDO.

Mean scores for males and females are shown in figure 2. These indicate that males score significantly higher on all of the LMs and SDO compared to females.

A series of 2 (sex) x 2 (ethnicity) ANOVA models indicated no significant interactions for any of the LMs or SDO. Thus the magnitude of sex difference is the same across ethnic groups and we proceed with the analysis regarding sex and ethnicity as two independent dimensions of group status.

Analysis of Cross-Lagged Effects and Group Status on Policy Attitudes

In order to test the longitudinal effects of SDO and group status on specific LMs, and particularly the hypothesis that SDO mediates group differences in LMs, we estimated four SEM models using data from both time points (figures 3 to 6). The four LMs allow us to conduct four separate tests of the hypothesis that SDO mediates group differences in LMs. For this reason, and in order to avoid overcomplicating the model, the tests are carried out for each of the four LMs in a separate cross-lagged structural model. In these models, the LM at time 2 is regressed on SDO and itself at time 1. In order to test the reverse causal path (from specific

attitudes to SDO) in each model, SDO at time 2 is also regressed on itself and the LM at time 1. Further paths are specified between each group status on the one hand and SDO and LMs on the other at both time 1 and time 2. Ethnicity and sex were both coded such that membership of the high status group (males or NZ European) was coded 1 and membership of the low status group (females or Maori) was coded 0. The paths from ethnicity and sex thus indicate the effect of being in a high status group versus a low status one. We controlled for any effects of age, education, household income and urban versus rural residential area on SDO and LMs at both time points in all of these analyses (not depicted in the diagrams). Indicators of model fit are reported in table 2 and show good fit for all four models.

Examination of the estimated path coefficients indicates that the cross-lagged path from SDO to specific LM is statistically significant in the case of hostile sexism (figure 3), but not in the case of benevolent sexism (figure 4), historical negation (figure 5) or symbolic exclusion (figure 6). The cross-lagged path from specific LM to SDO is statistically significant in all cases.

FIGURES 3 TO 6 HERE

TABLE 2 HERE

The models included both direct and mediated paths (via SDO) between group status and LMs at time 2. Estimates for these effects along with confidence intervals were estimated using 1000 bootstrap samples in MPlus 7 and are shown in table 3 and figures 7 and 8. Because of the coding for the two dichotomous status variables described above, the unstandardized coefficients indicate the absolute difference in attitude scores associated with being in the high status group compared to the low status group for each dimension of status (ethnicity and sex). As such, they

allow direct comparison between direct and indirect effects, since both indicate the variance in attitudes attributable to status and are scaled in the same way. These estimates indicate significant direct effects of ethnic group status on historical negation and of sex on hostile sexism and symbolic exclusion. There is a significant indirect effect of sex on hostile sexism via SDO.

TABLE 3 HERE

FIGURES 7 AND 8 HERE

We also estimated the indirect effects on ethnicity and sex on SDO via LMs in each model. This analysis is illustrated in table 4 and figure 8, and suggest significant indirect effects ethnic group status on SDO via historical negation and symbolic exclusion, and a negative effect of ethnic group status on SDO via benevolent sexism. There are also positive effects of sex on SDO via benevolent sexism, historical negation and symbolic exclusion.

TABLE 4 HERE

FIGURE 9 HERE

Discussion

Using a large longitudinal panel survey conducted over five years in New Zealand, we investigated the hypothesis advanced by SDT that high status groups are more supportive of group based hierarchy in general, and that group differences in specific LMs are due to group differences in SDO. We found only limited support for this. In the case of sex, males did show a

higher level of support for hierarchy in general than females: on average, males endorsed both gender- and ethnicity-related LMs more than females did, and scored higher on SDO. However, high ethnic group status (i.e. being NZ European rather than Maori) was linked to a higher level of legitimization of ethnic hierarchy but a less legitimization of gender hierarchy. Support for group-based hierarchy in general (as indicated by SDO scores) was unrelated to ethnic group status. We observed a number of cross-lagged effects of group status on specific LMs, but this was only mediated by SDO in the case of hostile sexism. There were direct cross-lagged effects of being male on benevolent sexism and symbolic exclusion, and of being New Zealand European on historical negation, unmediated by SDO.

In the case of ethnicity, the SDT mediation hypothesis fell at the first hurdle because there were no ethnic group differences in SDO, either in terms of the overall mean levels or in our structural models, which control for a variety of demographic variables. This finding is unexpected given that the majority of studies on group status and SDO do find dominant groups to have higher SDO than subordinate groups, particularly in societies that are characterised by liberal ideology and relatively small gender inequalities (Lee & Pratto, 2011). However, the finding is by no means unprecedented, as there are a number of examples in the literature of dominant groups scoring even lower on SDO than subordinates: Israelis versus Palestinians (Schlein, 2007), Hindus versus Muslims in India (Khan & Liu, 2008), rich and educated versus poor and uneducated across Europe (Carvacho et al., 2013) and men versus women in Germany (Kuepper & Zick, 2011).

However, the crucial point here is that Maori and NZ European participants *do* differ substantially in their support for hierarchy: the former rejects ethnic hierarchy, but accepts gender hierarchy, compared to the latter. It is not the case that group-based hierarchy is

consensual between these two groups. Rather, there are important group differences in LMs such that the SDO mediation hypothesis should be fully applicable to this context. The fact that meaningful differences in the endorsement of specific LMs can exist between groups that have very similar SDO scores should draw our attention to the limits of SDO as a construct to help understand intergroup consensus and divergence. Moreover, the fact that a group can be relatively prone to endorse one kind of hierarchy but reject another further challenges the notion of group differences in support for hierarchy in general.

