

Facets of Right-Wing Authoritarianism Mediate the Relationship Between Religious Fundamentalism and Attitudes Toward Arabs and African Americans

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Since the September 11 terrorist attacks, hate crimes against Arabs have increased in the United States. Despite recent increases in anti-Arab attitudes, little psychological research has been conducted to understand this prejudice. Across two studies, we tested a theoretical model of Arab and African-American prejudice. We found the aggression facet of right-wing authoritarianism mediated the relationship between religious fundamentalism (RF) and prejudice toward Arabs and African Americans. Results are interpreted in light of previous research on cognitive rigidity, RF, and prejudice, and implications are made for political leaders conversing about Arab nations and peoples.

Keywords: *authoritarianism, fundamentalism, racial prejudice, Arabs, African Americans.*

INTRODUCTION

Over the last decade, heated events with Arabs such as the September 11 terrorist attacks have increased negative attitudes toward Arabs in the United States. According to the American-Arab Anti-Discrimination Committee Research Institute (ADCRI), hate crimes against Arabs increased significantly (over 700 violent incidents in the first nine weeks) following the September 11 attacks (Ibish and Stewart 2003). After the first nine weeks, these hate crimes remained higher than in previous years. Despite this increasing explicit, sometimes violent, prejudice against Arabs, little psychological research has focused on understanding this timely issue. For decades, most racism research in the United States has focused on prejudice toward African Americans (cf. Hall, Matz, and Wood 2010 for a meta-analysis). Today, research on prejudice against Arabs is needed to help researchers and policymakers understand, and ultimately combat, this form of prejudice.

Increases in anti-Arab attitudes most likely have been catalyzed by terrorist acts; however, measures of ideology, cognition, and identity have also been linked with anti-Arab attitudes. For instance, social dominance orientation (SDO; Pratto et al. 1994), self-identifying as an

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“American,” and perceiving threat from terrorist attacks have all been associated with anti-Arab prejudice (Oswald 2005). It is also possible that holding traditional, conservative beliefs and authoritarian ideologies contribute to this prejudice as well. Following a terrorist attack in Madrid in March 2004, individuals demonstrated increases in negative attitudes toward Arabs, but they also reported increases in authoritarianism and possessed a stronger attachment to traditional conservative values (Echebarria-Echabe and Fernandez-Guede 2006). Given the co-occurrence of increases in traditional conservative values, authoritarianism, and anti-Arab attitudes, it remains unclear what roles traditional values and authoritarian ideologies play in promoting anti-Arab attitudes. This study attempted to clarify this question by testing a theoretical model of traditional “religious” values (religious fundamentalism, RF), right-wing authoritarianism (RWA), and prejudice toward Arabs. This theoretical model also included a well-studied form of racism, prejudice toward African Americans, to compare RF and RWA’s associations with Arab prejudice to that of African-American prejudice.

Although Echebarria-Echabe and Fernandez-Guede (2006) measured general traditional conservative values, we were interested in examining traditional *religious* values (which are conservative) because of the strong association between religious conservatism and various types of prejudice. To measure traditional religious values, we assessed RF (Altemeyer and Hunsberger 2004) because it has been associated with prejudice toward a variety of out-groups, including racial out-groups (e.g., African Americans; Hall et al. 2010) and value-violating out-groups (e.g., gay men; Whitley 2009). RF represents a closed-minded set of beliefs that there is one fundamental, inerrant set of teachings about humanity and the deity (Altemeyer and Hunsberger 1992). Until recently, most researchers have assumed that RF is directly linked to prejudiced attitudes and discriminatory and violent behaviors. However, recent research suggests there is more to the surface-level relationship between RF and prejudice. Rigid cognitive components, such as need for closure (Brandt and Reyna 2010) and need for cognition (Hill et al. 2010), have been shown to mediate the relationship between RF and prejudice. Thus, prejudice stems, in part, from rigid cognition rather than simply fundamentalist beliefs. Similarly, rigid and aggressive “ideologies” associated with RF may also mediate the relationship between RF and prejudice.

RWA (Altemeyer 1981, 1988, 1996) is one such ideology and the one of interest in this study because of its demonstrated increases following terrorist attacks (Echebarria-Echabe and Fernandez-Guede 2006). For instance, an analysis of letters to the editors of major U.S. newspapers demonstrated significant increases in authoritarianism in these letters following the September 11 attacks (Perrin 2005). Perrin (2005) suggested these increases in authoritarianism could be a response to threat. RWA represents a rigid moralization of society and, as indicated by exploratory and confirmatory factor analyses (Mavor, Louis, and Sibley 2010), is composed of three facets: (1) RWA aggression, which involves engaging in punitive behaviors toward “evildoers,” (2) RWA submission, the belief that all legitimate authorities should be obeyed, and (3) RWA conventionalism, a component most closely related to RF that represents the belief there are certain inerrant sets of values and morals society must uphold (Altemeyer and Hunsberger 1992; Mavor, Louis, and Sibley 2010; Mavor et al. 2009). Each component of RWA is associated with specific types of prejudice (i.e., RWA aggression with racial prejudice and RWA conventionalism with value-violating prejudice; Johnson et al. 2011; Mavor, Louis, and Laythe 2011; Mavor et al. 2009). Most previous studies, including Echebarria-Echabe and Fernandez-Guede’s (2006) studies demonstrating RWA increased following terrorist attacks, have examined RWA as a unitary component (Mavor, Louis, and Laythe 2011). By assessing RWA as a unitary component, we cannot conclude which component of RWA drives racial prejudice. To address this issue in the present studies, we tested whether different “facets” of RWA would mediate the relationship between RF and racial prejudice. By doing so, we can interpret which component is associated with certain measures, such as anti-Arab attitudes (Echebarria-Echabe and Fernandez-Guede 2006).

