

# A community-based test of the Dual Process Model of Intergroup Relations: Predicting attitudes towards Christians, Muslims, Hindus, Jews, and Atheists

Marc Stewart Wilson

Victoria University of Wellington, New Zealand

Research in New Zealand and elsewhere has shown that attitudes towards Muslims has been generally negative. Antipathy towards a variety of outgroups has previously been shown to be predicted by a combination of competitive/dangerous worldview and social dominant and authoritarian attitudes in Duckitt's (2001) dual-process cognitive-motivational model of ideology and prejudice. In this research, approximately one thousand New Zealanders completed measures of these variables, and their attitudes towards a range of groups: including Atheists, Christians, Hindus, Jews, and Muslims. Muslims were evaluated most negatively of the religion-based groups, and this was predicted by both the social dominance and authoritarianism 'routes' described in the dual-process model. This suggests that Muslims are seen as threatening both hierarchical and traditional social relationships.

**Keywords:** Social dominance orientation (SDO); Right-Wing Authoritarianism (RWA); Islamophobia.

## Introduction

Trying to understand prejudicial attitudes, and discriminatory acts and systems, is something of the bread and butter of social psychology, and a fair chunk of other social science besides (see Allport, 1954; Duckitt, 1992; Sibley & Barlow, 2016, for reviews). The events of March 15<sup>th</sup> have been popularly characterised, by some, as an extreme manifestation of more 'everyday' prejudices and, therefore, it falls to those who've dedicated careers to understanding prejudice (and discrimination) to step up and address this position.

In the West, Muslims are not viewed particularly positively. Islamophobia, and anti-Muslim attitudes, appear to be particularly pronounced post-9/11 (Atom, 2014). Velasco Gonzalez, Verkuyten, Weesie and Poppe (2010) reported that half of more than 1,000 Dutch adolescents held negative attitudes towards Muslims (see also Clements, 2012). At the same time, two-thirds of a Swedish sample reported negative attitudes in 1990 (Hvitfelt, 1991, cited in Bevelander & Otterbeck, 2010), a decade before 9/11. Since 9/11, however, threat perceptions appear to be particularly important as predictors of anti-Muslim sentiment (e.g., Wike & Grim, 2010). Anti-Muslim attitudes may be most pronounced among "white" majority group members (e.g.,

Hewstone & Schmid, 2014) and cross-cultural studies have suggested that Muslims may be viewed no more negatively than immigrants in general (e.g., Strabac, Aalberg, & Valenta, 2014). In New Zealand? While surveys have asked about New Zealanders' attitudes towards Muslims, there have been few academic studies. Shortly after 9/11, the New Zealand Election Study survey indicated that just over one in twenty New Zealanders favoured unrestricted immigration from Muslim countries while almost a quarter favoured a complete ban (NZES, 2002). More recently, research has suggested New Zealanders are, at best, ambivalent towards Muslims (Centre for Applied Cross-Cultural Research, 2011).

The problem of explaining prejudice has gone through a variety of phases, including a focus on psychoanalytic foundations in the 1930s and 1940s, personality in the 1950s, social structures in the 1960s, and cognitive process in the 1980s and 1990s (see Sibley & Barlow, 2016). I shall focus here on individual difference perspectives that hark back to the seminal work of Adorno, Frenkel-Brunswik, Levinson and Sanford (1950), and synthesised by Duckitt (2001; Duckitt, Wagner, du Plessis, & Birum, 2002) into a powerful explanatory framework that is as close to a Grand

Theory of prejudice as individual difference researchers have ever had.

While Adorno et al's (1950) claims that people do unpleasant things because they have unpleasant (specifically authoritarian) personalities has had, and still has, intuitive appeal, it fell from favour in the 1960s for various credible reasons (see Altemeyer, 1981, for a review of these concerns). Thirty years later their notion of an authoritarian personality was resurrected by Altemeyer in the guise of Right-Wing Authoritarianism (RWA), trimmed of its more esoteric content and without the Freudian trappings (Altemeyer, 1981; 1996). In the mid-1990s, RWA was joined in the pantheon of prejudice-related individual difference constructs by Social Dominance Orientation (Pratto, Sidanius, Stallworth, & Malle, 1994), central to tests of Social Dominance Theory (Sidanius & Pratto, 1999).

Right-Wing Authoritarianism (RWA) and Social Dominance Orientation (SDO) have been introduced already in this volume (see Azeem, Hunter & Ruffman, 2019; Du, Buchanan, Hayhurst & Ruffman, 2019; Osborne, Satherley, Yogeewaran, Hawi & Sibley, 2019). Briefly, SDO reflects the extent to which individuals endorse hierarchical relationships between groups, with higher-status groups perching above those of increasingly lower status (and

perceived value: Sidanius & Pratto, 1999). RWA, on the other hand, has been conceptualised for almost 40 years as the combination of submission to authority, endorsement of aggression by authorities against transgressors, and a conventional and traditional view of how the world should be (Altemeyer, 1981; 1996). Both RWA and SDO have been shown to uniquely, and additively, predict prejudice (McFarland & Adelson, 1996; Sibley, Robertson & Wilson, 2006). Following the synthesis initially proposed by McFarland and Adelson (1996), Duckitt (2001) proposed a Dual Process Motivational Model of prejudice, in which RWA and SDO are the pointy end of two paths from childhood socialisation (specifically punitive versus unaffectionate parenting) through development of personality (specifically conforming versus toughminded) informing individual's worldviews (specifically that the world is a dangerous, or competitive place), and that ultimately manifest in outgroup derogation and ingroup favouritism. The combination of SDO and RWA, including in the context of the DPM, has subsequently been shown to effectively predict attitudes to a numerous 'outgroups' including those based on race, sexuality, and dietary preference (e.g., Cantal et al., 2015; Levin, Pratto, Matthews, Sidanius & Ktiely, 2013; Sibley & Duckitt, 2008; Judge & Wilson, 2019; Whitley & Ægisdóttir, 2000). Indeed, RWA and SDO combine to explain as much as half of the variation in prejudice towards race-based outgroups (McFarland & Adelson, 1996; Altemeyer, 1998).