The limits of SDT's generality hypothesis at the group level also has implications for efforts to understand the intersection of different lines of categorization in experiences of and resistance to group-based oppression. The notion of intersectionality emerged from a critique by Black feminists of the failure of much feminist scholarship to appreciate how membership in one kind of marginalised category may shape the experience of another (e.g. Hull, Bell-Scott & Smith, 1982). For example the nature and quality of gender oppression may be different for Black women compared to White women, and thus feminism is hindered if it is informed exclusively by the experiences and priorities of the latter (see Shields, 2008). Empirical work within social psychology has demonstrated that, indeed, prototypical members of oppressed groups tend to be those who are dominant on other lines of categorization, such that the prototypical woman is white, the prototypical ethnic minority member is heterosexual, and so forth, leading to the 'invisibility' of those belonging to multiple oppressed categories (Ghavami & Peplau, 2012; Purdie-Vaughns & Eibach, 2008; Schug, Alt & Klauer, 2015). Solidarity within social movements for equality thus requires an appreciation by activists for the diverse kinds of oppression and the way they impact on one another (Curtin, Stewart & Cole, 2015; Greenwood, 2008). To take SDT at face value, such solidarity should be readily forthcoming: Just as support

for one kind of group-based hierarchy naturally entails support for other kinds because a general orientation (SDO) is the basis for all of them, so it follows that resistance to one entails resistance to all. Yet we see that this is not the case. Belonging to one kind of oppressed group does not necessarily relate to egalitarianism with regard to other categories, and even where it does (as in the case here of woman rejecting the symbolic exclusion of Maori), SDO is not the mechanism. Thus, we question the utility of the SDT perspective in understanding how and when solidarity emerges between people oppressed in different ways, as well as when this fails to happen.

At the very least, our findings should stimulate a deeper investigation into the nature of the status-SDO relation, which to date has been rather under-theorised (but see Jetten & Iyer, 2010). Our observation that group status effects on SDO are mediated by specific LMs in five out of the eight possible cases that we looked at also highlights an important avenue for investigating this relation further, particularly given that one of these pathways is negative (being in the dominant ethnic group leads to lower SDO via lower benevolent sexism). While it may turn out that this finding is unique to ethnic differences in New Zealand, it entirely plausible that such patterns are more widespread. This is worth examining further as we refine our understanding of ideological differences between groups.

We found no cross-lagged effects of SDO on benevolent sexism, historical negation or symbolic exclusion, but there was an effect on hostile sexism. Conversely, the path from LM to SDO is reliable in all cases. That SDO increases hostile sexism but not benevolent sexism replicates an earlier finding from a longitudinal student sample (Sibley et al., 2007). In general though, and in contrast to our present findings, tests of the cross-lagged effects of SDO generally find the pathway from SDO to specific attitudes and LMs to be stronger than the reverse (e.g.

Kteilly et al., 2011; Sibley & Liu, 2010; Sibley, Wilson & Duckitt, 2007; Thomsen et al., 2010). The reason for this discrepancy may lie in the breadth and representativeness of our sample. The present study is unique among longitudinal tests of this relation, as the evidence for causal role of SDO to date has relied on student samples. Consequently, variance in SDO and LMs is less constrained in our sample: compare for example our observed standard deviations of hostile (1.23) and benevolent sexism (1.18) with those observed previously in a student sample also from New Zealand (.86 and .85 respectively; Sibley et al., 2007). It could be that when participants are drawn from an ideologically and economically more homogeneous milieu such as a university student population, variation in attitude change between time points is more likely due to dispositional factors that are tapped by SDO. In contrast, in a heterogeneous sample more of the variation can plausibly be attributed to the more diverse norms, social learning and social positions involved, whose effects on LMs could potentially be independent of those of SDO. If this is the case, then we would expect weaker cross-lagged effects of SDO in broader and more representative samples. The value of the present study therefore lies partly in the fact that this is the first test of SDO's causal role to use such a broad sample.

A shortcoming of longitudinal cross-lagged analysis for investigating this topic is that the attitudes involved are relatively stable within the timespan covered by the study, particularly with an adult sample and stable testing conditions. Yet, despite the high stability of ethnic LMs we nonetheless observed several reliable cross-lagged effects of group status, indicating meaningful change attributable to group membership that, according to SDT, should be driven by SDO. Thus, the theorised mediation by SDO, if consistently true, should have been confirmed by our analysis. Moreover, the high degree of statistical power due to the large sample size is reflected in the small confidence intervals of the nonsignificant indirect paths. This is also

important because it means that we are not arguing for null results on the basis of an underpowered study but rather providing tight estimates of the effects based on a statistically powerful study. These confidence intervals derived from bootstrap analysis indicate that even a very small mediated path in the population would have been unlikely to give rise to the result we obtained. In short, our sample and analysis strongly favoured the detection of any SDO-mediated path that exist.

Within SDT, dominant groups' superior power to disseminate and enact their ideologies, and subordinate groups' self-interest to reject them, are assumed to drive ideological consensus and dissension respectively. One promising way forward, then, is to consider accounts of both power (e.g. Turner, 2005) and collective action (e.g. van Zomeren et al., 2008), in order to investigate the social psychological processes that shift the balance one way or the other. In this way, we can ask why it is that dominant groups sometimes succeed but sometimes manifestly fail to create ideological consensus despite superior material resource and structural power. Similarly, there is much to gain from situated and contextually sensitive analysis of how particular legitimizing myths are embedded in specific identity positions, as Jogdand, Khan and Mishra (2016) illustrate powerfully with regard to karma and caste in India. By questioning the role of a general orientation in driving such phenomena, we hope to open the way for alternative accounts that meet them in all their richness and their specificity.

NOTES:

1. The NZAVS sample is independent of any other research findings cited in this paper, with the exception of Satherley et al. (2015), which reports analysis of attrition rates in the survey. The raw data is available to appropriately qualified researchers on request for the purposes of replicating or checking the validity of the analyses we report. Requests for access should be addressed to Professor Chris Sibley (c.sibley@auckland.ac.nz).

