Right-Wing Authoritarianism Predicts Prejudice Equally Toward “Gay Men and Lesbians” and “Homosexuals”

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Author Note: We thank Kimberly Rios for providing experimental materials and data from Rios (2013). For the conceptual and close replications of Rios (2013) Studies 1 and 2, we pre-registered our research and analysis plan prior to data collection using the replication recipe (Brandt et al., 2014). Where we deviate from the pre-registered analyses we note it explicitly in the text. Pre-registration of the conceptual and close replications of Rios (2013) Study 1 can be found at https://osf.io/z5bqy/ and for Rios (2013) Study 2 at https://osf.io/pk9ga/.
Two recent experiments found evidence for what we term the social category label (SCL) effect—that the relationship between right-wing authoritarianism (RWA) and prejudice against gay men and lesbians can be reduced or even eliminated when the target group is labeled “gay men and lesbians” rather than “homosexuals” (Rios, 2013). Although this appears a promising approach to reduce self-reported sexual prejudice, with both theoretical implications for the meaning of RWA itself and practical implications for question wording for assessing these attitudes, there are several reasons to further examine these findings, including a) inconsistencies with extant evidence, b) small sample sizes in the original two experiments, and c) concerns with the RWA measures used in the two experiments. We tested the SCL hypothesis with a nationally representative sample (Study 1) and close and conceptual replications of Rios’ (2013) two studies (Studies 2 – 5) using multiple measures of RWA and prejudice. Across 23 tests of the SCL hypothesis, we obtained one statistically significant and one marginally significant effect consistent with the hypothesis, two significant effects opposite the hypothesis, and 19 non-significant effects. A meta-analysis of evidence reported here and in Rios (2013) indicates that RWA strongly predicts anti-gay prejudice, with no significant variation by label. This confirms that typically robust association between RWA and anti-gay prejudice and confirms that the SCL effect is not robust. We discuss potential limitations of these studies, theoretical, methodological, and practical implications for our failures to replicate the original SCL studies, and future directions for examining social category label effects.

Keywords: right-wing authoritarianism; sexual prejudice; replication; labeling effects
Right-Wing Authoritarianism Predicts Prejudice Equally Toward “Gay Men and Lesbians” and “Homosexuals”

Intergroup attitudes researchers have long been interested in explaining the dispositional antecedents of prejudice against societally disadvantaged or marginalized groups. Decades of research have shown that right-wing authoritarianism (RWA; Altemeyer, 1981; 1996; 1998)—which captures tendencies to obey authorities perceived as legitimate, aggress against those who would disobey these authorities, and adherence to social norms and conventions—is an especially powerful predictor of prejudice against groups seen as threatening traditional social norms and moral values (Duckitt, 2006; Duckitt & Sibley, 2010). Higher RWA is associated, for example, with greater prejudice against gay men and lesbians (Altemeyer, 1998; Terrizzi, Shook, & Ventis, 2010), Muslims (Echebarria-Echabe & Fernandez Guede, 2007; Imhoff & Recker, 2012), and immigrants (Asbrock, Christ, Duckitt, & Sibley, 2012; Zakrisson, 2005). The relationship between RWA and prejudice is quite robust, with a recent meta-analysis estimating the relationship at $r = .49$ (95% CIs [.46, .51]; Sibley & Duckitt, 2008).

Naturally, social scientists have been interested in reducing the link between RWA and prejudice, or in reducing prejudice among those high in RWA. Such interventions have been mixed in their efficacy. In one study, Altemeyer (1994) used Rokeach’s (1973) value-confrontation procedure, which confronts participants with the discrepancy between how highly they rank the value of freedom relative to equality (this procedure presumably highlights how participants care more about their own personal freedom than that of others). Altemeyer (1994) found that people high in RWA exposed to these value inconsistencies more strongly favored academic scholarships for Aboriginal students compared to those in a control group. However, a follow-up study by Altemeyer (1994) failed to replicate these effects. Other work has shown that
increased contact quality and quantity with outgroup members can reduce prejudice among people high in RWA (Asbrock, Christ, Duckitt, & Sibley, 2012; see Hodson, 2011 for a review).

One recently proposed method for reducing the RWA-anti-gay prejudice association considers whether the label used to describe the target group itself can reduce or even eliminate the effect of RWA on sexual prejudice (Rios, 2013). In this context, the “homosexual” label implies greater social deviance and “otherness” than the “gay men and lesbians” label (see Connell, 1992), and that therefore the relationship between RWA and prejudice towards gay men and lesbians should be moderated by which label is used. In two studies (Study 1 $N = 62$; Study 2 $N = 102$) participants from online community samples were randomly assigned to complete measures of prejudice against either “homosexuals” or “gay men and lesbians.” RWA significantly predicted prejudice against “homosexuals,” but there was no significant relationship between RWA and prejudice against “gay men and lesbians” (all analyses controlled for social dominance orientation [SDO]; Pratto, Sidanius, Stallworth, & Malle, 1994). Furthermore, consistent with the idea that the label affects the perceived social deviance and otherness of gay men and lesbians, the moderation effect was mediated by differences in perceived symbolic threat (Study 1) and psychological essentialism (Study 2).

This social category label (SCL) effect is consistent with other research finding that the label used to describe a social group influences the way people think or feel about that group. For example, Whites react more negatively to African-Americans when they are labeled “Black” compared to “African-American” (Hall, Phillips, & Townsend, 2014). Labels for high status groups also appear to influence intergroup attitudes, as White Americans induced to self-identify

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1We have given this name to this effect so that it can be efficiently discussed in the manuscript. This term does not appear in Rios (2013).
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as “White” are less supportive of diversity than those induced to self-identify as “European American” (Morrison & Chung, 2011).

If the SCL effect is robust, it would have important theoretical implications for how social psychologists understand authoritarianism and its effects on prejudice. In essence, it would imply that RWA does not necessarily predict prejudice against socially deviant groups (Duckitt, 2006; Duckitt & Sibley, 2010), but rather how the group is labeled determines the effect of RWA on prejudice. There are also strong methodological implications of the SCL effect, as it would suggest that previous research showing a relationship between RWA and anti-gay prejudice is a function of which label researchers have used to describe the social category. Finally, there are potentially important implications for how survey researchers devise questions about social groups, how government officials ask about citizens’ demographic background information, and how political pundits and social commentators discuss different social groups. Moreover, compared with many other types of prejudice reduction interventions (e.g., intergroup contact), they would be relatively easy to implement. There are, however, three key reasons to further examine the robustness of the SCL effect: inconsistency with extant findings regarding the relationship between RWA and prejudice against gay men and lesbians, small sample sizes in the original studies, and RWA measurement issues in the original studies.

Inconsistency with extant findings. In the original SCL effect studies (Rios, 2013), the association between RWA and attitudes towards "gay men and lesbians" was not significantly different from zero. This is surprising because published evidence is largely inconsistent with a null relationship between RWA and attitudes towards “gay men and lesbians”. Although these extant studies do not compare the effects of different labels, they do find substantial correlations between RWA and variables measuring negative attitudes toward “gay men” or “gays” and
"lesbians" (e.g., Duckitt, Bizumic, Krauss, & Heled, 2010; Pratto et al., 1994; Sibley, Robertson, & Wilson, 2006; Terrizzi, Shook, & Ventis, 2010; Whitley, 1999). For example, in a sample of 146 college students, Terrizzi et al. (2010) found a correlation of $r = .82$ between RWA and LaMar and Kite’s (1998) Attitudes toward Gay Men and Lesbians scale.