Indeed, the idea that prejudices travel together, such that holding one prejudice tends to be associated with others (identified as generalized prejudice: see Bergh & Akrami, 2016, for a review), has been integrated into the DPM. For example, Asbrock, Sibley and Duckitt (2010) showed that attitudes towards a variety of attitude targets may be broken down into three families of dangerous (e.g., criminals, drunk drivers, those who behave 'immorally'), derogated (e.g., psychiatric patients, obese people, 'physically unattractive people') and dissident (e.g., feminists, activists, and atheists), and that these are differentially predicted by the RWA/SDO arms of the DPM. Specifically, SDO longitudinally predicts prejudice towards derogated groups, RWA predicts prejudice toward dangerous groups, and both predict prejudice towards dissident groups,

presumably because dissident groups may threaten both security and hierarchy (see also Cantal et al., 2015).

Given that SDO and RWA robustly predict prejudice, we should expect that they do so for specifically anti-Muslim prejudice and policy initiatives. This is generally the case. For example, Choma, Jagayat, Hodson, & Turner, (2018) reported moderate negative correlations between SDO and RWA, and attitudes towards Muslims (see also Rowatt, Franklin & Cotton, 2005; Uenal, 2016). Dunwoody and McFarland (2018) have shown that, following the 2015 Paris Terrorist attacks (perpetrated by Islamic extremists), RWA correlated .72 and .65 with perceptions of Muslim threat and support for extreme anti-Muslim policies, while SDO correlated .48 and .40. Beck and Plant (2018) reported that whether or not white non-Muslims were more likely to administer an unpleasant stimulus (hot sauce) to a target identified as Muslim was moderated by RWA. Crowson (2009) found that the SDO arm of the DPM predicted support for restricting human rights following the events of 9/11, RWA was both a stronger predictor of human rights restrictions and military aggression against Iraq. However, SDO-dominance predicts support for torture of Muslim extremists, while RWA may not (Lindén, Björklund, & Bäckström, 2018).

Thomsen, Green and Sidanius (2008) argued, and showed, that authoritarians may be most aggressive towards immigrant groups who don't assimilate into their new culture of residence (as a rejection of conformity), while social dominants are particularly aggressive towards that do (seen as violation of the dominant social hierarchy). Consistent with this, Perry and Sibley (2013) show that attitudes towards immigration policy are predicted by both arms of the DPM, arguing that immigration represents threats to both symbolic and realistic cultural resources. Indeed, Matthews and Levin (2012) applied the DPM to perceptions of threat from Muslims, reporting that economic threat perceptions were mediated by SDO, and symbolic threat perceptions mediated through RWA.

The aim of this research, then, is to investigate the utility of SDO and RWA, in a limited test of the Dual Process Model (including worldviews, but not personality or childhood experience), in predicting attitudes towards religion-defined groups: Muslims, Hindus, Jews, Christians and Atheists.

## METHOD

### PARTICIPANTS

Participants were respondents to an online survey. 5,744 people responded to the survey, of whom 1,025 completed the set of questions relating to groups. 62% were female, 87% explicitly identified as European and 6% as Maori (indigenous New Zealanders), and the mean sample age was 49.74 years ( $SD=13.34$ ). 359 (35%) responded to the question "If you do have a spiritual 'faith', which of the following describes what you believe" by selecting Christianity, 2 people selected Hinduism, 5 people selected Judaism, 90 selected Buddhism or "something else", with 56% indicating that they did not have a particular faith.

### MEASURES

The survey included a range of measures relating to attitudes to topical social issues, and constructs related to socio-political attitude. The summary below describes only those of interest in the present study.

All participants completed measures of SDO, RWA and Competitive worldviews. SDO was assessed using a reliable ( $\alpha=.77$ ) balanced set of six items previously used in the NZAVS (see Milfont et al., 2013), and RWA was based on the mean of responses to a reliable ( $\alpha=.71$ ) balanced set of six items from Altemeyer's (1996) Right-Wing Authoritarianism scale representing the two highest loading pro- and con-trait items on each of three Authoritarianism factors identified by Mavor, Louis and Sibley (2010). Dangerous Worldview ("Despite what one hears about "crime in the street," there probably isn't any more now than there ever has been" and "There are many dangerous people in our society who will attack someone out of pure meanness, for no reason at all") and Competitive Worldview ("It's a dog-eat-dog world where you have to be ruthless at times" and "Life is not governed by the 'survival of the fittest.' We should let compassion and moral laws be our guide") were each assessed using a balanced pair of items drawn from Duckitt, Wagner, du Plessis, and Birum's (2002) and previously adopted by other researchers in the New Zealand context (e.g., Perry & Sibley, 2013).

Attitudes towards groups were solicited by asking participants to respond to 18 target group labels using a 1 ('Strongly negative') to 7 ('Strongly positive') scale. The groups pertinent to this research were "Christians", "Muslims", "Hindus", "Jews" and "Atheists", but also included

“Politicians”, “Lawyers”, “Goths”, “Pākehā”, “Maori” and “The Police” among others. The group attitudes section of the survey was one of five randomly presented to each participant along with the main body of measures completed by all.