Previous relationships between RF, RWA, and racial prejudice are unclear due to two primary measurement issues. First, there has been a failure to deal with the statistical and conceptual

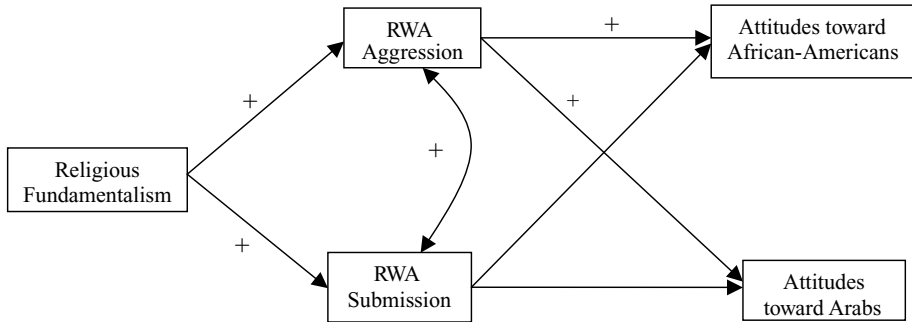
overlap between the conventionalism subcomponent of RWA and RF by removing RWA conventionalism when examining them in tandem (Mavor, Louis, and Laythe 2011; Mavor et al. 2009). Removing this overlap is important because failing to do so creates statistical artifacts, which lead to incorrect interpretations of the relationship between RF and prejudice (Mavor et al. 2009). For instance, when the conventionalism component of RWA was removed in analyses using both RWA and RF, the relationship between RF and racial prejudice was positive when controlling for the other facets of RWA (whereas some relationships were previously found to be negative; cf. Mavor et al. 2009). The second measurement issue relates to the limitation of previous statistical techniques used to examine relationships between religiosity and prejudice, namely, correlational methods and multiple regression analyses (Laythe, Finkel, and Kirkpatrick 2001; Rowatt and Franklin 2004). Although correlational and multiple regression analyses allow researchers to see how RF and RWA are each separately associated with prejudices, neither of these techniques allows researchers to examine simultaneously multiple mediators of the relationship between RF and prejudices. In this study, we investigated whether the aggression and submission facets of RWA mediate the relationship between RF and attitudes toward specific racial out-groups (Arabs and African Americans) using mediation path analyses (MacKinnon 2008; MacKinnon, Lockwood, and Williams 2004) through structural equation modeling (SEM). SEM (1) takes measurement error into account when statistically analyzing data (Schumacker and Lomax 2004), and (2) allows for testing mediation with confidence intervals of RWA in the relationship between RF and racial prejudice.

To form a theoretical model of the relationship between RF, RWA, and racial prejudice, we examined prior research on the relationships between these variables. Measures of RF and RWA correlated strongly (average $r = .68$; Hall, Matz, and Wood 2010), and both have been associated with a variety of racial prejudices. For instance, a recent meta-analysis demonstrated both RF and RWA were each associated with negative attitudes toward blacks (r equivalents = .13 and .41, respectively; Hall, Matz, and Wood 2010). Among a sample of Christian college students, RF and RWA were associated with anti-Arab attitudes (r s = .19 and .32, respectively; Rowatt, Franklin, and Cotton 2005), and RWA has also been shown to correlate positively with anti-Arab prejudice in Spanish and French samples (Dru 2007; Echebarria-Echabe and Fernandez-Guede 2006). Finally, RF and RWA have both correlated positively with prejudice toward Aboriginal Australians (r s = .39 and .59, respectively; Mavor et al. 2009) among a sample of Australian students.

Because RWA is a cognitively rigid ideology, we further based our theoretical model off of past research examining various measures of cognitive rigidity as mediators between RF and prejudices using mediation analyses (Brandt and Reyna 2010; Hill et al. 2010). For instance, Brandt and Reyna (2010) found need for closure partially mediated the RF-homosexual prejudice relationship. Closed-mindedness and preference for order also partially mediated the relationship between RF and "Altemeyer's RWA scale expressing the desire to protect society from immoral or deviant groups" (Brandt and Reyna 2010:720). Other measures of cognitive rigidity (e.g., need for cognition, preference for consistency) have also been shown to partially mediate the relationship between RF and a variety of prejudices, including racism, sexism, and homophobia (Hill et al. 2010).