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	T1 mean (SD)	T2 mean (SD)	1.	2.	3.	4.	5.
1. SDO	2.55 (.95)	2.45 (.88)	.59	.29	.19	.13	.34
2. Hostile sexism	3.21 (1.23)	3.12 (1.19)	.40	.67	.41	.28	.35
3. Benevolent sexism	3.96 (1.15)	3.92 (1.18)	.24	.39	.67	.27	.23
4. Historical negation	5.19 (1.47)	5.06 (1.47)	.13	.29	.26	.71	.49
5. Symbolic exclusion	3.14 (1.52)	2.99 (1.49)	.37	.37	.24	.46	.74

Table 1: Means, standard deviations and correlations for SDO and LMs at time 1 and time 2. Correlations above the diagonal are from time 1, those below the diagonal are time 2. Stabilities across time are shown on the diagonal.

	Hostile Sexism	Benevolent	Historical	Symbolic
	model	sexism model	negation model	exclusion model
Chi Square*	463	520	590	500
RMSEA	.038	.041	.044	.040
TLI	.959	.950	.951	.962
CFI	.974	.967	.968	.975
SRMR	.022	.027	.027	.026

Table 2: Model fit indices for the cross-lagged structural models predicting each of the four LMs (hostile sexism, benevolent sexism, historical negation and symbolic exclusion. *All chi-square values are significant ($p < .001$) with 90 degrees of freedom in all cases.

	Direct effect		Indirect effect (via SDO)	
	Estimate	95% C.I.	Estimate	95% C.I.
Effects of ethnicity				
Hostile sexism	-.059	(-.172, .053)	.007	(-.005, .020)
Benevolent sexism	-.083	(-.193, .028)	.001	(-.005, .007)
Historical negation	.193	(.052, .334)	.003	(-.005, .012)
Symbolic exclusion	.081	(-.037, .198)	.001	(-.007, .010)
Effects of sex				
Hostile sexism	.024	(-.060, .109)	.031	(.007, .056)
Benevolent sexism	.120	(.042, .197)	.004	(-.015, .023)
Historical negation	-.032	(-.121, .057)	.014	(-.011, .039)
Symbolic exclusion	.143	(.051, .235)	.006	(-.023, .034)

Table 3: Direct and indirect (via SDO) effects of ethnicity and sex on specific LMs.

Effects are unstandardized beta coefficients indicating increase in the LM as a function of being in the higher status group compared to the lower status group.

Confidence intervals are estimated using 1000 bootstrap samples. Bold text highlights confidence intervals not overlapping with zero.

	Ethnicity		Gender	
	Estimate	95% C.I.	Estimate	95% C.I.
Hostile sexism	-.019	(-.041, .004)	.077	(.045, .110)
Benevolent sexism	-.006	(-.013, .000)	.011	(.001, .021)
Historical negation	.027	(.004, .051)	.002	(-.004, .006)
Symbolic exclusion	.046	(.007, .085)	.014	(.001, .028)

Table 4: Direct and indirect effects (via hostile sexism, benevolent sexism, historical negation and symbolic exclusion) of ethnicity and sex on SDO. Effects are unstandardized beta coefficients indicating increase in the LM as a function of being in the higher status group compared to the lower status group. Confidence intervals are estimated using 1000 bootstrap samples. Bold text highlights confidence intervals not overlapping with zero.

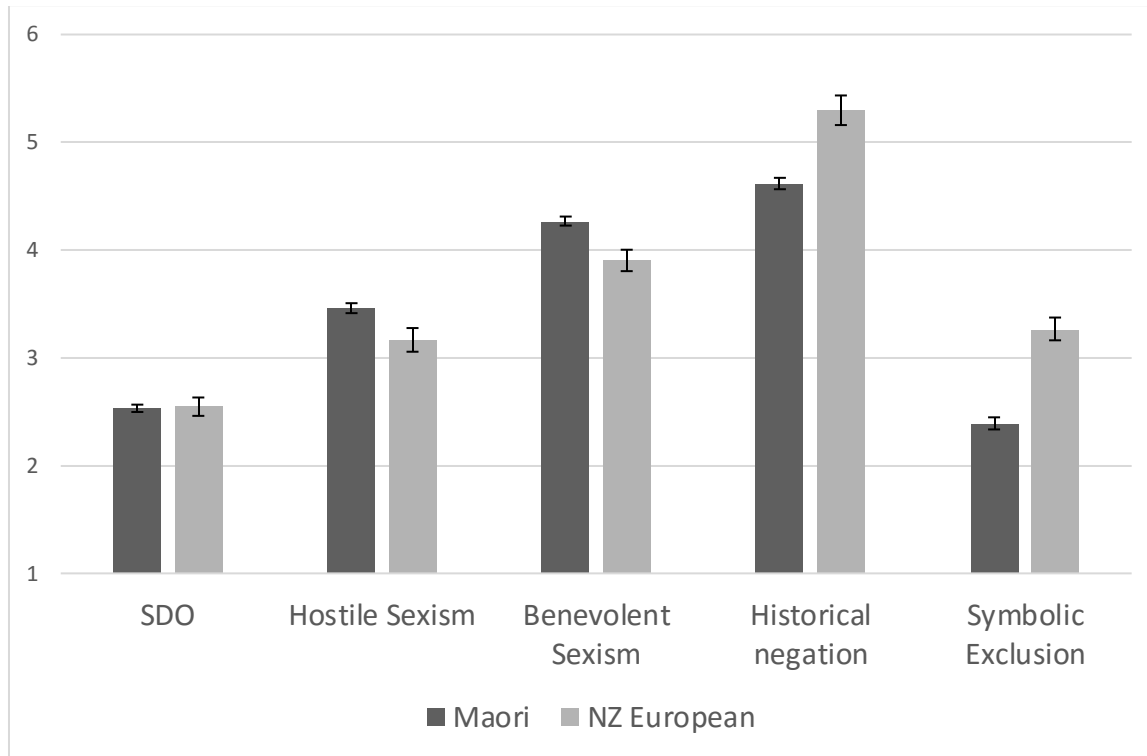


Figure 1: Ethnic group differences in mean SDO and LMs at time 1. Error bars show 95 percent confidence intervals.