**PROCEDURE**

Participation in the online survey (delivered via SurveyMonkey) was solicited through the Sunday Star Times, a national New Zealand newspaper, as an investigation of New Zealanders’ political and social attitudes. The ‘Brainscan’ survey was open for a two-week period, after which the data were collated and summarised for serialisation in the newspaper. Results were summarised and serialised through the Sunday Star Times. Ethical approval was granted by the School of Psychology Human Ethics Committee. Finally, parts of this data set have been previously published in Milfont et al., (2013), Judge and Wilson (2019), and Ruffman et al., (2016).

**RESULTS**

Table 1 shows means and standard deviations for each variable, as well as intercorrelations between each. RWA, SDO, and Competitive Worldview mean scores were all significantly lower than the scale midpoint of 4 ( $t(1023-1024) \leq -17.30$ ,  $p$ 's  $<.001$ ) while Dangerous Worldview scores were significantly higher than the midpoint ( $t(1024)=10.03$ ,  $p<.001$ ). Of the five religion targets, only Muslims were rated below the scale (neutral) midpoint ( $t(1025)=-2.83$ ,  $p<.005$ ). Christians ( $t(1021)=6.85$ ,  $p<.001$ ), Hindus ( $t(1020)=10.65$ ,  $p<.001$ ), Jews ( $t(1019)=12.51$ ,  $p<.001$ ), and

Atheists ( $t(1021)=13.37$ ,  $p<.001$ ) were all rated significantly more positively than the scale neutral point. All groups were rated significantly differently from each other ( $p<.005$ ) except for Christians and Hindus, and Hindus and Jews. At the same time, all religious targets were rated more positively than Politicians ( $M=3.39$ ,  $SD=1.23$ ), Bankers ( $M=3.77$ ,  $SD=1.28$ ), and Goths ( $M=3.49$ ,  $SD=1.26$ ) and less positively than Maori ( $M=4.55$ ,  $SD=1.33$ ), The Police ( $M=4.99$ ,  $SD=1.40$ ) and Pākehā ( $M=5.09$ ,  $SD=1.19$ )

Table 1 shows that RWA was positively associated with attitudes towards Christians, but negatively associated with attitudes towards the other four groups. SDO, was uncorrelated with attitudes towards Christians, but was negatively correlated with attitudes towards all four remaining groups. In all but one case (attitudes towards Christians and Atheists) the more positive participants were towards one religion target, the more positive they were towards all others.

AMOS Version 23 was used to test path saturated models using Dangerous and Competitive Worldviews, and SDO and RWA, to predict attitudes towards the five religion target groups. Non-significant paths were removed and models re-calculated prior to summary below. All five models evidenced good fit to the data, and are presented in Figures 1a to 1e.

The Dual Process Model variables accounted for between 3% (Jews) and 14% (Christians) of the variation in group attitudes. Generally, RWA was associated with less positive attitudes to target groups, except for Christians (where the relationship was positive) and Jews (where it was non-significant). Similarly, SDO was associated with less positive

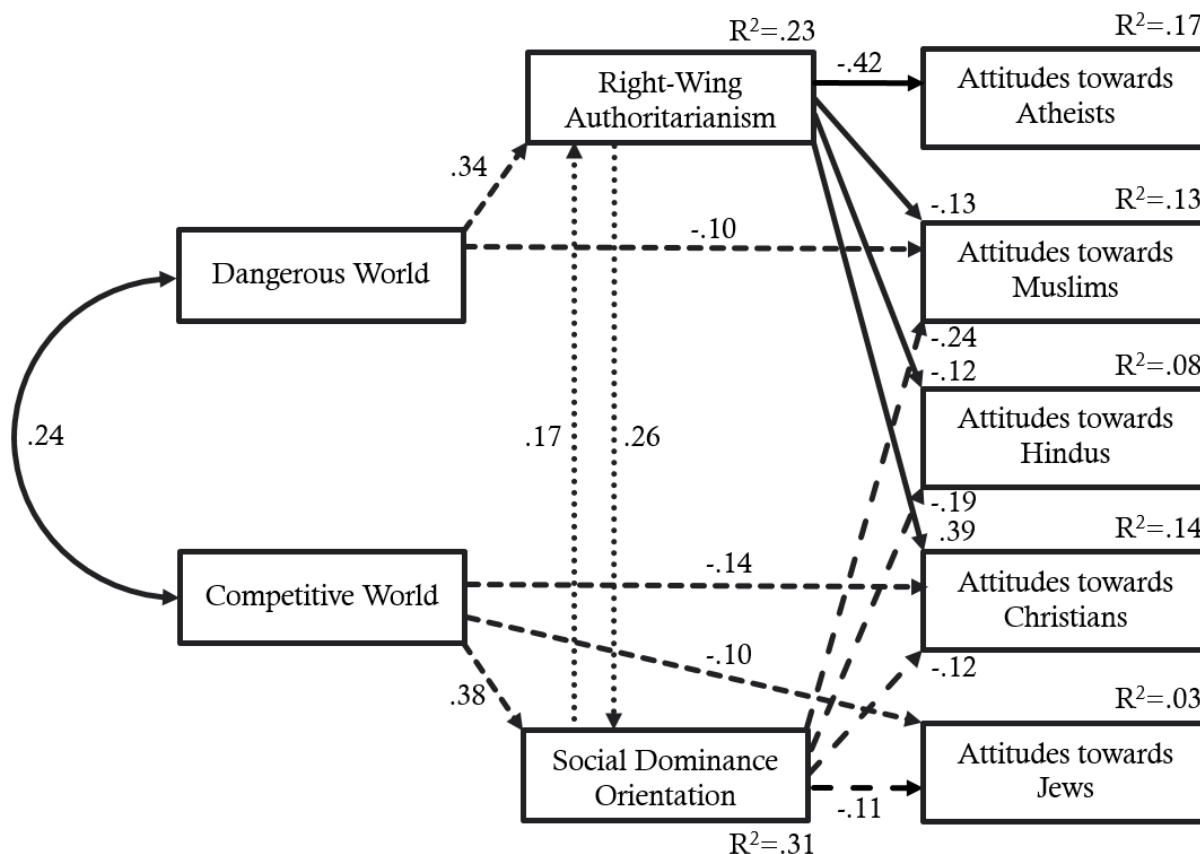
attitudes with all groups but Atheists. Dangerous Worldview scores directly predicted more negative attitudes towards Muslims (only), while Competitive Worldview scores directly predicted greater negativity towards Christians and Jews (only).