Given the emerging theme in the literature that various components of cognitive rigidity mediate the relationship between RF and prejudice (Brandt and Reyna 2010; Hill et al. 2010), we wanted to examine if a specific ideology that is closed-minded and rigid would mediate the relationship between RF and racial prejudices. We predict that RWA aggression, a rigid and aggressive ideology, mediates the RF-racial prejudice relationship more strongly than RWA submission. Thus, our theoretical model is that RWA aggression should be the facet of RWA most strongly mediating the relationship between RF and racial prejudice because RWA aggression is the strongest correlate of racial prejudice among the RWA facets (Johnson et al. 2011; Mavor,

Figure 1
Conceptual model, including all exogenous and endogenous variables in the structural equation base model



Note: Exogenous variables were allowed to correlate, including the residuals of the mediators. RWA = right-wing authoritarianism. Paths hypothesized to have a significant, positive relationship are indicated with +. Paths hypothesized to have a significant, negative relationship are indicated with -. Paths hypothesized to have no significant relationship contain no directionality indicators (+ or -). Double-headed arrows indicate a correlation between variables.

Louis, and Laythe 2011; Mavor et al. 2009). Other cognitively rigid components should not drive the relationship as strongly.

To test our model, we examined both components of RWA (aggression and submission) as a mediator of an understudied racial prejudice, anti-Arab attitudes. Given the on-going military conflicts between the United States and countries in the Middle East (e.g., Afghanistan, Iraq), increases in anti-Arab attitudes and hate crimes against Arabs, and what we perceive as general misunderstandings about or fear of Arabs by some individuals in the United States, the examination of Arab prejudice would be both theoretically informative and practically valuable. We also examined a well-grounded relationship in the literature—RF and African-American prejudice (Hall, Matz, and Wood 2010)—within our model to compare with the relationship between RF and anti-Arab attitudes. Given that RWA aggression attitudes are oppressive and hostile (e.g., “removing the ‘rot’ from society”) and have been strongly associated with racial prejudice ($r = .48$) (Mavor et al. 2009), we hypothesized RWA aggression would be the strongest mediator among the components of RWA of the relationship between RF and both racial attitudes (i.e., Arabs and African Americans).

STUDY 1

Study 1 was designed to test our hypothesis among a U.S. college sample. We tested our theoretical model (see Figure 1) that RWA aggression would mediate the well-documented relationship between RF and prejudice against African Americans as well as the less studied but increasingly relevant prejudice against Arabs. In Study 1, a subtle measure of racism was examined because most prejudice toward African Americans in the United States has shifted toward implicit rather than explicit attitudes (Hall, Matz, and Wood 2010). Thus, utilizing more subtle measures of prejudice toward African Americans would allow for a better comparison of our model to previous studies. Explicit attitudes toward Arabs were utilized, however, because this racial prejudice is less proscribed than racial prejudice toward African Americans and few implicit measures currently exist for attitudes toward Arabs.

Table 1: Descriptive statistics and correlations for Study 1 (college sample; $n = 324$; RF, RWA aggression, RWA submission, RWA conventionalism, subtle racism, and Anti-Arab attitudes)

	Mean (<i>SD</i>)	α	1	2	3	4	5
1. RF	5.57 (1.78)	.91					
2. RWA aggression	3.97 (1.37)	.74	.35**				
3. RWA submission	3.72 (1.26)	.58	.35**	.47**			
4. RWA conventionalism	4.10 (1.58)	.82	.77**	.29**	.33**		
5. Subtle racism	4.97 (1.35)	.70	.08	.26**	.17**	.16**	
6. Anti-Arab attitudes	3.27 (1.18)	.75	.15*	.45**	.20**	.19**	.24**

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

RF = religious fundamentalism; RWA = right-wing authoritarianism.

METHOD

Participants

Three hundred twenty-four undergraduate psychology students (81 males, 233 females; 10 unspecified gender; mean age = 20.00 years, $SD = 3.25$) participated in this study. Students were somewhat diverse regarding ethnicity: 62 percent white, 11.7 percent Hispanic, 10.5 percent African American, 10.2 percent Asian, 0.3 percent Native American, 2.5 percent “other,” and 2.8 percent unspecified. Participants’ religious affiliation were as follows: 48.5 percent Protestant, 22.2 percent “other” religion, 16.7 percent Catholic, 6.8 percent “no religion,” 1.2 percent Hindu, .9 percent Buddhist, .3 percent Jewish, .3 percent Muslim, and 3.1 percent did not specify a religious affiliation.

Procedures and Measures

Participants were recruited using an online research participation website (SONA)¹ to fulfill a course requirement or to receive extra credit. The online survey included items about demographics, religiosity, and the personality and attitude measures described below.

Religious Fundamentalism

To measure RF, the 12-item Revised Religious Fundamentalism Scale (Altemeyer and Hunsberger 2004) was used (“There is a particular set of religious teachings in this world that are so true, you can’t go any ‘deeper’ because they are the basic, bedrock message that God has given humanity”; “God has given humanity a complete, unfailing guide to happiness and salvation, which must be totally followed;” 1 = very strongly disagree, 9 = very strongly agree). Data obtained from this measure were internally consistent ($\alpha = .91$; Table 1).