Further, in our own previously unpublished data collected prior to our awareness of Rios (2013), we find that the association between RWA and prejudice towards “gay men”, “gays”, and “lesbians” (both with and without controlling for SDO) is consistently positive and moderate in size. Table 1 provides details for these 12 samples. With the exception of Sample 3, which consisted of college students, all of our samples were collected online via Mechanical Turk (MTurk). RWA was measured with versions based on Altemeyer’s (1996; 1998) RWA scales or Duckitt et al.’s (2010) multi-dimensional ACT scale. Any RWA or ACT items containing references to gays, lesbians, homosexuals, or homosexuality were removed prior to analysis. SDO was measured with one of several iterations of the SDO scale (Pratto et al. 1994). There were various measures of prejudice, including feeling thermometer ratings and willingness to discriminate.

We performed a meta-analysis of these data to estimate the effect of RWA on prejudice against “gay men/gays and lesbians” in our own samples. In samples with multiple measures of prejudice, we z-scored and averaged the measures to create composite prejudice scores. When sexual orientation was assessed in the sample, non-heterosexual participants were excluded from analysis (as in Rios’ Studies 1 and 2). The zero-order correlation between RWA and prejudice against “gays and lesbians” or “gay men and lesbians” was positive and significant in every

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2The pre-registration of these analyses can be found at [https://osf.io/yuvj7/](https://osf.io/yuvj7/). The pre-registration noted 13 samples; however, one sample did not contain a measure of SDO as originally thought, and was therefore excluded from the analyses.
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sample ($rs .29 - .74$; partial $rs$ controlling for SDO $0.31 - 0.66$). The meta-analysis shows that RWA predicts prejudice against “gay men and lesbians” or “gays and lesbians” across a variety of operationalizations of both RWA and of prejudice, and in both student and community samples (without controlling for SDO: $r = .51$, 95% CI [.44, .59]; controlling for SDO: $r = .42$, 95% CI [.35, .49]).

Thus, the evidence scattered in the extant literature and this meta-analysis of our own existing data suggests that the null association between RWA and prejudice towards “gay men and lesbians” found in the two original studies (Rios, 2013) is anomalous. The average relationship between RWA and prejudice towards "gay men and lesbians" appears to be larger than those two original studies estimated; therefore, those studies may have overestimated the size of the difference between this relationship and the relationship between RWA and prejudice towards "homosexuals" (i.e., the interaction at the heart of the SCL effect). All of the studies reported hereafter therefore compare these two relationships in the form of the RWA $\times$ label interaction effect.

**Small sample sizes.** The original tests of the SCL effect (Rios, 2013) used a dichotomous (label) $\times$ continuous (RWA) design. These designs are surprisingly complex, and so such designs are often underpowered (Aguinis, Boik, & Pierce, 2001). This is the case with the two original studies testing the SCL effect (Study 1: $N = 62$, post-hoc power of .50 calculated with Aguinis et al., 2001; Study 2: $N = 102$, post-hoc power of .68). Studies with low statistical power are unlikely to provide precise effect size estimates and often overestimate the effect size (Ingre, 2013). In the five studies presently reported, we sought to increase power relative to the original studies.
The original studies did not use full or standard versions of the RWA scale. Study 1 used a 6-item version of Altemeyer’s (1998) 32-item scale. The original paper does not specify how these items were chosen. Study 2 used a 10-item subscale of Manganelli Rattazzi, Bobbio, and Canova’s (2006) 21-item RWA scale, which consisted entirely of positively worded items. The precise measurement of authoritarianism, and especially of right-wing authoritarianism, has been the center of controversy since the original work on authoritarianism (see e.g., Adorno, Frenkel-Brunswik, Levinson, & Sanford, 1950; Altemeyer, 1998; Funke, 2005; Stenner, 2005). This has led to a proliferation of validated RWA measures that try to improve on historical conceptualizations of the constructs; however, it is also then unclear how well findings with one measure of RWA generalize to other measures of the same or related constructs. Therefore, in our conceptual replications of these two original studies (described below), we explore the generalization of the SCL effect to other measures of RWA.

**The Present Studies**

We examined the robustness of the SCL effect in a series of conceptual and close replications. In Study 1, we analyzed data from a large survey experiment embedded in the 2012 time series of the American National Election studies (ANES) that varied the use of the “gays and lesbians” and “homosexuals” labels.

In Studies 2 and 3, we conducted close and conceptual replications of Rios (2013) Study 1. The close replication (Study 2) used the original materials provided by the original author. The conceptual replication (Study 3) measured RWA using a short version of Duckitt, Bizumic, Krauss, and Heled’s (2010) Authoritarianism-Conservatism-Traditionalism (ACT) scale, which captures three distinct components of RWA: Authoritarianism, which assesses punitiveness vs. leniency; Conservatism, which assesses obedience vs. rebelliousness; and Traditionalism, which
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assesses conformity vs. nonconformity to social norms, values, and morality (These dimensions are respectively analogous to the attitudinal clusters Altemeyer [1996] identified as authoritarian aggression, authoritarian submission, and conventionalism which were never separately measured in earlier versions of the RWA scale). Using this scale allowed us to test if the SCL effect extends to alternative measures of RWA, and whether support for the SCL hypothesis varies by RWA component. In Studies 4 and 5, we conducted close and conceptual replications of Rios (2013) Study 2. Again, the close replication (Study 4) used the original materials provided by the original author. The conceptual replication (Study 5) included the full balanced version of Manganelli Rattazzi et al.’s (2006) RWA scale instead of the 10-item imbalanced version used in Rios (2013) Study 2. Finally, we meta-analyzed the data reported here and in the two original studies to test how well the data overall support the SCL hypothesis.

**Study 1: 2012 American National Election Study (ANES)**

The ANES is a representative survey of American voters typically conducted during an election year. It consists of a pre-election and a post-election survey that includes questions assessing a variety of social, political, and psychological variables. In the pre-election survey of the 2012 ANES, respondents were randomly assigned to indicate their support for employment and military service discrimination against either “gays and lesbians” or “homosexuals.”

The 2012 ANES does not include direct measures of the RWA or SDO scales, but it does include measures that other researchers have used as proxies for these constructs. It includes one measure of traditional values and another measure of child-rearing values, both of which have been used as proxies of the RWA construct in the extant literature (Brandt & Reyna, 2014;  

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3We did not preregister Study 1 because we only happened upon this experimental manipulation while reviewing the ANES dataset to analyze as part of data collected prior to Rios (2013). Rather than maintaining the original pre-registration plan we opted to test the effect of the experimental manipulation.
Feldman & Stenner, 1997; Stenner, 2005), along with an egalitarianism measure. Egalitarianism is negatively related to SDO (Levy, West, Ramirez, & Karafantis, 2006; Pratto, Sidanius, Stallworth, & Malle, 1994), and the reverse-coded ANES egalitarianism measure has been used as a proxy SDO measure (Sidanius, Devereux, & Pratto, 1992). Thus, the embedded experiment within the 2012 ANES offers an opportunity for a conceptual replication of the SCL hypothesis in a nationally representative sample.

**Method**

**Participants and Procedure**

A total of 2477 participants from the 2012 time series of the ANES who indicated they were heterosexual or straight were included in the analyses (1175 male, 1302 female; $M_{age} = 50.4, SD = 16.3$). Participants completed a pre-election and a post-election survey.

**Materials**

The traditionalism measure consists of two items$^4$ (“The newer lifestyles are contributing to the breakdown of our society”; “This country would have many fewer problems if there were more emphasis on traditional family ties”) that were strongly correlated ($r = .66$) and were averaged together ($1 = $disagree strongly to $5 = $agree strongly).