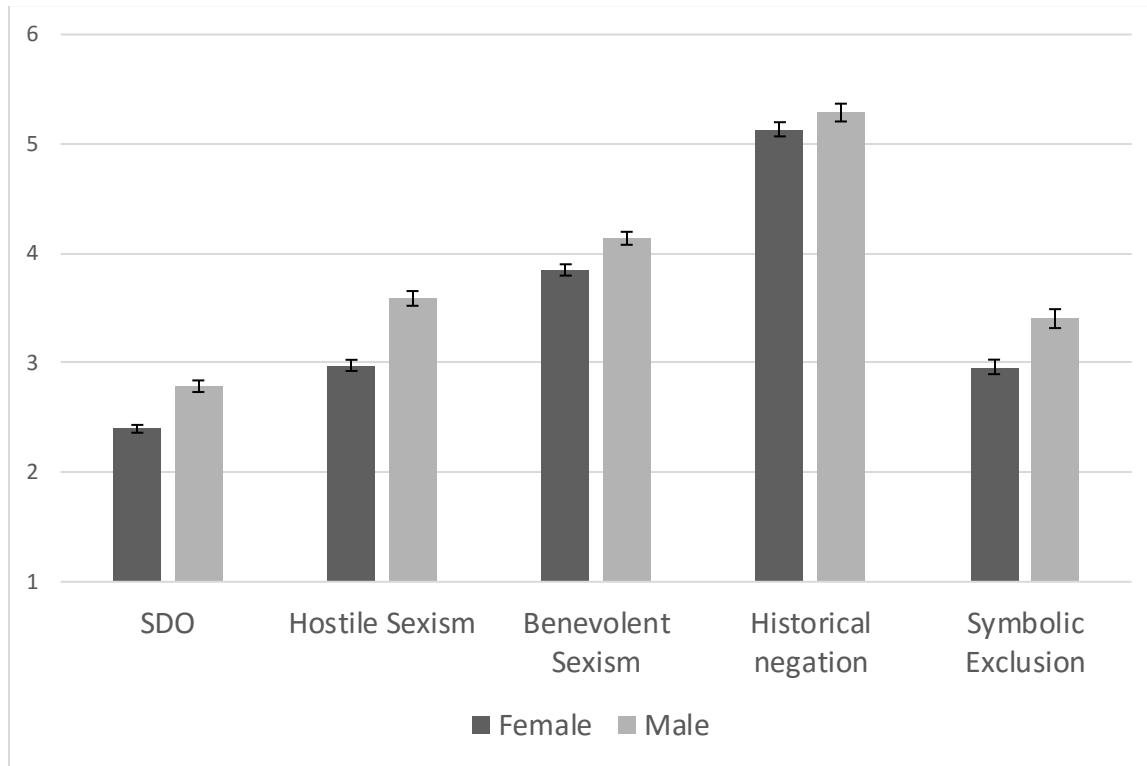


Figure 2: Sex differences in mean SDO and LMs at time 1. Error bars show 95 percent confidence intervals.