Right-Wing Authoritarianism

RWA was measured with a 10-item scale (Mavor et al. 2009; Smith and Winter 2002) composed of three subscales: (1) authoritarian aggression, (2) authoritarian submission, and (3) conventionalism (Altemeyer and Hunsberger 1992; Mavor et al. 2009; Mavor, Louis, and Sibley 2010). RWA conventionalism was excluded from analyses due to its strong conceptual and statistical overlap with RF in previous studies (Mavor et al. 2009) and the present sample ($r = .77$, Table 1). Thus, only six items from this 10-item scale were measured in this study. Three items measured RWA aggression (“There are many radical, immoral people in our country today, who

¹ See <http://sona-systems.com> for software information.

are trying to ruin it for their godless purposes, whom the authorities should put out of action”) and three items measured RWA submission (“What our country needs most is discipline, with everyone following our leader in unity”; 1 = strongly disagree, 7 = strongly agree). Data obtained from each subscale showed a Cronbach’s α consistent with past research (RWA aggression $\alpha = .74$; RWA submission $\alpha = .58$; Mavor et al. 2009; Table 1).

Anti-Arab Attitudes

The five-item Anti-Arab Racism Scale (Pratto et al. 1994) was used to assess attitudes toward Arabs (“Most of the terrorists in the world today are Arabs”; “Iraqis have little appreciation for democratic values”; 1 = very negative, 7 = very positive). Data obtained from this measure were internally consistent ($\alpha = .75$; Table 1).

Subtle Racism Toward African Americans (RAS)

The Racial Argument Scale (Saucier and Miller 2003) was included to measure subtle racism. On the RAS, participants read 13 brief paragraphs, each followed by a conclusion that was either positive or negative toward African Americans. Participants rated how well the conclusion supported the argument (1 = not at all, 9 = very much). Of the 13 items, seven were negative toward African Americans. Because this scale has been shown to have two separate factors and subscales (positive and negative; see Saucier and Miller 2003: Study 1), we examined the negative attitudes toward African Americans subscale separately. Data from this subscale showed acceptable internal consistency (Cronbach’s $\alpha = .70$; Table 1) comparable to past research (Saucier and Miller 2003).

Analytic Procedure

A base model was fit using *MPlus* (v. 5.20; Muthén and Muthén 2008–2010) testing the proposed structural equation model (Figure 2). The residuals of the mediators were allowed to correlate with each other. FIML estimation was used to handle missing data. All other analyses were performed using SPSS (v. 15.0). Model fit was evaluated by examining the following four estimates: (1) the chi-square (χ^2) goodness of fit, (2) the root mean square error of approximation (RMSEA; Browne and Cudek 1993), (3) the Tucker Lewis Index (TLI), also known as the Non-Normed Fit Index (NNFI), and (4) the Comparative Fit Index (CFI; Bentler 1990).

Several techniques are available to test for statistical mediation (Baron and Kenny 1986; James and Brett 1984). In the present analysis, MacKinnon, Lockwood, and Williams’s (2004) method was utilized. This method has been found to produce unbiased mediation estimates (Cheung and Lau 2008; Hathcoat and Barnes 2010). In addition, this technique allows confidence intervals to be constructed around the estimated indirect effects.

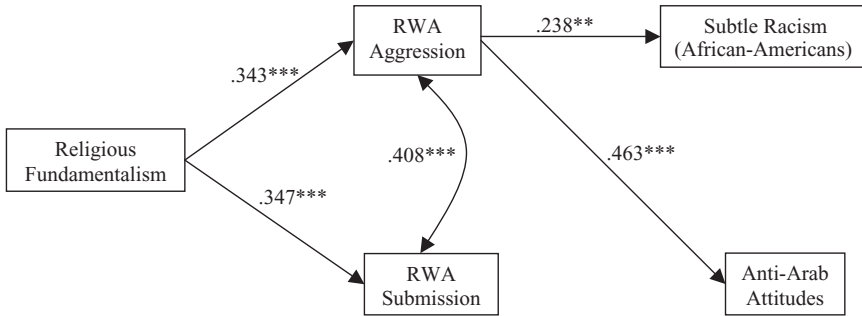
RESULTS

Please see Table 1 for Cronbach’s α , descriptive statistics, and correlations.² The path model is reported in Figure 2 with all significant paths present in the base model.

² The only scale that had low internal consistency was RWA submission, but its Cronbach’s α value is in line with past research (see Johnson et al. 2011; Mavor et al. 2009, for α value). Due to this low reliability, however, findings with RWA submission should be interpreted with some caution.

Figure 2

Model from Study 1 (college sample; $n = 324$) depicting mediation effects of RWA aggression and RWA submission on RF with subtle racism (RAS negative) and Anti-Arab attitudes



Note: Standardized coefficients are shown. Selected fit indexes: $\chi^2(2, N = 324) = 0.095, p = .95$ (CFI = 1.000, TLI/NNFI = 1.000, RMSEA = .000) with a 90% confidence interval of .000, .000. Nonsignificant paths for indirect effects were not drawn. Double-headed arrows indicate a correlation between variable residuals. * $p < .05$, ** $p < .01$, *** $p < .001$.