For the 4-item measure of child-rearing values, participants choose the quality that is more important for a child to have among four pairs of “desirable qualities.” The pairs were “independence or respect for elders,” “curiosity or good manners,” “self-reliance or obedience,” and “being considerate or well-behaved,” with the latter of each pairing the more authoritarian choice. More authoritarian options were coded as 2, less authoritarian options were coded as 1,

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$^4$Two other items are often used to measure traditionalism in the ANES that we did not include in our analyses because they reference tolerance towards people who are not traditional, creating an overlap between our predictor and outcome variables (see Brandt & Reyna, 2014).
and “both were important” options were coded as 1.5. The items were averaged to form a scale ($\alpha = .63$); lower scale reliabilities are common for this particular measure of authoritarianism (e.g., Feldman & Stenner, 1997).

The traditionalism and child-rearing values items are face-valid measures of authoritarianism, and have been used as such in the extant literature (e.g., Brandt & Reyna, 2014). Further, in two additional Mechanical Turk validation studies (sample 1 N = 256; sample 2 N = 258), we found relationships between RWA (as measured by Duckitt et al.’s 2010 36-item ACT scale) and traditionalism of $r = .84$ and .82, respectively, and between RWA and child-rearing values of $r = .52$ and .59, respectively. Thus, these measures seem appropriate measures of the authoritarianism construct.

Participants also completed the 6-item anti-egalitarian measure (e.g., “We have gone too far in pushing for equal rights in this country;” 1 = disagree strongly to 5 = agree strongly; $\alpha = .83$; see SOM for all items).

In the pre-election survey, participants were randomly assigned to answer policy questions about either “gays and lesbians” ($n = 1260$) or “homosexuals” ($n = 1217$). These policies were to “protect homosexuals [gays and lesbians] against job discrimination” and “allow homosexuals [gays and lesbians] to serve in the United States Armed Forces.” Responses ranged from 1 = strongly approve to 4 = strongly disapprove, so that higher scores indicated more disapproval of the anti-discrimination policies. They were correlated ($r = .47$) and averaged to form a scale.\(^5\)

\(^5\)Discriminatory policies may not index prejudice and stereotypes, like the measure used in the original studies (Rios, 2013). To test see if the policy items were associated with prejudice we regressed policy on a feeling thermometer towards “gays and lesbians” (0 = cold/unfavorable, 100 = warm/favorable) that was collected in the post-election survey and the experimental condition, revealing a strong main effect of the feeling thermometer on policy ($b = -.017, SE = .001, 95\%CI [-.019, -.016], \beta = -.54, p < .001$). In the second step of the equation we included the interaction between the feeling thermometer and the experimental condition, revealing a non-significant
Results and Discussion

We weighted the sample based on strata and primary sampling unit for all analyses to ensure representativeness (see Damico, 2014). This is important for this wave of the ANES because the sampling frame purposefully oversampled some demographic groups. Models were estimated with the “svyglm” function of the “survey” package for R (Lumley, 2014).

The SCL hypothesis predicts a significant Authoritarianism × Condition interaction such that there is a significant slope of authoritarianism in the “homosexuals” condition but a non-significant or weaker slope in the “gays and lesbians” condition. For all of the studies reported here we followed the data analytic strategy used in Rios’ (2013) original tests of the SCL effect. We regress discrimination/prejudice on authoritarianism (mean-centered), anti-egalitarianism (mean-centered), and condition (0 = homosexuals; 1 = gays and lesbians) in Step 1, and the authoritarianism × condition and anti-egalitarianism × condition interactions in Step 2 (Aiken & West, 1991). If there are significant or marginally significant interactions, we follow up with simple slope analyses for each condition and for +/- 1SD of the authoritarianism mean.

The results for traditionalism are in Table 2. In Step 1, traditionalism predicted more opposition to the anti-discrimination policies, and Step 2 indicated that the interaction between traditionalism and the experimental condition was not significantly different from zero. The results for authoritarian child-rearing values are also in Table 2. In Step 1, authoritarian child-rearing values predicted more opposition to the anti-discrimination policies, and Step 2 indicated that the interaction between authoritarian child-rearing values and the experimental condition was not significantly different from zero.

interaction effect ($b = -.00008, SE = .002, 95\%CI [-.003, -.003], \beta = -.001, p = .96$). This suggests that the policy items are strongly associated with affective prejudice regardless of group label.
In sum, across two measures of authoritarianism in a large and representative sample, the SCL hypothesis did not receive support. Each measure of authoritarianism predicted opposition to anti-discrimination policies regardless of group label.

**Studies 2 and 3: Conceptual and Close Replications of Rios (2013) Study 1**

The 2012 ANES analysis did not find support for the SCL effect. Although scholars have previously argued that the RWA scale and the authoritarianism measures used by the ANES all capture aspects of the underlying “authoritarianism” construct (e.g., Brandt & Reyna, 2014; Hetherington & Suhay, 2011) and we found strong positive correlations between the RWA scale and these two variables in two separate MTurk samples (see Study 1 Method), the 2012 ANES sample is limited in that it did not contain a version of the RWA scale itself.

Further, the dependent variables varied between the 2012 ANES and the original studies: whereas the 2012 ANES employed two items capturing support for discriminatory policies, Rios’ (2013) original studies used a two-item affective reaction measure (Study 1) and a 21-item scale (Kite & Deaux, 1986) that captured various negative attitudes and beliefs about gay men and lesbians/homosexuals (Study 2). We cannot rule out the possibility that there is something unique about the dependent measures used in the original studies that lends to support for the SCL effect or in our initial replication that lends to non-significant SCL effects.

We therefore conducted close (Study 2) and conceptual (Study 3) replications of Rios’ (2013) Study 1. In Study 2, we used all of the original materials. Study 3 was identical to Study 2 except that we used a short 17-item version of Duckitt et al.’s (2010) ACT scale instead of the 6-item RWA scale used in the original study. In both replication attempts, we included the 2-item measure of anti-gay prejudice from Rios’ (2013) Study 1, and followed that measure with the 21-
Studies 2 and 3: Method

Participants

There were 62 participants sampled in Rios (2013) Study 1. Our target N was 2.5 times the original sample size (Simonsohn, 2015). We oversampled to guard against possible incomplete data, ultimately recruiting 464 participants from MTurk. After excluding participants who were not heterosexual, a sample of 411 participants remained (Study 2 [close replication]: N = 195, 56% male, 44% female, M_{age} = 35 years; Study 3 [conceptual replication]: N = 216, 54% male, 46% female, M_{age} = 36 years).

Materials and Procedure

All RWA, SDO, and anti-gay prejudice measures are provided in the SOM.

Participants were randomly assigned to the close or conceptual replication study. In both studies participants completed the RWA and SDO measures, followed by measures of symbolic threat, realistic threat, and prejudice towards "homosexuals" or "gays and lesbians" depending on the experimental condition. The close replication followed the original methods of Rios (2013) Study 1, with the addition of the 21-item prejudice measure used in Rios (2013) Study 2 (see SOM; 1 = Strongly disagree; 5 = Strongly agree), followed by a feeling thermometer item (0 = very cold; 100 = very warm), which were on separate pages at the end of the study. All prejudice measures were scored so that higher scores indicate more anti-gay prejudice.

The conceptual replication followed all of the original methods with the exception of the additional prejudice measures (described above) and the replacement of the RWA measure used
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in the original study with 17-items\(^6\) from the 36-item ACT scale (Duckitt et al., 2010). The ACT scale has separate measures of Authoritarianism (e.g., “The way things are going in this country, it’s going to take a lot of ‘strong medicine’ to straighten out the troublemakers”), Conservatism (e.g., “Our country will be great if we show respect for authority and obey our leaders”), and Traditionalism (e.g., “It is important that we preserve our traditional values and moral standards”). All items were rated on the same 1 = Strongly Disagree to 7 = Strongly Agree scale.