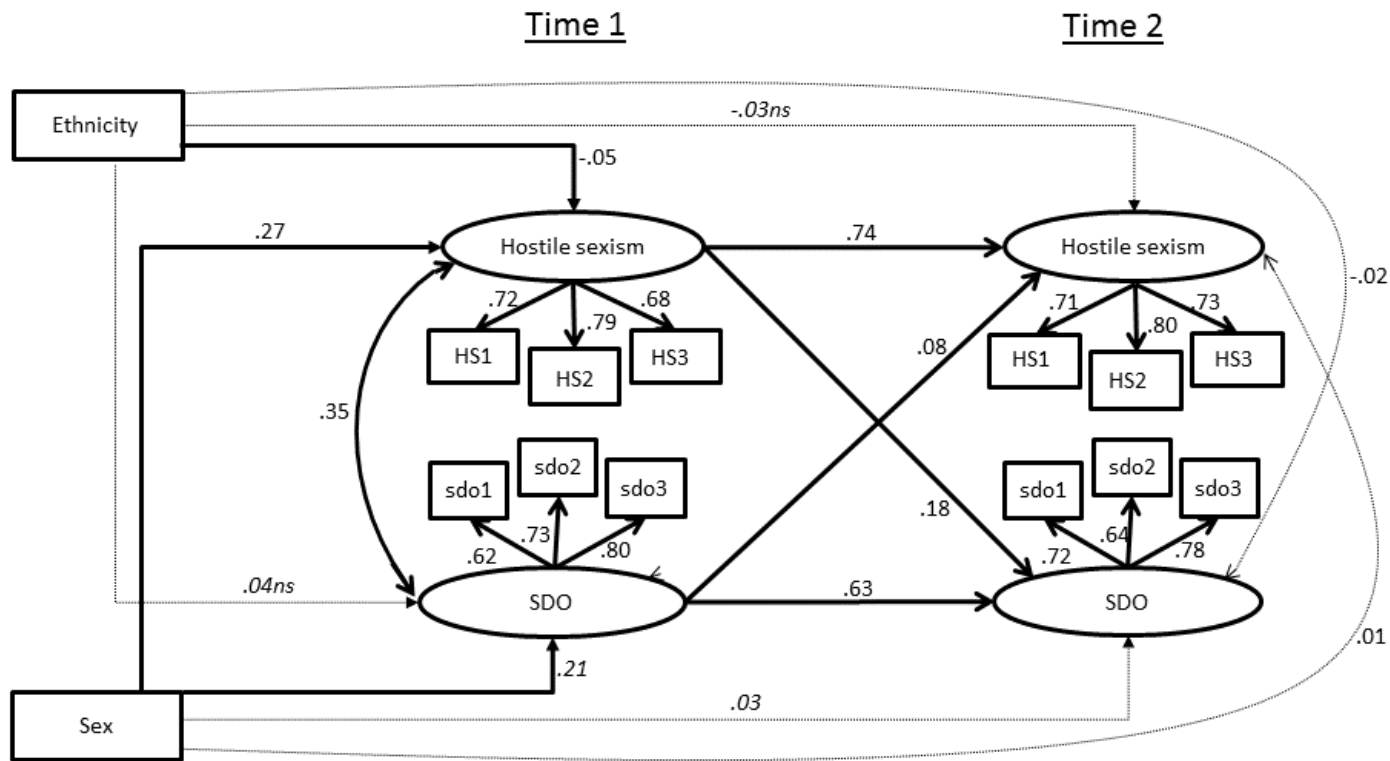


Figure 3: Longitudinal model testing cross-lagged effects of ethnicity, sex and SDO on hostile sexism.

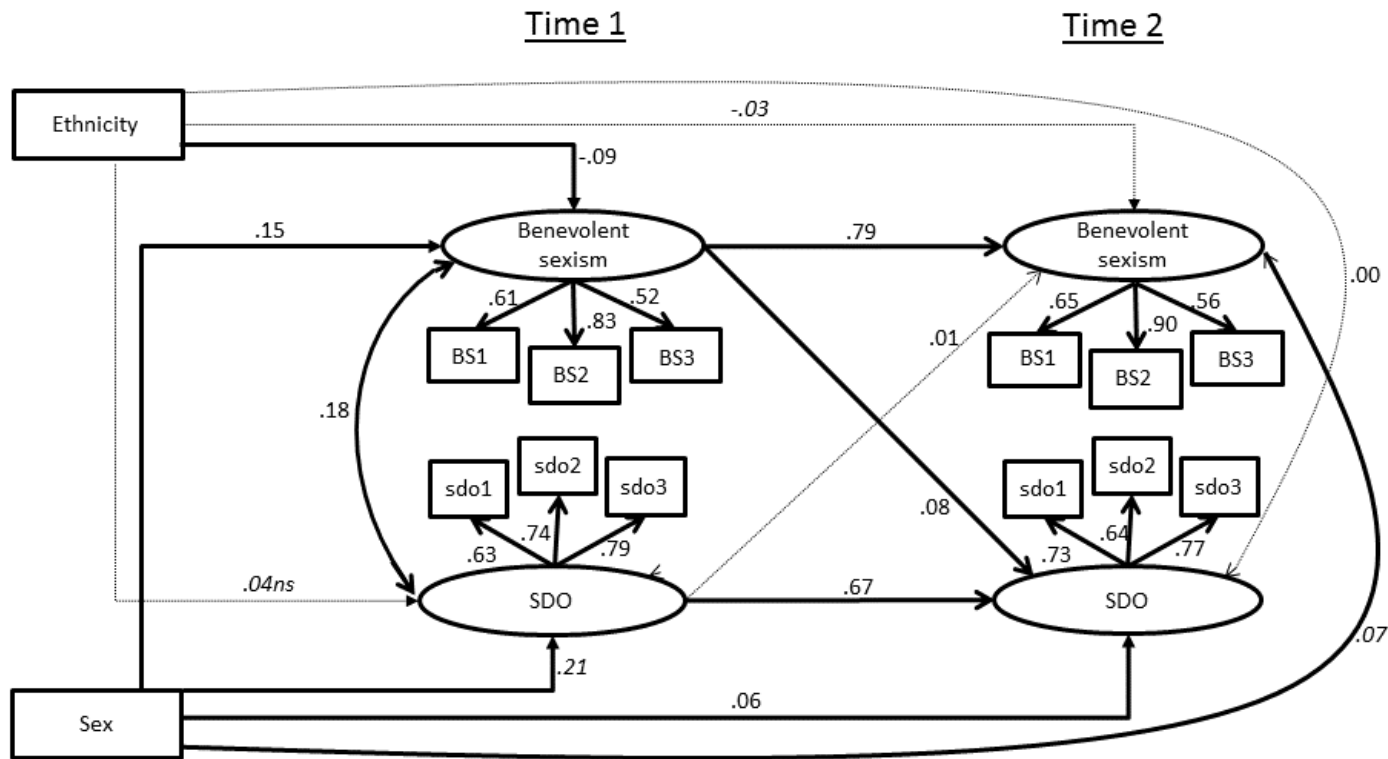


Figure 4: Longitudinal model testing cross-lagged effects of ethnicity, sex and SDO on benevolent sexism.