Overall Model Fit

The hypothesized model appears to fit the data well. The model chi-square was nonsignificant, $\chi^2(2) = 0.095, p = .95$, indicating that the model fits the data. The RMSEA value, compensating for the effects of model complexity, was .000 (CI₉₀: .000, .000). This value indicates a good fit of the model as being less than .05 (Browne and Cudeck 1993). The value of the TLI or NNFI was 1.000 and the value of the CFI was 1.000, which meet the standards of good fit (i.e., .95 or higher; Hu and Bentler 1999). Figure 2 shows the beta weights of the tested model. All paths drawn are significant at the $p < .05$ level.

Mediation Effects

In the present model, we tested two-path mediation. Each lower and upper bound value for the 95 percent confidence intervals (CIs) around each indirect effect failing to contain zero indicates support for the mediation hypothesis because the null hypothesis is that the indirect effect value is zero. Thus, CIs “not” containing zero indicate a variable (RWA aggression or RWA submission) was a statistically significant mediator between RF and subtle racism toward anti-Arab or African-Americans attitudes.

Mediators of the RF-Anti-Arab Attitudes Relationship

RWA aggression was the only component of RWA that mediated the effect of RF on anti-Arab attitudes (mediated effect = .159; CI: .095, .223) in the present model.

Mediators of the RF-Subtle Racism Toward African Americans (RAS) Relationship

RWA aggression was the only component of RWA that mediated the effect of RF on subtle racism toward African Americans (mediated effect = .082; CI: .022, .141) in the present model.

DISCUSSION

The data from this sample fit our theoretical model well. As hypothesized, RWA aggression was the strongest mediator of the RF-racial prejudice relationship. This pattern emerged for both African American and Arab prejudices. This indicates aggressive ideologies underlie both

types of racism and play an important role in mediating the relationship between RF and racial prejudice. These results extend Mavor et al.'s (2009) findings that RWA aggression was a stronger predictor than RF of racism toward aboriginal Australians. Furthermore, it extends Johnson et al. (2011), who found RWA aggression was the strongest mediator between general religiosity and prejudice toward African Americans among RWA submission, RWA aggression, and RF. Finally, it helps clarify Echebarria-Echabe and Fernandez-Guede's (2006) finding that RWA and anti-Arab attitudes increased following a terrorist attack by examining which "facet" of RWA was associated with anti-Arab attitudes. RWA aggression has repeatedly emerged as the strongest predictor or mediator for a variety of racial out-groups (African Americans, Arabs, and aboriginal Australians; Johnson et al. 2011; Mavor, Louis, and Laythe 2011; Mavor et al. 2009), indicating that this aggressive ideology may be the component associated with religion that drives the religiosity-racial prejudice relationship seen across several studies (Hall, Matz, and Wood 2010).

Perhaps the most unique finding of this study is that RWA aggression is the strongest mediator of the RF-racial prejudice relationship for Arabs among the mediators tested here. Although individuals of Arab descent may be incorrectly categorized as "Muslims," it appears the same component of RWA that mediates the RF-African-American prejudice mediates the RF-Arab prejudice relationship as well. Prior research demonstrates that RWA aggression is a weaker mediator of the relationship between religiosity and value-violating relationships, such as attitudes toward gay men/lesbian women (Johnson et al. 2011). Thus, the relationship between RF, RWA, and prejudice toward Arabs more closely mirrors racial prejudice than value-violating prejudice.

RWA aggression was a stronger mediator of the relationship between RF and Arabs than between RF and African Americans. These results, however, may be due to the limitations in the measures used. The RAS (Saucier and Miller 2003) was used to measure "subtle" racism toward African Americans whereas a more direct, "explicit" measure was used to measure attitudes toward Arabs (Pratto et al. 1994). To address this issue, we ran a second study testing the same model with the scales measuring explicit attitudes toward African Americans and Arabs.

STUDY 2

Although the model in Study 1 was confirmatory in nature, we investigated whether the results would replicate in a more representative U.S. sample with different measures of prejudice that focused on comfort with social proximity to racial out-groups rather than attitudes toward these out-groups. To do this, an online sample of data was collected with new prejudice measures from across the United States from Amazon's Mechanical Turk (M-Turk) website, which has been shown to provide reliable and more diverse data than college samples (Behrend et al. 2011; Buhrmester, Kwang, and Gosling 2011).

METHOD

Participants

Two hundred seventy-five Americans (73 males, 186 females, 16 missing; mean age = 32.58 years, $SD = 11.84$) completed an online survey through M-Turk. Participants' ethnicity was as follows: 72.8 percent white, 7.6 percent African American, 5.8 percent Asian/Pacific Islander, 4.0 percent Hispanic, 2.2 percent "other," 1.8 percent Native American, and 5.8 percent unspecified. Participants' religious affiliation was as follows: 30.1 percent "no religion," 19.6 percent Protestant, 18.8 percent Catholic, 16.7 percent "other," 5.1 percent Jewish, 2.5 percent Buddhist, 1.4 percent Hindu, and 5.8 percent did not specify a religious affiliation.