Given that 45% of the sample identified a particular religious faith, including 35% as Christian, those who identified with a faith other than Christianity were removed. This left a sample of 929 participants. Multivariate ANOVA indicated that Christians scored significantly lower on Competitive Worldview ( $M=3.22$ ,  $SD=1.28$  versus  $M=3.43$ ,  $SD=1.24$ ;  $F(1,911)=6.02$ ,  $p<.05$ ), and higher on Dangerous Worldview ( $M=4.72$ ,  $SD=1.35$  versus  $M=4.30$ ,  $SD=1.48$ ;  $F(1,911)=19.31$ ,  $p<.001$ ), SDO ( $M=2.75$ ,  $SD=1.02$  versus  $M=2.51$ ,  $SD=1.07$ ;  $F(1,911)=11.27$ ,  $p<.005$ ), and RWA ( $M=3.33$ ,  $SD=1.03$  versus  $2.55$ ,  $SD=.92$ ;  $F(1,911)=142.25$ ,  $p<.001$ ) than those with no faith. They were also more positive towards Christians ( $M=5.13$ ,  $SD=1.16$  versus  $M=3.83$ ,  $SD=1.20$ ;  $F(1,911)=261.39$ ,  $p<.001$ ) and Jews ( $M=4.59$ ,  $SD=1.11$  versus  $M=4.35$ ,  $SD=1.07$ ;  $F(1,911)=10.76$ ,  $p<.005$ ), less positive towards Atheists ( $M=3.85$ ,  $SD=1.27$  versus  $M=4.99$ ,  $SD=1.22$ ;  $F(1,911)=185.46$ ,  $p<.001$ ) than those with no faith. Christians were also non-significantly less positive towards Muslims ( $M=3.80$ ,  $SD=1.29$  versus  $M=3.92$ ,  $SD=1.22$ ;  $F(1,911)=1.94$ ,  $p=.16$ ) and Hindus ( $M=4.35$ ,  $SD=1.06$  versus  $M=4.38$ ,  $SD=1.11$ ;  $F(1,911)=.20$ ,  $p=.66$ ).

**Table 1.** Means, SDs, and intercorrelations between DPM and religion variables for total sample.

	1.	2.	3.	4.	5.	6.	7.	8.	M (SD)
1. Comp. World	-								3.31 (1.27)
2. Dang. World	.24**	-							4.45 (1.44)
3. RWA	.18**	.37**	-						2.83 (1.04)
4. SDO	.43**	.22**	.45**	-					2.59 (1.05)
5. Christians	-.13**	.05+	.30**	-.01	-				4.29 (1.36)
6. Muslims	-.17**	-.20**	-.27**	-.32**	.24**	-			3.89 (1.26)
7. Hindus	-.15**	-.11**	-.22**	-.26**	.32**	.61**	-		4.37 (1.10)
8. Jews	-.15**	-.04	-.08*	-.16**	.41**	.43**	.59**	-	4.43 (1.10)
9. Atheists	.04	-.13**	-.41**	-.18**	-.24**	.24**	.27**	.18**	4.56 (1.35)

N's between 1019 and 2015; += $p<.10$ , \*= $p<.05$ , \*\*= $p<.001$



**Figure 1.** Composite of five path models predicting attitudes towards Atheists, Muslims, Hindus, Christians and Jews. (All paths shown are significant at  $p < .05$ ; dotted and dashed lines from different variables for clarity)

**Table 2.** Means, SDs, and intercorrelations between DPM and religion variables for non-religious (below the diagonal) and Christian (above the diagonal) subsamples.