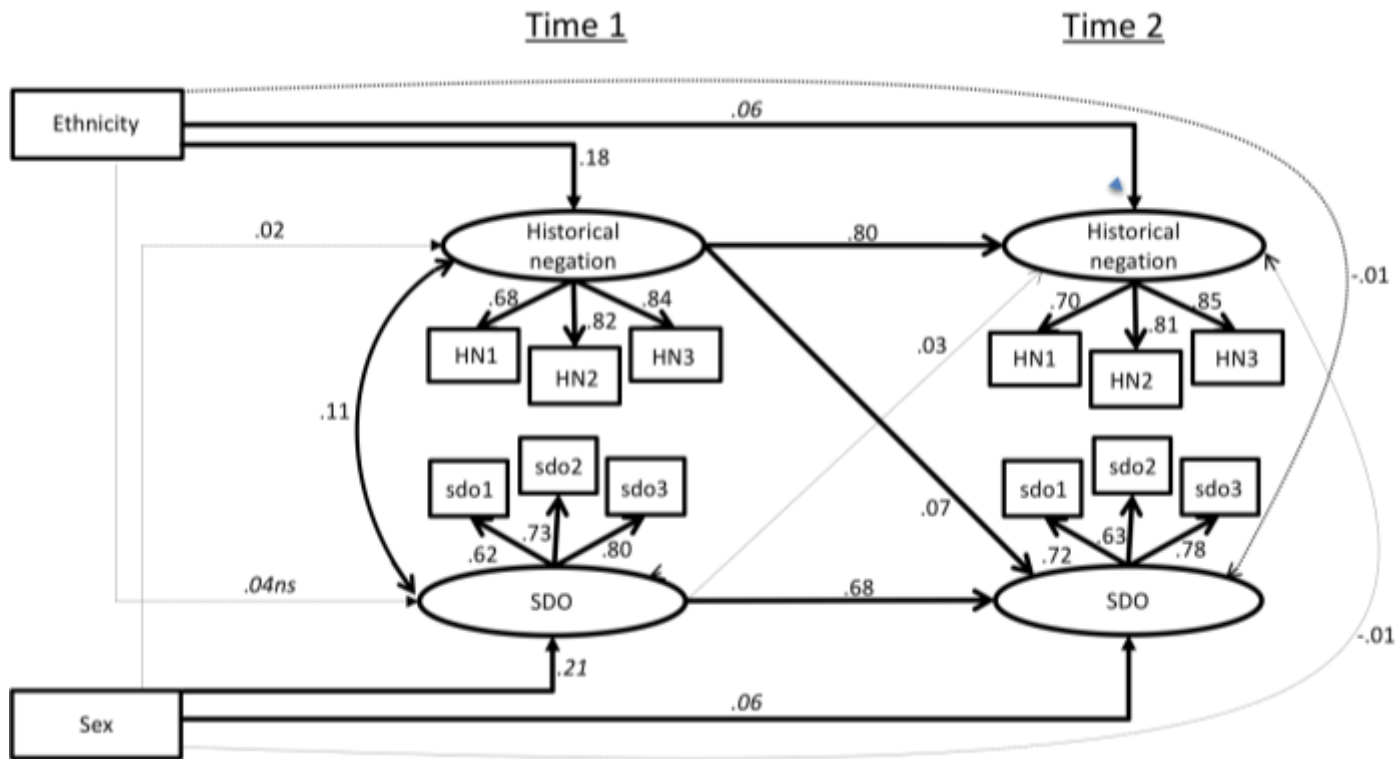


Figure 5: Longitudinal model testing cross-lagged effects of ethnicity, sex and SDO on historical negation.

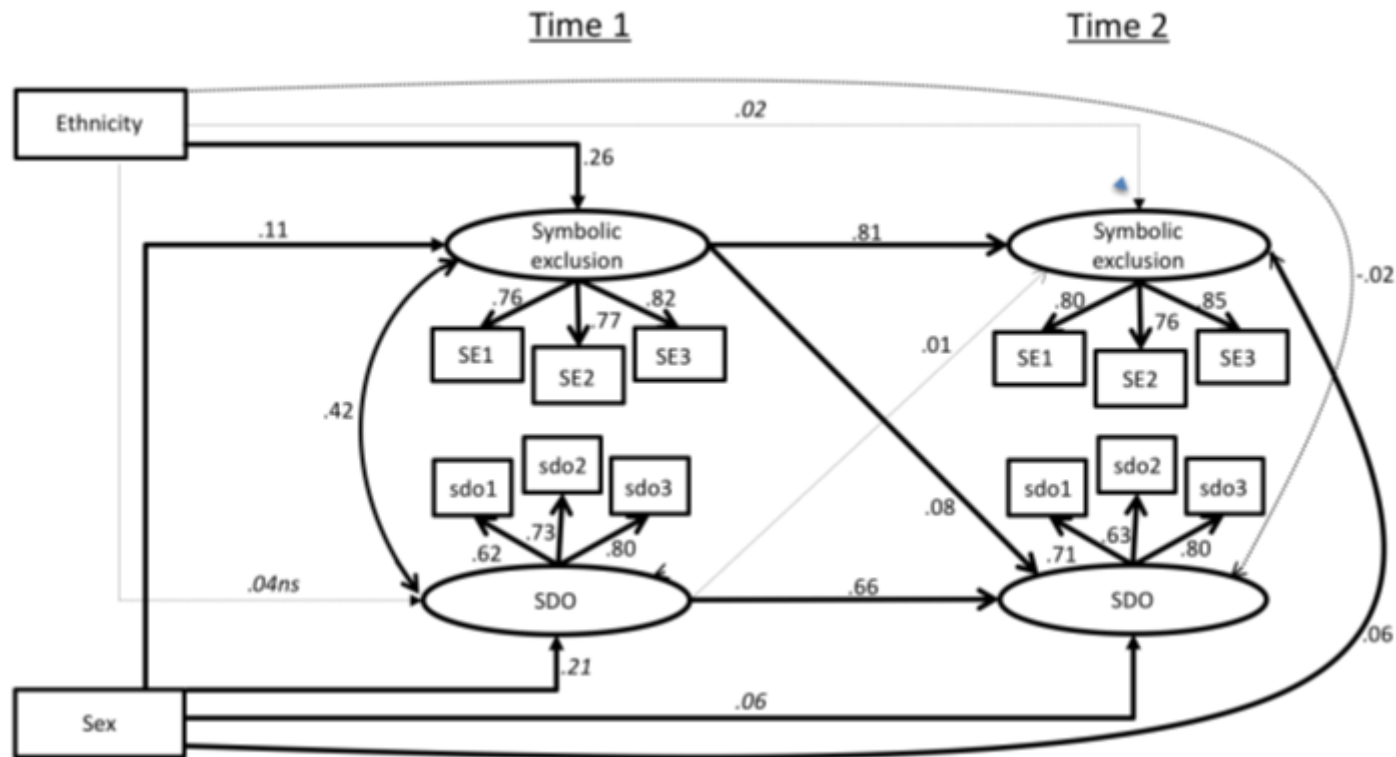


Figure 6: Longitudinal model testing cross-lagged effects of ethnicity, sex and SDO on symbolic exclusion.