Table 2: Descriptive statistics and correlations for Study 2 (community sample; $n = 275$; RF, RWA aggression, RWA submission, RWA conventionalism, and attitudes toward African Americans and Arabs [social distance scales])

	Mean (<i>SD</i>)	α	1	2	3	4	5
1. RF	3.38 (2.32)	.96					
2. RWA aggression	3.24 (1.68)	.84	.66**				
3. RWA submission	3.03 (1.42)	.70	.60**	.65**			
4. RWA conventionalism	2.68 (1.67)	.88	.86**	.56**	.51**		
5. Social distance—African Americans	1.33 (0.49)	.85	.09	.24**	.19**	.13*	
6. Social distance—Arabs	1.54 (0.63)	.89	.29**	.40**	.38**	.27**	.64**

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

RF = religious fundamentalism; RWA = right-wing authoritarianism.

Procedure and Measures

This survey included items about demographics, religiosity, and the personality and attitude measures described below. All participants received \$0.15 in exchange for their completion of the 96-item survey.

Religious Fundamentalism

The same 12-item measure of RF (Altemeyer and Hunsberger 2004) used in Study 1 was measured in Study 2. Data obtained from this measure were internally consistent ($\alpha = .96$; Table 2).

Right-Wing Authoritarianism

The subscales (RWA aggression and RWA submission) measured in Study 1 (Mavor et al. 2009; Smith and Winter 2002) were measured in Study 2 as well. Once again, RWA conventionalism had strong statistical overlap with RF in the present sample ($r = .86$; Table 2) and was excluded from analyses. Data obtained from each subscale of RWA utilized showed a Cronbach's α consistent with or higher than past research (RWA aggression $\alpha = .84$; RWA submission $\alpha = .70$; Mavor et al. 2009; Table 2).

Attitudes Toward Arabs and African Americans

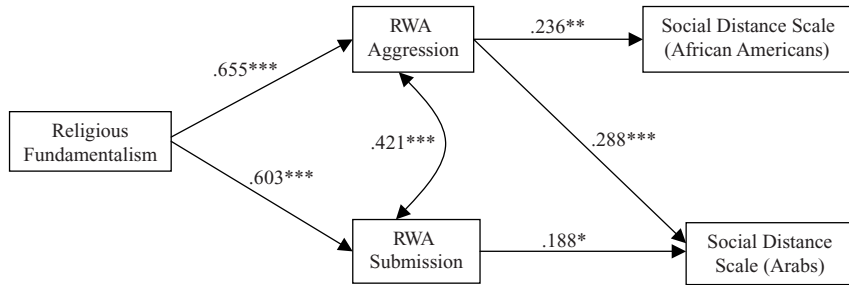
Attitudes toward Arabs and African Americans were measured using adapted versions of social distance scales (Bogardus 1933). Four items comprising this scale asked individuals to what degree they feel comfortable with being socially proximal to either Arabs or blacks/African Americans (1 = not at all comfortable, 3 = comfortable). For instance, individuals were asked, "How comfortable would you be working with someone who is . . ." and then were asked about various racial out-groups, such as "Arab?" or "Black or African American?" All items were reverse-scored, aggregated, and averaged so that higher scores indicated higher levels of negative attitudes or prejudice toward Arabs and African Americans. Data obtained from the Arab subscale (Cronbach's $\alpha = .90$) and the black/African-American subscale (Cronbach's $\alpha = .85$) both demonstrated good internal consistency (Table 2).

Analytic Procedure

A base model was fit using *MPlus* (v. 5.20; Muthén and Muthén 2008–2010) testing the proposed structural equation model (Figure 3). The residuals of the mediators were allowed to correlate with each other. FIML estimation was used to handle missing data. All other analyses

Figure 3

Model from Study 2 (community sample; $n = 275$) depicting mediation effects of RWA aggression and RWA submission on RF with attitudes toward African Americans and Arabs (social distance scales)



Note: Standardized coefficients are shown. Selected fit indexes: $\chi^2(2, N = 275) = 3.352, p = .19$ (CFI = 0.997, TLI/NNFI = .987, RMSEA = .050) with a 90% confidence interval of .000, .141. Nonsignificant paths for indirect effects were not drawn. Double-headed arrows indicate a correlation between variable residuals. * $p < .05$, ** $p < .01$, *** $p < .001$.

were performed using SPSS (v. 15.0). Model fit was evaluated by examining the same four estimates used in Study 1: (1) the chi-square (χ^2) goodness of fit, (2) RMSEA (Browne and Cudeck 1993), (3) the TLI/NNFI, and (4) the CFI (Bentler 1990). The method utilized in Study 1 for testing statistical mediation (MacKinnon, Lockwood, and Williams 2004) was also utilized in Study 2.

RESULTS

As noted, data from all scales had an acceptable level of internal consistency. Please see Table 2 for Cronbach's α , descriptive statistics, and correlations. The path model is reported in Figure 3 with all significant paths present in the base model.

Overall Model Fit

The hypothesized model appears to fit the data well. The chi-square for this model was nonsignificant, $\chi^2(2) = 3.352, p = .187$, indicating that the model fits the data. The RMSEA value, compensating for the effects of model complexity, was .050 (CI₉₀: .000, .141). This value indicates an acceptable fit of the model as being less than .08 (Browne and Cudeck 1993). The value of the TLI or NNFI was .987 and the value of the CFI was .997. Figure 3 shows the beta weights of the hypothesized model. All paths drawn are significant at the $p < .05$ level.