	1.	2.	3.	4.	5.	6.	7.	8.	9.
1. Comp. World	-	<sup>a</sup> .18**	<sup>b</sup> .02	<sup>c</sup> .37**	<sup>d</sup> -.21**	<sup>e</sup> -.04	<sup>f</sup> -.05	<sup>g</sup> -.16*	<sup>h</sup> .04
2. Dang. World	<sup>a</sup> .29**	-	<sup>g</sup> .26**	<sup>h</sup> .06	<sup>i</sup> -.01	<sup>j</sup> -.17**	<sup>k</sup> -.09+	<sup>l</sup> -.07	<sup>m</sup> -.09+
3. RWA	<sup>b</sup> .32**	<sup>g</sup> .42**	-	<sup>i</sup> .33**	<sup>j</sup> .19**	<sup>k</sup> -.30**	<sup>l</sup> -.29**	<sup>m</sup> -.10+	<sup>n</sup> -.33**
4. SDO	<sup>c</sup> .50**	<sup>h</sup> .29**	<sup>i</sup> .49**	-	<sup>j</sup> -.17**	<sup>k</sup> -.29**	<sup>l</sup> -.30**	<sup>m</sup> -.22**	<sup>n</sup> -.11*
5. Christians	<sup>d</sup> -.11*	<sup>e</sup> -.01	<sup>f</sup> .12**	<sup>g</sup> -.05	-	<sup>k</sup> .11*	<sup>l</sup> .20**	<sup>m</sup> .47**	<sup>n</sup> -.09+
6. Muslims	<sup>d</sup> -.24**	<sup>e</sup> -.20**	<sup>f</sup> -.25**	<sup>g</sup> -.32**	<sup>h</sup> .44**	-	<sup>l</sup> .57**	<sup>m</sup> .35**	<sup>n</sup> .38**
7. Hindus	<sup>e</sup> -.20**	<sup>f</sup> -.10*	<sup>g</sup> -.19**	<sup>h</sup> -.25**	<sup>i</sup> .46**	<sup>j</sup> .66**	-	<sup>l</sup> .59**	<sup>m</sup> .40**
8. Jews	<sup>e</sup> -.16**	<sup>f</sup> -.07	<sup>g</sup> -.14**	<sup>h</sup> -.16**	<sup>i</sup> .38**	<sup>j</sup> .52**	<sup>k</sup> .60**	-	<sup>m</sup> .21**
9. Atheists	<sup>f</sup> -.13*	<sup>g</sup> -.11*	<sup>h</sup> -.31**	<sup>i</sup> -.16**	<sup>j</sup> -.03	<sup>k</sup> .17**	<sup>l</sup> .23**	<sup>m</sup> .28**	-

Non-Faith subsample N's between 564 and 569; Christian subsample N's between 356 and 359  
 += $p < .10$ , \*= $p < .05$ , \*\*= $p < .005$ ; correlations sharing superscripts significantly different at least at  $p < .05$

Table 2 shows the correlations between religious sample, while correlations between DPM variables and group attitudes for the non-faith and Christian subsamples. I essentially unchanged (excepting that compared the strength of correlations between Christian and non-religious participants by calculating Fischer's Z based on independent correlations (for example comparing the .40 correlation between SDO and RWA for non-religious with the correlation of .33 for these variables among Christians). Correlations were all significantly stronger in the non-faith sample, while correlations between SDO and group attitudes were essentially unchanged (excepting that among Christians, Competitive Worldview was uncorrelated with RWA and the same was true for Dangerous Worldview and SDO ( $Z$ 's=-4.59 and -3.51,  $p$ 's<.001). SDO was also more weakly correlated with RWA than among those with no faith ( $Z$ =-.28,  $p < .005$ )

Inclusion of faith (Christian versus no faith) as a variable in the path models (allowing paths to worldviews, RWA and SDO, and religion group attitude variables) showed that being Christian was a significant predictor of lower attitudes towards Atheists, Muslims, Hindus, Christians and Jews, but higher attitudes towards Jews. Competitive Worldview, but higher Dangerous Worldview, RWA, but not SDO ( $p=.07$ ) scores. Inclusion also resulted in poorer model fit for all targets, did not explain additional variance in attitudes towards Muslims, Hindus, or Jews, and did not generally change the

general pattern of results identified in Figures 1a to 1e. Exceptions were the models for Christians (where being Christian was a strong direct positive predictor of, and explaining an additional 14% of variance in, attitudes towards Christians) and Atheists (where being Christian was a strong direct negative predictor of, and explaining an additional 8% of variance in, attitudes towards Christians).

## DISCUSSION

In the total sample, though not as negative as attitudes towards some (non-religious) target groups, attitudes towards Muslims were significantly more negative than the other (religious) group targets and, as the mean score was below the scale midpoint, also negative in absolute terms (consistent with Highland, Troughton, Shaver, Barrett, Sibley, & Bulbulia, 2019, this issue). With the exception of attitudes towards Christians, both SDO and RWA were associated with more negative attitudes to all religion groups. Christians, however, showed an unusual bifurcation in the relationship between SDO and RWA, and attitudes in both bivariate correlation and DPM path models. That is to say, SDO was not correlated with attitudes to Christians and associated with more negative attitudes to Christians in the DPM analyses, while RWA was associated with more positive attitudes towards Christians in both sets of analyses. Generally speaking, where SDO and RWA are both significant predictors of group attitudes in path analyses they both predict more negative attitudes (e.g., Sibley & Duckitt, 2007; Cantal, Milfont, Wilson, & Gouveia, 2015). Path analyses suggested that the SDO arm of the DPM is, on average, a more important predictor of attitudes towards Muslims, Hindus and Jews, compared to the RWA arm. Indeed, Dangerous Worldviews and RWA were stronger predictors only of attitudes towards Christians and Atheists, and statistically unrelated to attitudes towards Jews.

Given the theoretical foundations of the DPM, and the body of research that has distinguished the relative roles of RWA and SDO in prejudice towards different groups, it appears that these religion groups may experience antipathy for different reasons. Duckitt and Sibley (2007) included Arabs, Atheists and Terrorists among the target groups in their test of generalized prejudice, finding that they loaded on separate 'Derogated', 'Dissident Group', and 'Dangerous'

factors respectively. Similarly, Cantal and colleagues (2015) similarly found that Atheists loaded with other dissident groups, and both Cantal and colleagues (2015) and Duckitt and Sibley (2007) reported that RWA was a stronger negative predictor of attitudes towards both dangerous and dissident groups, than was SDO.