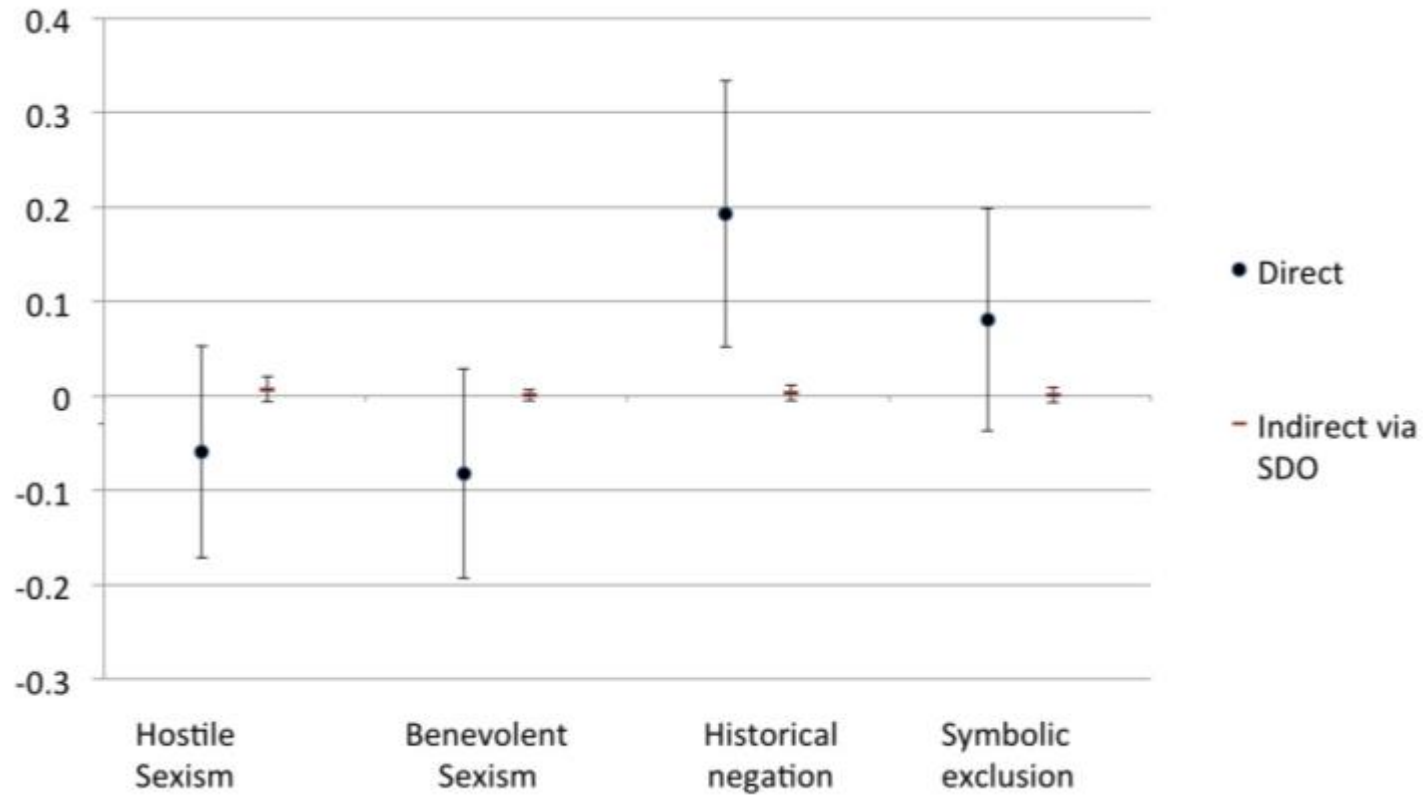


Figure 7: Direct and indirect (via SDO) effects of ethnic group status on specific LMs. Error bars show 95 percent confidence intervals.

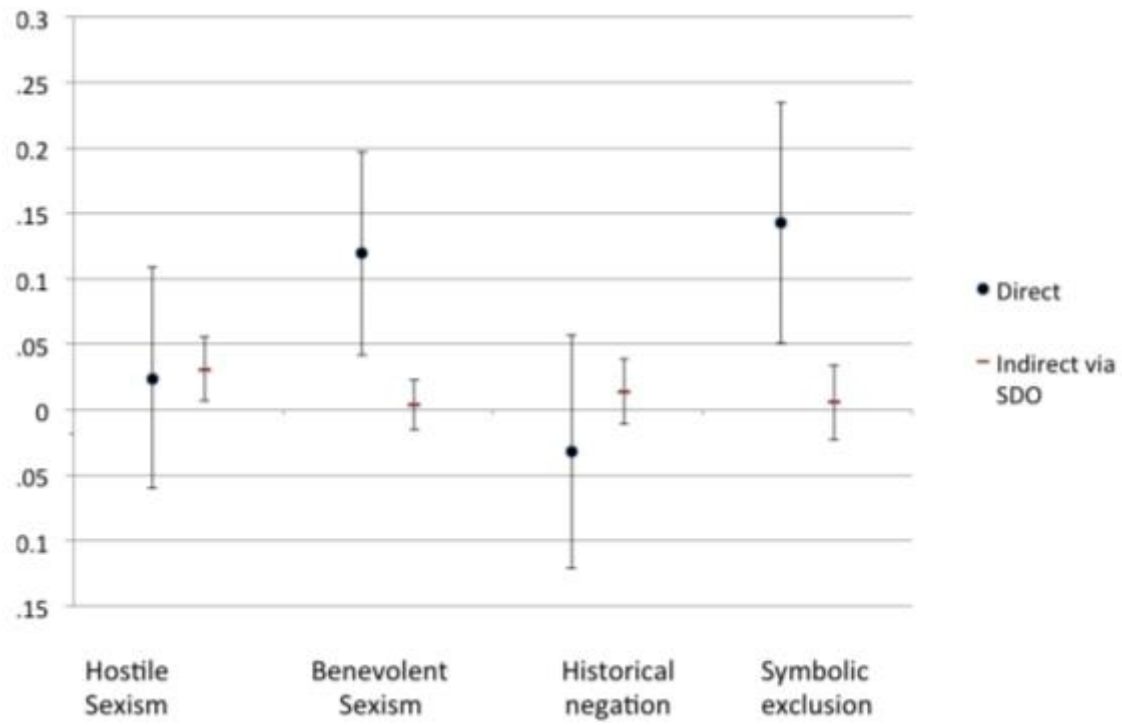


Figure 8: Direct and indirect (via SDO) effects of sex on specific LMs. Error bars show 95 percent confidence intervals.