Mediation Effects

We tested two-path mediation in the present model. As in Study 1, 95 percent CIs were created around each indirect effect. Please note that CIs not containing zero indicate a mediating variable (RWA aggression, RWA submission) was a statistically significant mediator between RF and attitudes toward Arabs and African Americans.

Mediators of the RF-Attitudes Toward Arabs Relationship

RWA aggression mediated the effect of RF on attitudes toward Arabs (mediated effect = .188; CI: .094, .283). RWA submission also mediated the effect of RF on attitudes toward Arabs (mediated effect = .113; CI: .027, .200).

Mediators of the RF-Attitudes Toward African Americans Relationship

RWA aggression was the only component of RWA that mediated the effect of RF on attitudes toward African Americans (mediated effect = .155; CI: .054, .255) in the present model.

DISCUSSION

Results from Study 1 replicated in a more representative U.S. sample. Namely, RWA aggression was the strongest mediator between RF and prejudice toward Arabs and African Americans for both attitudes toward these racial out-groups (Study 1) and comfort with social proximity to these racial out-groups (Study 2). In this sample, however, RWA submission also mediated the relationship between RF and racial prejudice, but only toward Arabs. These findings increase plausibility of our proposed structure of the relationship between RF, RWA, and racial prejudice. Furthermore, the present results replicate and extend past research examining relationships between RF, RWA aggression, and racial prejudice (Mavor, Louis, and Laythe 2011; Mavor et al. 2009). Similar to Study 1, Study 2 confirms that the relationship between RF and prejudice toward Arabs strongly resembles the relationship between RF and prejudice toward African Americans.

GENERAL DISCUSSION

Combined, these studies provide a theoretical framework that helps explain links between aspects of religious traditionalism, authoritarianism, and racial prejudice. More specifically, these studies demonstrate that RWA aggression is associated with various types of racial prejudice. Across studies, RWA aggression has had the strongest association with racial prejudice across a variety of out-groups including Arabs (this study), African Americans (Johnson et al. 2011; this study), and aboriginal Australians (Mavor et al. 2009). RWA aggression is related to racial prejudice across many different culturally relevant racial groups. Unlike RWA aggression, RWA submission was only minimally associated with racial prejudice. The present results replicate past findings that RWA submission has had the weakest association with racial prejudice (Johnson et al. 2011; Mavor et al. 2009)

Using path analyses in SEM, we clarify somewhat problematic interpretations of the relationships among RF, RWA, and prejudice given the limited analytical tools previously available. For instance, a recent meta-analysis demonstrated that RF was a predictor of prejudice against African Americans (Hall, Matz, and Wood 2010), but the present studies extend these previous findings by demonstrating that aggressive ideologies mediated the RF-racial prejudice relationship. Furthermore, the present studies extend the theoretical framework laid by former researchers (Brandt and Reyna 2010; Hill et al. 2010) that measures of cognitive rigidity mediate the RF-prejudice relationship.

A unique finding in this study is that the relationship between RF, RWA, and Arab prejudice closely resembles the relationship between RF, RWA, and African-American prejudice. Namely, aggressive authoritarian beliefs mediate the RF-Arab prejudice relationship. These results are consistent with past research demonstrating that RWA is a stronger correlate of Arab prejudice than RF among Christian college students (Rowatt, Franklin, and Cotton 2005). This new finding demonstrates that Arab prejudice mirrors racial, not value-violating prejudices (Johnson et al. 2011). Perhaps surprisingly, RWA aggression is a stronger mediator of the RF-Arab prejudice

relationship than the RF-African-American relationship when examining attitudes toward these two groups. However, these differences may be due to difference in the scales utilized rather than differences in relationships between these variables. In Study 1, attitudes toward African Americans were measured with a “subtle” measure of racism (Saucier and Miller 2003) whereas a more “explicit” measure of racism was used to assess attitudes toward Arabs (Pratto et al. 1994). If an explicit measure of racism toward African Americans had been used, such as the Modern Racism Scale (McConahay, Hardee, and Batts 1981), RWA aggression may have mediated the relationship between RF and attitudes toward African Americans as strongly as the relationship between RF and attitudes toward Arabs. Supporting this notion, RWA aggression had a similar relationship between RF and both types of racial prejudice in Study 2 when examining comfort with social proximity toward these groups using the same scale.

Alternate Interpretation

Because RWA represents a type of rigid ideology, it is possible that RWA is a proxy measure of cognitive complexity. RWA has been associated with cognitive complexity measures, such as resistance to change (Jost et al. 2003) as well as need for structure and a greater reliance on heuristic processing (Kimmelmeier 2010). Furthermore, measures of cognitive complexity have mediated the RF-prejudice relationship (Brandt and Reyna 2010; Hill et al. 2010). Although there is no way to partial out these effects in this study, this study does demonstrate “which” components of rigid ideologies (RWA) are associated with certain types of prejudice. Although RWA is associated with cognitive complexity, it also includes specific components as indicated by the two subscales utilized in these studies: RWA aggression and RWA submission. In addition to helping clarify the associations among RF, RWA, and prejudices, this study lays the groundwork for future research to examine three-path mediation models examining how cognitive complexity may further mediate the relationship between RF and prejudice.