Working backwards then, maybe Jews are derogated, Atheists are dissident, and Muslims are... what? Given that both SDO and RWA negatively predict attitudes, we can infer that Muslims trigger SDO-based antipathy because their presence threatens the social hierarchy, as well as inspiring RWA-based antipathy through both realistic and symbolic threat to physical and cultural security. Indeed, Obaidi, Kunst, Kteily, Thomsen and Sidanius (2019) have shown that anti-Muslim attitudes are moderately associated with perceived terroristic threat, and strongly associated with both symbolic and realistic (resource-based) threat perceptions. In short, Muslims may be seen to tick all the boxes for outgroup antipathy. Additionally, Uenal (2016) has argued that Islamophobia comprises two dimensions – anti-Muslim prejudice and anti-Islam sentiment. A survey of German community participants supported this differentiation and suggested that perceptions of symbolic threat predicted both anti-Muslim and anti-Islam sentiments, realistic threat predicted only anti-Muslim sentiment, and 'terroristic' (safety-based) threat predicted only anti-Islam sentiments. The research described here addresses only the 'face' of Islam – Muslims – rather than attitudes towards Islam as a belief system.

The aim of this research was not to focus upon any religious influence upon anti-Muslim attitudes, but religion proved to be an important consideration in several ways. Self-identified Christians were notably more authoritarian, threatened, and to a lesser extent, social dominant, than irreligious participants. They showed a pronounced, and un-surprising, in-group bias in their attitudes towards Christians, and outgroup bias against Atheists. While self-identified Christians were not, however, more negative towards Muslims, this should be considered in the context that Muslims were regarded most negatively of all the religion-based targets. It will be cold comfort that only Politicians, Bankers, and Goths were rated more negatively than Muslims. Even Atheists were evaluated equivalently.

However, self-identified Christians were also less likely to see the world as competitive than non-religious participants and, importantly, there wasn't any reason to think that the utility of the DPM in predicting attitudes towards Muslims (or Hindus or Jews) was moderated by Christian identification. This is consistent with the notion that, while religiosity and prejudice are typically found to be correlated in Western populations, this association may be completely mediated by RWA or religious fundamentalism (e.g., Altemeyer & Hunsberger, 1992; Johnson, Rowatt, Barnard-Brak, Patock-Peckham, Labouff, & Carlisle, 2011). That is, some authoritarians may be drawn to religion, and particularly fundamentalist positions on their religion, because literal interpretations of the Bible (and other texts) may justify their antipathies – it is not the religion per se.

Since the events of March 15<sup>th</sup>, the world has witnessed two further atrocities committed in places of worship – against Christians in Sri Lanka, and Jews in the United States. The results reported here also illustrate that antipathy towards people on the basis of affiliation with religions other than Islam shares some commonality. RWA predicts negative attitudes towards all but Christians and Jews, while SDO predicts negative attitudes towards all but the irreligious. Perhaps importantly, while RWA predicts more positive attitudes towards Christians, SDO predicts more negativity.

One striking result, and one tangential to the purpose of this research, was that among self-identified Christians SDO and RWA were uncorrelated with Dangerous and Competitive Worldviews, respectively. It is common to see that SDO correlates with Dangerous Worldviews, albeit much more weakly than with Competitive Worldview, while RWA frequently correlates with Competitive Worldviews and, again, more weakly than with its theoretical precedent, Dangerous Worldview. Among Christians, in this sample, the DPM components more cleanly reflect their theoretical exemplar.

At the same time, it should be acknowledged that these analyses are based on short measures of RWA and SDO (six items each of the full thirty- and sixteen-item scales), extremely short measures of Dangerous and Competitive Worldviews (two versus full scale of ten items) and single items representing attitudes towards groups. Not only is it

impossible to disentangle the dimensionality of attitudes towards these groups to better identify the relationships between DPM variables and those facets (e.g., Uenal, 2016), but the short scales will inevitably under- or over-represent particular facets of these predictors. For example RWA, in particular, is a heavily content-driven scale with explicit mention of particular groups and biblical references. While RWA is theorised to comprise of three related components (Altemeyer, 2001), these are not easily separable into subscales to further determine whether, for example, the strong RWA-related antipathy towards Muslims is driven by one or a combination of authoritarian aggression, submission or conventionalism.

That this sample reported weakly negative attitudes towards Muslims isn't a surprise as it is consistent with previous research here (e.g., Highland et al., 2019; NZES, 2002) and elsewhere (e.g., Velasco et al., 2010; Clements, 2012). Neither is the finding that SDO and RWA are associated with less negative attitudes. What then, are the implications for improving perceptions of Muslims in New Zealand? First, we may understand a little better the basis for this antipathy – threatening both social order and hierarchy, potentially justifying the craft of dual process-informed interventions. Additionally, as Shaver, Sibley, Osborne and Bulbulia (2017) have shown that increasing news exposure is associated with increasing anti-Muslim prejudice in New Zealand, the media may play an important role in this. At the same time, news exposure predicts slightly more anti-Arab, but not anti-Asian prejudice, which they identify as somewhat paradoxical given that the majority of Muslims in New Zealand are Asian, rather than Arabic.

While media-propagated images of collapsing towers and bloodied American faces has been associated with increasingly negative attitudes towards Muslims, the events in Christchurch showed Muslim targets of violence. Is it too much to hope that the increased prejudice towards Muslims following atrocity perpetrated by Islamic extremists (e.g., Huddy & Feldman, 2011; Morgan, Wisneski, & Skitka, 2011; Vasilopoulos, Marcus, & Foucault, 2017) might remediate in the face of an event in which atrocity has been perpetrated against Muslims? I anticipate that, thanks to longitudinal research (like the NZAVS) and the continued efforts of researchers,

some of whose work is represented in this issue, the answer will be forthcoming.