Lastly, participants reported demographic information, including their sexual orientation.

**Study 2: Close Replication Results and Discussion**

Table S1 (below the diagonal) in SOM reports the correlations, Ms, and SDs for RWA, SDO, symbolic threat, and all three prejudice measures in the close replication of Rios Study 1. All variables were strongly and positively correlated with each other. All measures were reliable (all $\alpha$s > .90). Table 3 reports the results of moderated multiple regression analyses on each of the four outcome variables. There were significant RWA and SDO main effects on each dependent measure, and no significant condition main effects or SDO × Condition interactions.

There was a marginally significant RWA × Condition interaction on the 2-item prejudice measure ($p = .09$). Simple slopes show that RWA significantly predicted the 2-item prejudice measure against “homosexuals,” $b = .53$, $SE = .13$, 95%CI [.27, .79], $\beta = .40$, $t = 4.06$, $p < .001$, and marginally significantly against “gay men and lesbians,” $b = .22$, $SE = .13$, 95%CI [.16, .35], $\beta = .18$, $t = 1.70$, $p = .09$. Further, among those high (+1 SD) in RWA, prejudice was higher in the “homosexuals” than in the “gay men and lesbians” condition, $b = -.80$, $SE = .39$, 95%CI [-1.58, -.02], $\beta = -.20$, $t = -2.03$, $p = .04$, whereas there were no differences between conditions.

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\(^6\)This scale originally included 18 items (6 items for each component) but due to a clerical error, one item on the Traditionalism component was duplicated and therefore removed from analyses.
There was a significant RWA × Condition interaction on the feeling thermometer \((p = .04)\). Simple slopes indicated RWA significantly predicted prejudice against “homosexuals,” \(b = 7.03, SE = 1.70, 95\%CI [3.66, 10.40], \beta = .40, t = 4.14, p < .001\), but not against “gay men and lesbians,” \(b = 2.06, SE = 1.62, 95\%CI [-1.17, 5.28], \beta = .13, t = 1.27, p = .21\). Further, among those high in RWA, prejudice was marginally higher in the “homosexuals” than in the “gay men and lesbians” condition, \(b = -9.63, SE = 5.07, 95\%CI [-19.63, .36], \beta = -.18, t = -1.90, p = .06\), whereas there were no differences between conditions among people low in RWA, \(b = 6.24, SE = 5.14, 95\%CI [-3.90, 16.38], \beta = .12, t = 1.21, p = .23\).

There were no other interactions predicting the 21-item prejudice measure or symbolic threat. As an exploratory analysis, we z-transformed each prejudice measure and averaged across to create a composite anti-gay prejudice measure \((\alpha = .93)\). Analyses with this measure found a marginally significant RWA × Condition interaction \((p = .07)\) indicating that the relationship between RWA and prejudice was marginally stronger in the “homosexuals” than in the “gay men and lesbians” condition. Therefore, the SCL hypothesis received qualified support in this close replication of Rios’ (2013) Study 1, although these effects were primarily of marginal statistical significance despite the significantly larger sample size than Rios (2013) Study 1.\(^7\)

**Study 3: Conceptual Replication Results and Discussion**

\(^7\)We specified in our pre-registration that we would remove outliers following the procedure used by Rios (2013), however, decided not to use this procedure because of recently published analyses suggesting that removing outliers does not improve—and can harm—Type I error rates (Bakker & Wicherts, 2014). There were no outliers in Study 3. In Study 2, there was one outlier on the 21-item prejudice measure. The RWA × condition interaction was still non-significant after this outlier was removed \((p = .78)\). We also specified in the pre-registration that we would run additional regression analyses pooling data from Studies 2 and 3 and using an interaction term to compare the two samples. None of the RWA × Condition interactions were moderated by sample \((ps > .34)\).
Table S1 (above the diagonal) in SOM reports the correlations, Ms, and SDs for RWA, SDO, symbolic threat, and all three prejudice measures in the conceptual replication of Rios (2013) Study 1. All variables were strongly and positively correlated with each other (all $\alpha$s > .90). Table 4 reports results of moderated multiple regression analyses on each of the four outcome variables. Main effects of RWA and SDO indicate that higher RWA and SDO scores predicted greater prejudice on all three measures, and greater symbolic threat. Inconsistent with the SCL hypothesis, there were no significant RWA $\times$ Condition interactions on any outcome variable ($ps$ ranged from .26 to .94). An exploratory analysis, with a z-transformed and combined prejudice measure ($\alpha$= .93), found a main effect of RWA ($p < .001$), but no significant RWA $\times$ Condition interaction ($p = .68$).

Component-Based Analysis of ACT Scale

To examine whether support for the SCL hypothesis varied by RWA component, we computed the following moderated multiple regression analyses on each of the four outcome variables in a set of exploratory analyses. In Step 1, we entered the dummy-coded condition variable (0 = homosexual; 1 = gay men and lesbians) and the mean-centered variables for Authoritarianism, Conservatism, Traditionalism, and SDO. In Step 2, we entered the Authoritarianism $\times$ Condition, Conservatism $\times$ Condition, Traditionalism $\times$ Condition, and SDO $\times$ Condition interactions. For the 21-item prejudice measure, the feeling thermometer, symbolic threat, and a composite prejudice measure there were no significant or marginally significant interactions between any of the ACT dimensions and the experimental condition (all $p$’s > .12; see SOM for full analyses).

For the two-item prejudice measure, in Step 1 there were main effects of Traditionalism ($b = .78, \ SE = .14, 95\%CI \ [.52, 1.05], \ \beta = .56, \ t = 5.78, \ p < .001$) and SDO ($b = .50, \ SE = .10,$
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95%CI [.30, .69], β = .32, t = 5.00, p < .001). No other main effects were significant, ps > .21. In Step 2, there was a significant Authoritarianism × Condition interaction (b = -.82, SE = .31, 95%CI [-1.44, -.21], β = -.41, t = 2.65, p = .01). Probing this interaction showed that whereas Authoritarianism did not significantly predict prejudice in the “homosexuals” condition (b = .25, SE = .23, 95%CI [-.20, .70], β = .14, t = 1.09, p = .28), it negatively predicted prejudice in the “gay men and lesbians” condition (b = -.58, SE = .21, 95%CI [-1.00, -.15], β = -.40, t = 2.70, p = .01). Further, a significant Traditionalism × Condition interaction (b = .58, SE = .28, 95%CI [.03, 1.12], β = .30, t = 2.08, p = .04) showed that Traditionalism was a stronger predictor of prejudice against “gay men and lesbians” (b = 1.06, SE = .18, 95%CI [.71, 1.41], β = .77, t = 6.07, p < .001) than against “homosexuals” (b = .49, SE = .22, 95%CI [.06, .91], β = .34, t = 2.26, p = .03). Both of these findings are in opposition to the SCL hypothesis. No other interactions were significant (ps > .63).

In the analysis of the full ACT scale, there was no support for the SCL hypothesis, as ACT/RWA had main effects on each anti-gay prejudice measure and threat, which were not qualified by target label. The component-based analyses also do not lend support for the SCL hypothesis, and actually produced two significant interaction effects opposite the SCL hypothesis on the two-item prejudice measure.