Implications for Political Language Toward Arab and Middle Eastern Countries

The results of the present studies have strong implications for how political leaders ought to engage in discussion about conflicts with the Middle East that could help reduce anti-Arab attitudes. This is especially relevant today given the number of conflicts the United States has had with Arab countries such as Iraq. Our results indicate that aggressive authoritarian beliefs (RWA aggression) are the strongest mediator of the relationship between RF and prejudice toward Arabs. Items on the RWA aggression scale include language referring to needing to “crush evil” and “stomp out the rot [of society].” Thus, it is important for political leaders to avoid aggressive language when referring to Arab countries or persons. By utilizing such aggressive language, political leaders could unintentionally increase aggressive ideologies held specifically toward Arabs, including Arab Americans. Alternatively, leaders ought to expose individuals to positive information about Arabs. Exposure to positive information about Arab-Muslims has been shown to decrease even implicitly negative attitudes toward Arab-Muslims (Park, Felix, and Lee 2007).

Strengths, Limitations, and Directions for Future Research

One limitation is that the sampled participants were predominantly Protestants and Catholics. Future studies should attempt to replicate these models among more diverse samples and across cultures. Another limitation of this study is that some statistical and conceptual overlap exists between RF and the facets of RWA utilized in these studies (aggression and submission; Tables 1 and 2). However, whereas RWA conventionalism contains items directly related to RF, RWA aggression and RWA submission overlap with RF only in that the RWA facets contain religious undertones. Thus, the present model still provides useful information in understanding which

components of a more general cognitive rigid ideology (RWA) mediate the relationship between RF and RWA. Furthermore, these studies replicate the general finding in the literature that various measures of cognitive rigidity mediate the relationship between RF and prejudice (Brandt and Reyna 2010; Hill et al. 2010).

One of the most novel findings in the present studies is that RWA aggression mediates the relationship between RF and attitudes toward Arabs, mirroring the relationship between RF, RWA aggression, and attitudes toward African Americans. This indicates that the prejudice toward Arabs resembles racial prejudice. However, because the terms “Arab” and “Muslim” could be (incorrectly) viewed as interchangeable, future studies ought to test the role of RWA aggression as a mediator between RF and attitudes toward both Arabs and Muslims. This would allow researchers to examine if RWA aggression is a stronger mediator between RF and the racial out-group (Arabs) or the religious out-group (Muslims). Furthermore, testing this model would provide a stronger test of the presented theoretical model that RWA aggression mediates the relationship between RF and racial prejudice.

Another area for future research would be to examine the role various emotions play in mediating the relationship between RF and prejudice. In the present models, we do not know if the rigid ideologies themselves predict prejudice or if underlying emotions associated with these ideologies predict prejudice. An area for future research would be examining the role that emotions might play in further mediating the relationship between RF, RWA, and racial prejudice. For instance, the most common emotions felt toward racial out-groups (i.e., African Americans) are fear and anger (Cottrell and Neuberg 2005). One of these emotions, anger, has predicted increases in implicit prejudice toward anger-inducing groups (i.e., Arabs; Dasgupta et al. 2009).

The theory behind these different emotions is that different out-groups present different “threats” to in-groups, causing different emotions to be felt. Because racial out-groups tend to present a threat to individuals, most individuals experience anger or fear toward these groups (Cottrell and Neuberg 2005). The RWA components in the present studies map on to these emotions quite well. For instance, RWA aggression represents a belief of engaging in actions that resemble the response to fear or threat (aggression). Future studies ought to examine the role that the emotions anger and fear play in further mediating these religiosity-racial prejudice relationships. It is possible that endorsed rigid ideologies (e.g., RWA aggression) increase various emotions that, in turn, increase prejudice toward these various racial out-groups.

Another area for future research would be to examine if gender moderates the effects seen in these studies. Since the vast majority of participants were females (71.9 percent), it is difficult to know if these results would generalize to all male or all female samples. Future studies should gather data from both males and females and perform multi-group SEM analyses to examine if there are differences in which components of RWA mediate the relationship between RF and prejudice among males and females. Due to differences in degree of religiosity (i.e., females are more religious than males; cf. Batson, Schoenrade, and Ventis 1993) and aggression (i.e., males are more overtly aggressive than females; cf. Hyde 1984), the relationships in the present model may be different for males and females.

Despite some of these limitations, the present studies help clarify a longstanding relationship between RF, RWA, and racial prejudice by providing a model depicting the relationship between these variables. The present studies also build solid groundwork for expanding on this area of research. More broadly, these results indicate that it may not be the belief in an inerrant set of religious values that is associated with prejudice but rather the aggressive ideologies associated with these beliefs that are positively related to racial prejudices. Future researchers should utilize the framework of the present model to inform analyses of these variables (RF and RWA) in examining their relationships to racial prejudice.

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