## REFERENCES

- Adorno, T. W., Frenkel-Brunswik, E., Levinson, D. J., & Sanford, R. N. (1950). *The Authoritarian Personality*. New York: Harper.
- Allport, G.W. (1954). *The Nature of Prejudice*. Cambridge, MA: Addison-Wesley.
- Altemeyer, B. (1981). *Right-wing authoritarianism*. Winnipeg, Canada: University of Manitoba Press.
- Altemeyer, B. (1996). *The Authoritarian Specter*. Cambridge, MA: Harvard University Press.
- Altemeyer, B. (1998). The other "authoritarian personality". *Advances in Experimental Social Psychology*, 30, 47-92.
- Altemeyer, B., & Hunsberger, B. (1992). Authoritarianism, religious fundamentalism, quest, and prejudice. *The International Journal for the Psychology of Religion*, 2(2), 113-133.
- Asbrock, F., Sibley, C. G., & Duckitt, J. (2010). Right-wing authoritarianism and social dominance orientation and the dimensions of generalized prejudice: A longitudinal test. *European Journal of Personality*, 24(4), 324-340.
- Al Atom, B. (2014). Examining the Trends of Islamophobia: Western Public Attitudes Since 9/11. *Studies in Sociology of Science*, 5(3), 83.
- Azeem, A.A., Hunter, J.A., & Ruffman, T. (2019). News headlines or ideological beliefs: What affects readers' interpretations of news stories about immigration, killing in the name of religion and other topical issues? A cross-cultural analysis. *New Zealand Journal of Psychology*, 48, 56-61.
- Beck, C. L., & Plant, E. A. (2018). The Implications of Right-Wing Authoritarianism for Non-Muslims' Aggression toward Muslims in the United States. *Analyses of Social Issues and Public Policy*, 18(1), 353-377.
- Bergh, R., & Akrami, N. (2016). Generalized prejudice: Old wisdom and new perspectives (pp. 439-460). In C.G.Sibley & F.K.Barlow (Eds.) *Cambridge handbook of the psychology of prejudice*. UK: Cambridge University Press.
- Bevelander, P., & Otterbeck, J. (2010). Young people's attitudes towards Muslims in Sweden. *Ethnic and Racial Studies*, 33(3), 404-425.
- Cantal, C., Milfont, T. L., Wilson, M. S., & Gouveia, V. V. (2015). Differential effects of right-wing authoritarianism and social dominance orientation on dimensions of generalized prejudice in Brazil. *European Journal of Personality*, 29(1), 17-27.
- Centre for Applied Cross-Cultural Research (2011). *Attitudes toward Muslim immigrants*. Available 23 April, 2019, at <https://www.victoria.ac.nz/cacr/research/migration/attitudes-toward-muslim-immigrants>,
- Choma, B. L., Jagayat, A., Hodson, G., & Turner, R. (2018). Prejudice in the wake of terrorism: The role of temporal distance, ideology, and intergroup emotions. *Personality and Individual Differences*, 123, 65-75.
- Clements, B. (2012). Research Note: The Sources of Public Feelings towards Religious Groups in Britain: The Role of Social Factors, Religious Characteristics, and Political Attitudes. *Journal of Contemporary Religion*, 27(3), 419-431.
- Crowson, H. M. (2009). Right-wing authoritarianism and social dominance orientation: As mediators of worldview beliefs on attitudes related to the war on terror. *Social Psychology*, 40(2), 93-103.
- Du, K., Buchanan, M., Hayhurst, J., & Ruffman, T. (2019). Parent talk about the wellbeing of others in disciplinary situations relates to younger children's empathy. *New Zealand Journal of Psychology*, 48, 106-113.
- Duckitt, J. H. (1992). *The social psychology of prejudice*. Praeger Publishers/Greenwood Publishing Group.
- Duckitt, J. (2001). A dual-process cognitive-motivational theory of ideology and prejudice. In *Advances in experimental social psychology* (Vol. 33, pp. 41-113). Academic Press.
- Duckitt, J., Wagner, C., Du Plessis, I., & Birum, I. (2002). The psychological bases of ideology and prejudice: Testing a dual process model. *Journal of Personality and Social Psychology*, 83(1), 75.
- Duckitt, J., & Sibley, C. G. (2007). Right wing authoritarianism, social dominance orientation and the dimensions of generalized prejudice. *European Journal of Personality*, 21(2), 113-130.
- Dunwoody, P. T., & McFarland, S. G. (2018). Support for anti-Muslim policies: The role of political traits and threat perception. *Political Psychology*, 39(1), 89-106.
- Hewstone, M., & Schmid, K. (2014). Neighbourhood ethnic diversity and orientations toward Muslims in Britain:

- the role of intergroup contact. *The Political Quarterly*, 85(3), 320-325.
- Highland, B.R., Troughton, G., Shaver, J., Barrett, J.L., Sibley, C.G., & Bulbulia, J. (2019). Attitudes towards religion predict warmth for Muslims in New Zealand. *New Zealand Journal of Psychology*, 48, 122-133.
- Huddy, L., & Feldman, S. (2011). Americans respond politically to 9/11: Understanding the impact of the terrorist attacks and their aftermath. *American Psychologist*, 66(6), 455-467.
- Johnson, M. K., Rowatt, W. C., Barnard-Brak, L. M., Patock-Peckham, J. A., LaBouff, J. P., & Carlisle, R. D. (2011). A mediational analysis of the role of right-wing authoritarianism and religious fundamentalism in the religiosity-prejudice link. *Personality and Individual Differences*, 50(6), 851-856.
- Judge, M., & Wilson, M. S. (2019). A dual-process motivational model of attitudes towards vegetarians and vegans. *European Journal of Social Psychology*, 49(1), 169-178.
- Levin, S., Pratto, F., Matthews, M., Sidanius, J., & Kteily, N. (2013). A dual process approach to understanding prejudice toward Americans in Lebanon: An extension to intergroup threat perceptions and emotions. *Group Processes & Intergroup Relations*, 16(2), 139-158.
- Lindén, M., Björklund, F., & Bäckström, M. (2018). How a terror attack affects right-wing authoritarianism, social dominance orientation, and their relationship to torture attitudes. *Scandinavian journal of psychology*, 59(5), 547-552.
- Matthews, M., & Levin, S. (2012). Testing a dual process model of prejudice: Assessment of group threat perceptions and emotions. *Motivation and Emotion*, 36(4), 564-574.
- Mavor, K. I., Louis, W. R., & Sibley, C. G. (2010). A bias-corrected exploratory and confirmatory factor analysis of right-wing authoritarianism: Support for a three-factor structure. *Personality and Individual Differences*, 48(1), 28-33.
- McFarland, S. G., & Adelson, S. (1996, July). *An omnibus study of personality, values, and prejudice*. In annual meeting of the International Society of Political Psychology, Vancouver, Canada.
- Milfont, T. L., Richter, I., Sibley, C. G., Wilson, M. S., & Fischer, R. (2013). Environmental consequences of the desire to dominate and be superior. *Personality and Social Psychology Bulletin*, 39(9), 1127-1138.
- Morgan, G. S., Wisneski, D. C., & Skitka, L. J. (2011). The expulsion from Disneyland: The social psychological impact of 9/11. *American Psychologist*, 66(6), 447-454.
- New Zealand Election Study (2002). Data downloaded from <http://www.nzes.org/exec/show/data>, April 23, 2019.
- Obaidi, M., Kunst, J. R., Kteily, N., Thomsen, L., & Sidanius, J. (2019). Living under threat: Mutual threat perception drives anti-Muslim and anti-Western hostility in the age of terrorism. *European Journal of Social Psychology*, 49(3), 567-584.
- Osborne, D., Satherley, N., Yogeewaran, K., Hawi, D., & Sibley, C.G. (2019). White nationalism and multiculturalism support: Investigating the interactive effects of white identity and national attachment on support for multiculturalism. *New Zealand Journal of Psychology*, 48, 62-70.
- Perry, R., & Sibley, C. G. (2013). A dual-process motivational model of social and economic policy attitudes. *Analyses of Social Issues and Public Policy*, 13(1), 262-285.
- 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.
- Rowatt, W. C., Franklin, L. M., & Cotton, M. (2005). Patterns and personality correlates of implicit and explicit attitudes toward Christians and Muslims. *Journal for the Scientific Study of Religion*, 44(1), 29-43.
- Ruffman, T., Wilson, M., Henry, J. D., Dawson, A., Chen, Y., Kladnitski, N., ... & Hunter, J. A. (2016). Age differences in right-wing authoritarianism and their relation to emotion recognition. *Emotion*, 16(2), 226-236.
- Shaver, J. H., Sibley, C. G., Osborne, D., & Bulbulia, J. (2017). News exposure predicts anti-Muslim prejudice. *PLoS one*, 12(3), e0174606.
- Sibley, C.G., & Barlow, F.K. (2017). An introduction to the psychology of prejudice (pp.3-20). In C.G.Sibley & F.K.Barlow (Eds.), *The Cambridge Handbook of the Psychology of Prejudice*. Cambridge: Cambridge University Press.
- Sibley, C. G., Robertson, A., & Wilson, M. S. (2006). Social dominance orientation and right-wing authoritarianism: Additive and interactive effects. *Political Psychology*, 27(5), 755-768.
- Sibley, C. G., & Duckitt, J. (2008). Personality and prejudice: A meta-analysis and theoretical review. *Personality and Social Psychology Review*, 12(3), 248-279.
- Sidanius, J., & Pratto, F. (1999). *Social Dominance: An Intergroup Theory of Social Hierarchy and Oppression*. Cambridge: Cambridge University Press.
- Strabac, Z., Aalberg, T., & Valenta, M. (2014). Attitudes towards Muslim immigrants: Evidence from survey experiments across four countries. *Journal of Ethnic and Migration Studies*, 40(1), 100-118.
- Thomsen, L., Green, E. G., & Sidanius, J. (2008). We will hunt them down: How social dominance orientation and right-wing authoritarianism fuel ethnic persecution of immigrants in fundamentally different ways. *Journal of Experimental Social Psychology*, 44(6), 1455-1464.
- Uenal, F. (2016). Disentangling Islamophobia: The Differential Effects of Symbolic, Realistic, and Terroristic Threat Perceptions as Mediators Between Social Dominance Orientation and Islamophobia. *Journal of Social and Political Psychology*, 4(1), 66-90.
- Vasilopoulos, P., Marcus, G. E., & Foucault, M. (2018). Emotional responses to the Charlie Hebdo attacks: Addressing the authoritarianism puzzle. *Political Psychology*, 39(3), 557-575.
- Velasco González, K., Verkuyten, M., Weesie, J., & Poppe, E. (2008). Prejudice towards Muslims in the Netherlands: Testing integrated threat theory. *British Journal of Social Psychology*, 47(4), 667-685.
- Whitley, B. E., & Ægisdóttir, S. (2000). The gender belief system, authoritarianism, social dominance orientation, and heterosexuals' attitudes toward lesbians and gay men. *Sex Roles*, 42(11-12), 947-967.
- Wike, R., & Grim, B. J. (2010). Western views toward Muslims: Evidence from a 2006 cross-national survey. *International Journal of Public Opinion Research*, 22(1), 4-25.