Studies 4 and 5: Close and Conceptual Replications of Rios (2013) Study 2

In our conceptual replications of the SCL effect (Studies 1 and 3), we did not find any evidence consistent with the SCL hypothesis (and in fact found two results opposite the SCL effect in Study 3 on the two-item prejudice measure used in Rios [2013] Study 1). However, in our close replication, we found partial support for the SCL hypothesis. Specifically, there was a marginally significant interaction effect on the 2-item prejudice measure and a significant
interaction effect on the feeling thermometer consistent with the SCL predictions (although, there was no support for the SCL hypothesis on the 21-item prejudice measure or symbolic threat). This suggests the possibility that the SCL effect emerges with the precise measures used in the original studies, but not with conceptually similar measures. It is also possible, however, that the true effect is near zero and that by testing many different interactions we happened to find significant interaction both consistent with and opposite the SCL hypothesis (i.e., Type 1 errors). To further examine these possibilities, we conducted close and conceptual replications of Rios (2013) Study 2. In the close replication (Study 4) we used the same 10-item RWA subscale as in the original study. In the conceptual replication (Study 5) we used the full version of this scale. These studies were conducted simultaneously and are therefore reported together.

**Studies 4 and 5: Method**

**Participants**

One hundred two participants were sampled in Rios (2013) Study 2. We targeted an $N$ of at least 255 for each of our replication attempts (Simonsohn, 2015), thus needing 510 participants total. We oversampled to guard against possible incomplete data, ultimately recruiting 534 participants from MTurk. After excluding participants who were not heterosexual, a sample of 483 participants remained (Study 4 [close replication]: $N = 246$, 68% male, 32% female, $M_{age} = 33$ years; Study 5 [conceptual replication]: $N = 237$, 70% male, 30% female, $M_{age} = 32$ years).

**Materials and Procedure**

All RWA, SDO, and anti-gay prejudice measures are provided in SOM. The materials and procedures for Studies 4 and 5 were identical to those of Studies 2 and 3, with the following exceptions:
Participants in the close replication completed the 10-item subscale of Manganelli Rattazzi et al.’s (2006) RWA scale used in Rios (2013) Study 2, whereas those in the conceptual replication completed a 20-item version of this scale, excluding only the item, “Gays and lesbians are just as healthy and moral as everyone else” because of its content overlap with the outcome variables. For the same reason, we removed the mention of “homosexuals” from item 14 (see SOM). No other items specifically mentioned homosexuals or gay men and lesbians.

We replaced the symbolic threat scale with the 15-item perceived essentialism scale of the sexual orientation category used in Rios (2013) Study 2. As in the original study, we limited our analysis to the 5-item discreteness subscale of this measure.

Participants first completed the 21-item prejudice measure used in Rios (2013) Study 2, followed by the 2-item measure from Rios (2013) Study 1, and then the feeling thermometer.

**Study 4: Close Replication Results and Discussion**

Table S2 (above the diagonal) in SOM reports the correlations, Ms, and SDs for RWA, SDO, essentialism, and all three prejudice measures in the close replication of Rios (2013) Study 2. All variables were strongly and positively correlated with each other. All measures were reliable (all $\alpha$s > .80). Table 5 reports results of moderated regression analyses on each of the four outcome variables. There were main effects of RWA on all outcome variables except the feeling thermometer, but no significant RWA $\times$ Condition interactions ($p$s ranged from .14 to .87). Further, an exploratory analysis with a z-transformed composite prejudice measure ($\alpha$ = .87) showed a main effect of RWA ($p < .001$), but no significant RWA $\times$ Condition interaction ($p = .58$). Thus, there is no support for the SCL hypothesis in the close replication of Rios (2013) Study 2; RWA predicted anti-gay prejudice regardless of target group label.

**Study 5: Conceptual Replication Results and Discussion**
Table S2 (below the diagonal) in SOM reports the correlations, $M$s, and $SD$s for RWA, SDO, essentialism, and all three prejudice measures in the conceptual replication of Rios Study 2. All variables were strongly and positively correlated with each other. All measures were reliable (all $\alpha$s > .77). Table 6 reports the results of moderated multiple regression analyses on each of the four outcome variables. There were main effects of RWA on all outcome variables, but no significant RWA $\times$ Condition interactions ($p$s ranged from .43 to .93). An exploratory analysis with a z-transformed composite prejudice measure ($\alpha$ = .87) showed a main effect of RWA ($p < .001$), but no significant RWA $\times$ Condition interaction ($p = .88$). Thus, there is no support for the SCL hypothesis in the conceptual replication of Rios (2013) Study 2; RWA predicted anti-gay prejudice regardless of target group label.

**Meta-Analysis**

We aimed for high-powered tests of the SCL hypothesis in our five studies; however, it is possible that when planning our studies we overestimated the likely size of the SCL effect and therefore overestimated the power of our studies (see Francis, 2012; Perugini, Gallucci, & Costantini, 2014). Therefore, we performed a meta-analysis of the original studies (Rios, 2013) and the data described in this paper to test if the strength of the relationship between RWA and intergroup attitudes varies significantly by target group label across studies. We estimated this model using the “rma.uni” function from R’s “metafor” package (Viechtbauer, 2010). We specified a random-effects model with restricted maximum-likelihood (REML) estimators, and included a single moderator variable: whether the target group was “gays/gay men and lesbians” or “homosexuals.” The meta-analysis included 19 samples, which are described below.
Samples collected prior to our attempted replications of Rios (2013). These 12 samples (see Table 1 for details) assessed the relationship between RWA and attitudes toward “gays/gay men and lesbians.” All measures used are available in SOM.

Study 1 (2012 ANES). Recall that respondents in the 2012 ANES completed both a pre-election and a post-election survey. In the pre-election survey, participants were randomly assigned to answer policy questions about either “gays and lesbians” or “homosexuals.” In the post-election survey, all participants provided feeling thermometer ratings of “gay men and lesbians.” In order to include all relevant data, for the 949 participants who completed the two-item policy measure for “gays and lesbians” in the pre-election study and who completed the feeling thermometer rating of “gay men and lesbians” in the post-election study, we computed a composite attitude measure by standardizing and averaging the two policy items and the feeling thermometer rating (these two measures were highly correlated; see Footnote 4). This was not possible for the 1217 participants who rated the two policies targeting “homosexuals” in the pre-election survey, as including their feeling thermometer ratings of “gay men and lesbians” from the post-election survey would have violated the meta-analytic assumption of independence of observations. For these participants, we therefore used only their score on the discrimination index (i.e. the outcome variable in Study 1). For both groups, the measure of RWA was the average ($r = .44$) of the traditionalism and authoritarian child-rearing measures described earlier.

Studies 2 – 5. In all studies, participants rated either “homosexuals” or “gay men and lesbians.” To measure anti-gay prejudice in the meta-analysis, we used the standardized composite anti-gay prejudice measure from each sample that averaged across the two-item prejudice measure, the 21-item prejudice measure, and the feeling thermometer.
Rios (2013) Studies 1 and 2. In both studies, participants rated either “homosexuals” or “gay men and lesbians.” Anti-gay prejudice was measured with a two-item prejudice scale (Study 1) or a 21-item prejudice scale (Study 2). Sample sizes are slightly larger than in the original studies because some participants did not have SDO data. These were excluded in the original studies but are included here in the zero-order analyses.

**Moderation by Label**

Figure 1 provides forest plots with effect sizes and 95% CIs for each sample and overall for the zero-order relationships. The meta-analytic point estimates of the size of the zero-order relationship between RWA and anti-gay prejudice were very similar whether participants rated “gays/gay men and lesbians” \( (r = .47, 95\% \text{ CI } [.41, .53]) \) or “homosexuals” \( (r = .45, 95\% \text{ CI } [.37, .53]) \). Figure 2 provides forest plots with effect sizes and 95% CIs for each sample and overall for the partial relationships, controlling for SDO. Effect size estimates were likewise very similar whether participants rated “gays/gay men and lesbians” \( (r_p = .36, 95\% \text{ CI } [.30, .43]) \) or “homosexuals” \( (r_p = .38, 95\% \text{ CI } [.28, .47]) \). To test whether these differences were statistically significant, we estimated a meta-regression model. The \( \beta \) coefficient for the moderator variable when using zero-order correlations did not differ significantly from zero; \( \beta = -.01, 95\% \text{ CI } [-.13, .10], p = .81 \). We also re-estimated this model with partial correlations (controlling for SDO) rather than zero-order correlations, but again the moderator coefficient did not differ significantly from zero; \( \beta = .01, 95\% \text{ CI } [-.11, .14], p = .83 \). These effects highlight that RWA strongly predicts anti-gay prejudice regardless of group label.