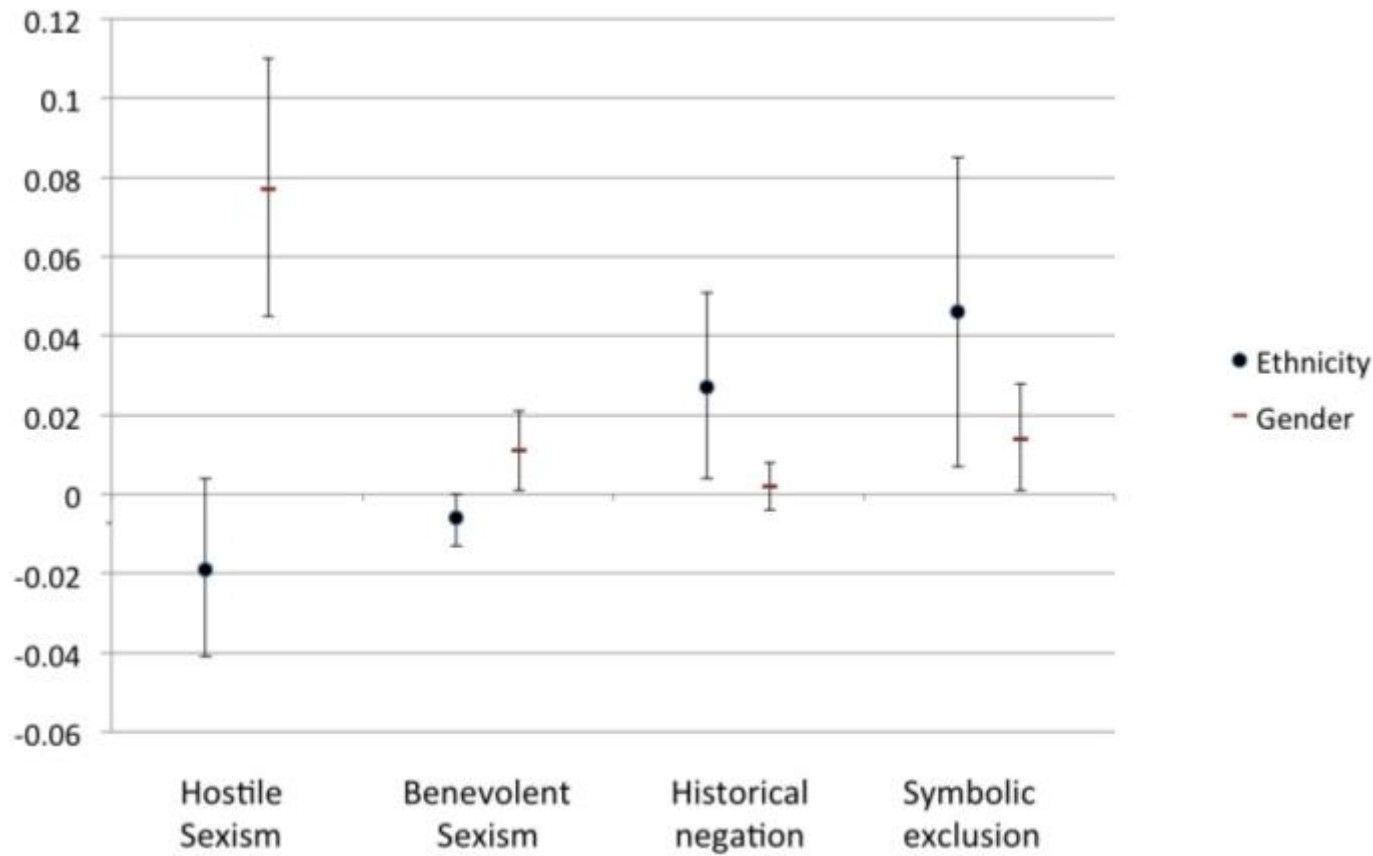


Figure 9: Indirect effects (via specific LMs) of sex and ethnic group status on SDO. Error bars show 95 percent confidence intervals.

Figure captions

Figure 1: Ethnic group differences in mean SDO and LMs at time 1. Error bars show 95 percent confidence intervals.

Figure 2: Sex differences in mean SDO and LMs at time 1. Error bars show 95 percent confidence intervals.

Figure 3: Longitudinal model testing cross-lagged effects of ethnicity, sex and SDO on hostile sexism.

Figure 4: Longitudinal model testing cross-lagged effects of ethnicity, sex and SDO on benevolent sexism.

Figure 5: Longitudinal model testing cross-lagged effects of ethnicity, sex and SDO on historical negation.

Figure 6: Longitudinal model testing cross-lagged effects of ethnicity, sex and SDO on symbolic exclusion.

Figure 7: Direct and indirect (via SDO) effects of ethnic group status on specific LMs. Error bars show 95 percent confidence intervals.

Figure 8: Direct and indirect (via SDO) effects of sex on specific LMs. Error bars show 95 percent confidence intervals.

Figure 9: Indirect effects (via specific LMs) of sex and ethnic group status on SDO. Error bars show 95 percent confidence intervals.