**General Discussion**

Across five studies, we performed a total of 23 tests of the SCL hypothesis. These studies used both nationally representative (Study 1) and community samples (Studies 2 – 5), and
multiple operationalizations and measurements of both authoritarianism and anti-gay prejudice. Of these tests, one significant and one marginally significant effect was consistent with the SCL hypothesis and two significant effects were opposite the SCL hypothesis (i.e., stronger effects of RWA on prejudice toward “gay men and lesbians” than toward “homosexuals”). The remaining 19 tests and a meta-analysis showed that RWA predicted prejudice regardless of target group label.

There are several possible reasons why we did not obtain the SCL effect. First, it is possible that the particular measures of RWA used in the original studies are necessary for the effect. This would explain why the original studies (Rios, 2013) found evidence for the SCL effect and why we did not find evidence for it in any of the conceptual replications using a number of different measures of RWA. However, this would not explain why we did not find evidence for the SCL effect in Study 4 (the close replication of Rios [2013] Study 2). It would further suggest that the original SCL effect is very limited in scope and unable to generalize to other (and more established) measures of the same construct.

Second, it could be that the precise order of the measures of prejudice make a difference, such that measures presented first are more likely to show the effect compared to measures presented last. This would explain why in Study 2 the two-item prejudice measure showed the effect, but the 21-item measure of prejudice did not. This would not explain, however, why symbolic threat in Study 2 did not show the effect (it was immediately prior to the two-item measure of prejudice), why the feeling thermometer item in Study 2 showed the effect (it was immediately following the 21-item measure), or why none of the prejudice measures in Studies 3 – 5 showed the effect. This explanation would also suggest that the effect is not long lasting, failing to extend beyond two or more survey items.
Third, it is possible that the type of anti-gay prejudice measure determines variation in SCL effects. This would explain why Study 2 revealed statistically or marginally significant support for the SCL effect on the affectively-tinged prejudice measures (i.e., the feeling thermometer rating and two-item prejudice measure from Rios [2013] Study 1), but not on the 21-item prejudice measure which captured a variety of attitudes and beliefs. However, this would not explain why there was no support for the SCL effect for either of these two measures in Studies 3 – 5, or why one of the original studies (Rios, 2013, Study 2) found supportive effects with the 21-item prejudice measure. It would also suggest that the original SCL effect is very limited in scope and unable to generalize to more cognitive or behaviorally-tinged measures.

Fourth, it is possible that the SCL effect occurs only in the populations sampled in the original studies. This would explain why the original studies were able to find support, but only two of our 23 analyses across five studies were able to find support. Although we have no way to directly dispute this possibility, if accurate, it severely restricts the generalizability of the effect. The data we collected (Studies 2 – 5) were from online community samples, as were the data from the original studies (albeit, different online samples). Moreover, the data in Study 1, which did not support the SCL hypothesis, were from a nationally representative sample which should lend itself to the broadest generalizations out of all of the different extant tests of the SCL hypothesis.

Fifth, it is possible that the societal context surrounding attitudes towards gay men and lesbians has changed between when the original data were collected and when our data were collected. Replication in social psychology is complicated because the very target of study can shift in ways that make direct replications difficult (e.g., Brandt et al., 2014) or even illusory (Stroebe & Strack, 2014). According to the Pew Research Center (2015), between 2010 and
2012, attitudes toward same-sex marriage underwent an important shift, when those who
supported same-sex marriage went from a minority (42% vs. 48%) to a plurality (48% vs. 43%); as of this writing in 2015, a majority of Americans now support same-sex marriage (57% vs. 39%). This could explain why the original studies, which were collected in 2010 and 2011 (Rios, 2014, personal communication) were able to find support for the SCL effect and our five studies, collected between 2012 and 2015, were not.

The change in societal context is the most difficult explanation for us to rule out, and, to our knowledge, the necessary data to test this hypothesis do not exist. If this explanation is accurate, it suggests an interesting and dynamic association between societal attitudes, RWA, and social category labels. That said, it is unclear to us why a societal shift toward increasingly pro-gay attitudes would increase the relationship between RWA and prejudice against “gay men and lesbians.” If anything, people high in RWA might be expected to adopt more positive attitudes toward gay men and lesbians as such attitudes became more conventional (Altemeyer, 1996). It would also not explain why extant studies (including four of our 12 samples collected prior to our replication attempts) collected around the time of the original studies (Rios, 2013) show that RWA predicts prejudice again “gay men and lesbians” (e.g., Duckitt et al. 2010; Terrizzi et al., 2010), inconsistent with the null association between RWA and prejudice found in the original studies (Rios, 2013). It would also suggest that these effects were somewhat fleeting and that pollsters, pundits, and other organizations should no longer worry that particular labels used to refer to gay men and lesbians will instigate prejudice from people high in RWA.

Taken together, then, what are we to make of the SCL hypothesis? Given that 19 of 23 interaction effects we tested were non-significant, and that the four significant or marginally significant interaction effects were evenly split between supporting and opposing the SCL
hypothesis, it seems quite possible that any support observed for the SCL effect may simply be the result of Type I error. Continuous × dichotomous variable designs like the ones necessary to test the SCL effect are deceptively complicated. For example, the RWA × condition interaction effect is also dependent on the strength of the correlations between RWA and prejudice, RWA and SDO, and SDO and prejudice, along with the strength of the correlation between the SDO × condition interaction and the other variables in the model. Given that the original studies had relatively small samples, it is possible that one or more of these different relationships was particularly strong (or weak), and this made the SCL effect appear more robust than it would in large samples that (theoretically) produce more accurate parameter estimates. In the sample that likely provides the best estimate of the effect size in the American population (i.e., the large and nationally representative 2012 ANES sample), the interactions between the label condition and the authoritarian measures were in the direction expected by the SCL hypothesis, but neither were significantly different from zero. Likewise, meta-analytically combining all the data reported here and in Rios (2013) showed no support for the SCL hypothesis.8

Theoretical, Methodological, and Practical Implications

Moderator variables have a "checkered history" in personality psychology (Chaplin, 1991, p. 143). This history is, in part, filled with attempts to find the key moderators that increase the correlation between personality traits and behaviors; however, moderator variables in personality research can also help researchers understand how well trait associations generalize

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8An anonymous reviewer suggested that the two experimental conditions in the original studies were not perfectly controlled because of the possibility that people may be more likely to infer “gay men” instead of “lesbians” from the category “homosexuals.” While we cannot directly address this question, data from three of our studies collected prior to the publication of Rios (2013) included separate measures of prejudice against “gay men” and “lesbians,” and each indicated that RWA is very strongly correlated with prejudice against both “gay men” and “lesbians” (Sample 6: r = .73 and .77, respectively; Sample 11: r = .74 and .80, respectively; Sample 12: r = .65 and .65, respectively). Thus, even if it is the case that the term “homosexual” is not entirely inclusive of “lesbians,” it appears that RWA is a very strong predictor of prejudice against both “gay men” and “lesbians.”
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to other contexts (i.e., the stability of its association or predictive power; Revelle, 2007). The
SCL effect (Rios, 2013) seemed to suggest that the RWA-anti-gay prejudice association was not
stable and did not generalize to a context where the group was described with a different term.
This would have potentially been an important demonstration because in the past RWA was
strongly linked to prejudice (Sibley & Duckitt, 2008), especially toward groups seen as deviating
from or threatening societal norms and conventions (Duckitt, 2006; Duckitt et al., 2010; Duckitt & Sibley, 2010), which includes gay men and lesbians (Asbrock et al., 2012; Brandt, Chambers, Crawford, Wetherell, & Reyna, in press). The SCL effect reported in Rios (2013) would
therefore require revisions to such theoretical frameworks as it would suggest that RWA’s
effects on prejudice against one such socially unconventional or deviant group are tenuous and
dependent upon how the group is labeled.

In our replication studies we have found, contrary to the SCL effect, that the RWA-anti-
gay prejudice association is stable across these different contexts. In a sense, although we have
failed to replicate the SCL effect we have succeeded in replicating the robust association
between RWA and anti-gay prejudice across two different labeling conditions. The results of the
present studies are therefore important as they indicate that theory regarding the effect of RWA
on prejudice against potentially threatening unconventional or socially deviant groups (e.g.,
Duckitt & Sibley, 2010) remains intact—RWA is a robust predictor of perceived symbolic threat
from and prejudice against gay men and lesbians, a group seen as deviating from societal
conventions (Asbrock et al., 2012; Brandt et al., in press). This stability across conditions is also
supportive of suggestions that RWA captures a stable disposition (Cohrs, 2013), at least when it
comes to predicting anti-gay prejudice.
If robust, the SCL effect would also have important methodological implications (e.g., the social category label one chooses in survey research). Rather than changing hearts and minds, changing group labels could reduce prejudice among the most prejudiced. If robust, the impact of the SCL effect could potentially be wide-reaching, as it is relevant not just to social and personality psychology but to other disciplines including political science, communications, and public policy. It would thus have multiple avenues by which it could inform scholarship and policy. However, our results indicate that survey researchers and policy makers need not alter the labels they use to describe gay men and lesbians because of concerns that one label may exacerbate negative attitudes more than another among a certain subset of the population. Of course, given that the term “homosexuals” is considered a derogatory term because of its historical association with deviancy and psychopathology (American Psychological Association, 1991), there are other legitimate reasons to prefer the label “gay men and lesbians” to “homosexuals.” However, the present studies show that enhanced prejudice from an authoritarian subset of individuals is unlikely one of them.

The implications of these studies for whether social category labels can produce main effects on intergroup attitudes is unclear. Some recent evidence indicates increased prejudice among Whites toward African-Americans when labeled “Blacks” than when labeled “African-Americans” (Hall et al., 2014). Further, using a large national sample, a 2010 CBS News-New York Times poll found greater support for “gay men and lesbians” serving in the U.S. military than “homosexuals” (Hetchkopf, 2010). However, we did not uncover a single label main effect in any of our five close and conceptual replications, and such main effects in Rios’ (2013) original studies were either non-significant (Study 1) or unreported and presumably non-significant (Study 2).
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Although this might suggest a need for skepticism regarding labeling effects more broadly, it might also suggest that such effects are temporally or context dependent as societal attitudes toward such groups change. Future research is therefore needed to understand the potential effects of group labels on group attitudes. One possibility is that people who use the “homosexual” label in conversation are more prejudiced than those who use the “gay man” or “lesbian” labels, as the label one uses may serve as a signal for one’s attitudes toward the group. It may also be the case that this type of labeling affects the self-concept and identities of gay and lesbian individuals (cf. Morrison & Chung, 2011). The present studies should not discourage scholars from investigating labeling effects on intergroup attitudes, but rather, should encourage them to use large samples, diverse populations, and established measures when designing robust tests of their potential effects.

Conclusion

The SCL hypothesis suggests that a subtle change in how gay men and lesbians are labeled can reduce or even eliminate the relationship between right-wing authoritarianism (RWA) and prejudice against them. Our multiple attempts to closely and conceptually replicate this finding, along with our meta-analysis of the original data (Rios, 2013) and our own, provided little support for the SCL hypothesis. Instead, our findings are consistent with research showing that RWA is a strong predictor of negative attitudes toward groups perceived as threatening to traditional moral values and beliefs (Altemeyer, 1996; 1998; Duckitt, 2001; Sibley & Duckitt, 2008), such as gay men and lesbians. At this stage it is therefore premature for social and personality psychologists to revise their theories regarding how the relationship between RWA and attitudes toward such groups can be altered through subtle labeling effects.
References


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Ingre, M. (2013). Why small low-powered studies are worse than large high-powered studies and how to protect against "trivial" findings in research: Comment on Friston (2012). *NeuroImage, 81*, 496-498.


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conservatism and prejudicial attitudes toward homosexuals. *Personality and Individual
Differences, 49*(6), 587-592.


Whitley, B. E. Jr. (1999). Right-wing authoritarianism, social dominance orientation, and

### Table 1

**Sample characteristics of twelve existing samples**

<table>
<thead>
<tr>
<th>Sample Name</th>
<th>Composition</th>
<th>Date</th>
<th>Size</th>
<th>RWA scale type</th>
<th>SDO scale type</th>
<th>Prejudice Measure</th>
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<tr>
<td>Sample 1</td>
<td>MTurk</td>
<td>March 2014</td>
<td>617</td>
<td>12-item ACT (.91)</td>
<td>4-item SDO brief (.83)</td>
<td>Feeling thermometer</td>
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<td>Sample 2</td>
<td>MTurk</td>
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<td>36-item ACT (.96)</td>
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<td>Feeling thermometer</td>
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<td>Sample 3</td>
<td>Student</td>
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<td>Sample 4</td>
<td>MTurk</td>
<td>March 2014</td>
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<td>36-item ACT (.96)</td>
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<td>Sample 5</td>
<td>MTurk</td>
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<td>18-item ACT (.94)</td>
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<td>Sample 6</td>
<td>MTurk</td>
<td>February 2011</td>
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<td>Warmth (1-7) (.88)</td>
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<td></td>
<td>Contact (1-7) (.89)</td>
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<td>Sample 7</td>
<td>MTurk</td>
<td>November 2013</td>
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<td>36-item ACT (.97)</td>
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<td>Sample 9</td>
<td>MTurk</td>
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<td>Sample 10</td>
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<td>Sample 12</td>
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<td>Discrimination (1-7) (.84)</td>
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</table>

**Note.** Samples 6, 11, and 12 used the term “gay men and lesbians;” all other samples used the term “gays and lesbians.” Samples, 2, 6, and 7 – 12 included assessment of participant sexual orientation. Internal reliability coefficients for RWA, SDO, and prejudice measures are included in parentheses.
Table 2

Study 1: Results of moderated multiple regression analyses using traditionalism and child-rearing values on the policy outcomes variable from analysis of the 2012 American National Election Study.

<table>
<thead>
<tr>
<th></th>
<th>Step 1</th>
<th></th>
<th>Step 2</th>
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<td>SE</td>
<td>β</td>
<td>t</td>
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<tr>
<td><strong>Traditionalism</strong></td>
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<td></td>
</tr>
<tr>
<td>Constant</td>
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<td>0.03</td>
<td>1.71</td>
<td>1.85</td>
</tr>
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<td>Traditionalism</td>
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*p < .10, ***p < .001

Notes: Higher scores on policy outcome variable indicates more discrimination.
### Study 2: Results of moderated multiple regression analyses on outcomes variables for close replication of Rios (2013) Study 1

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Running Head: RWA PREDICTS PREJUDICE AGAINST GAYS AND LESBIANS

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†p < .10; *p < .05; **p < .01; ***p < .001

Notes: Higher scores on symbolic threat and prejudice measures indicate more threat and prejudice, respectively.
Running Head: RWA PREDICTS PREJUDICE AGAINST GAYS AND LESBIANS

Table 4

Study 3: Results of moderated multiple regression analyses on outcomes variables for conceptual replication of Rios (2013) Study 1

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**p < .01; ***p < .001

Notes: Higher scores on symbolic threat and prejudice measures indicate more threat and prejudice, respectively.
Table 5  

Study 4: Results of moderated multiple regression analyses on outcomes variables for close replication of Rios (2013) Study 2

| Panel A: 21-item measure (Rios 2) | Step 1 |           |          |          |           |          |          |          |          |          |          |          |          |          |          |          |
|                                 |        |  b      | SE       | β        | t        | CIs      |  b      | SE       | β        | t        | CIs      |  b      | SE       | β        | t        | CIs      |          |          |
| Constant                        | 1.95   | .06    | 32.87*** | 1.84, 2.07 | 1.95   | .06    | 32.78*** | 1.83, 2.07 | 1.95   | .06    | 32.78*** | 1.83, 2.07 |
| RWA                             | .30    | .03    | .60      | 9.93***   | .24, .36 | .32    | .04    | .63      | 7.70***   | .24, .40 |
| Condition                       | .06    | .04    | .10      | 1.70†     | -.01, .14 | -.01  | .06    | -.11     | -.12, .11 | -.10  | .08    | -.19     | -.26, .07 |
| Condition                       | -.10   | .08    | -.06     | -1.18     | -.26, .07 | -.10  | .08    | -.06     | -.19     | -.26, .07 | -.10  | .08    | -.19     | -.26, .07 |
| RWA x Condition                 | -.15   | .17    | -.10     | - .89     | -.23, .18 | -.15  | .17    | -.09     | -.48, .18 | -.48, .18 |
| SDO x Condition                 | .18    | .21    | .10      | .87       | -.23, .59 | .18   | .21    | .10      | .87       | -.23, .59 |
| Panel B: 2-item measure (Rios 1) |        |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| Constant                        | 3.73   | .16    | 23.53*** | 3.42, 4.05 | 3.72   | .16    | 23.34*** | 3.41, 4.04 |          |          |          |          |          |          |          |          |          |
| RWA                             | .18    | .08    | .16      | 2.14*     | .01, .34 | .25    | .11    | .23      | 2.19*     | .02, .47 |          |          |          |          |          |          |          |
| SDO                             | .25    | .10    | .19      | 2.48*     | .05, .45 | .16    | .16    | .12      | 1.01      | -.15, .46 |          |          |          |          |          |          |          |
| Condition                       | -.37   | .23    | -.10     | -1.64     | -.82, .07 | -.38  | .23    | -.11     | -.16      | -.82, .07 |          |          |          |          |          |          |          |
| RWA x Condition                 | -.15   | .17    | -.09     | -.89      | -.48, .18 | -.48, .18 |          |          |          |          |          |          |          |          |          |
| SDO x Condition                 | .18    | .21    | .10      | .87       | -.23, .59 | -.23, .59 |          |          |          |          |          |          |          |          |          |
| Panel C: Feeling thermometer    |        |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| Constant                        | 34.92  | 2.04   | 17.15*** | 30.91, 38.93 | 34.94  | 2.05   | 17.04*** | 30.90, 38.92 |          |          |          |          |          |          |          |          |          |
| RWA                             | .48    | 1.06   | .04      | .46       | -1.60, 2.57 | .33   | 1.44   | .02      | .23       | -.25, 3.18 |          |          |          |          |          |          |
| SDO                             | 5.08   | 1.31   | .29      | 3.89***   | 2.51, 7.66 | 4.67  | 2.00   | .27      | 2.34*     | .73, 8.60 |          |          |          |          |          |          |
| Condition                       | -.21   | 2.89   | -.05     | -.75      | -.78, 3.52 | -.21  | 2.90   | -.05     | -.75      | -.78, 3.52 |          |          |          |          |          |          |
| RWA x Condition                 | .34    | 2.14   | .02      | .17       | -.38, 4.65 | .34   | 2.14   | .02      | .17       | -.38, 4.65 |          |          |          |          |          |          |
| SDO x Condition                 | .65    | 2.66   | .03      | .25       | -.45, 5.90 | .65   | 2.66   | .03      | .25       | -.45, 5.90 |          |          |          |          |          |          |
| Panel D: Essentialism           |        |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| Constant                        | 2.52   | .07    | 38.06*** | 2.39, 2.65 | 2.51   | .07    | 37.89*** | 2.38, 2.64 |          |          |          |          |          |          |          |          |
| RWA                             | .28    | .03    | .51      | 8.15***   | .21, .35 | .33    | .05    | .60      | 7.02***   | .23, .42 |          |          |          |          |          |          |
Running Head: RWA PREDICTS PREJUDICE AGAINST GAYS AND LESBIANS

<table>
<thead>
<tr>
<th></th>
<th>SDO</th>
<th>.11</th>
<th>.04</th>
<th>.17</th>
<th>2.66**</th>
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<th>.05</th>
<th>.06</th>
<th>.08</th>
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<td>.13</td>
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†p < .10; *p < .05; **p < .01; ***p < .001

Notes: Higher scores on essentialism and prejudice measures indicate more essentialism and prejudice, respectively.
Table 6

Study 5: Results of moderated multiple regression analyses on outcomes variables for conceptual replication of Rios (2013) Study 2

<table>
<thead>
<tr>
<th>Panel A: 21-item measure (Rios 2)</th>
<th>Step 1</th>
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<tbody>
<tr>
<td></td>
<td>b</td>
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<td>Constant</td>
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<td>RWA</td>
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<tr>
<td>SDO</td>
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<td>.08</td>
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<tr>
<td>Condition</td>
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<table>
<thead>
<tr>
<th>Panel B: 2-item measure (Rios 1)</th>
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<tbody>
<tr>
<td>Constant</td>
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<td>.11</td>
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<tr>
<td>Condition</td>
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<td>.23</td>
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<td>RWA x Condition</td>
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<td>SDO x Condition</td>
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<table>
<thead>
<tr>
<th>Panel C: Feeling thermometer</th>
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<tr>
<td>Constant</td>
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<tr>
<td>RWA x Condition</td>
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<tr>
<td>SDO x Condition</td>
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<table>
<thead>
<tr>
<th>Panel D: Essentialism</th>
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<th></th>
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</thead>
<tbody>
<tr>
<td>Constant</td>
<td>2.49</td>
<td>.07</td>
</tr>
<tr>
<td>RWA</td>
<td>.30</td>
<td>.04</td>
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</table>
Running Head: RWA PREDICTS PREJUDICE AGAINST GAYS AND LESBIANS

<table>
<thead>
<tr>
<th></th>
<th>SDO</th>
<th>Condition</th>
<th>RWA x Condition</th>
<th>SDO x Condition</th>
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</thead>
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<tr>
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<td>.35</td>
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<tr>
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<td>.04</td>
</tr>
<tr>
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<td>3.40**</td>
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<td>-.13, .22</td>
<td>-.04, .09</td>
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<td>.48</td>
<td>.03</td>
<td>-.45, .21</td>
<td>-.21, .13</td>
</tr>
</tbody>
</table>

**p < .01; ***p < .001

*Notes:* Higher scores on essentialism and prejudice measures indicate more essentialism and prejudice, respectively.
Figure 1. Forest plot of correlations between RWA and prejudice toward “gays/gay men and lesbians” (top) and “homosexuals” (bottom). Error bars are 95% confidence intervals; squares are proportional to sample size.
Figure 2. Forest plots of partial correlations (controlling for SDO) between RWA and prejudice toward “gays/gay men and lesbians” (top) and “homosexuals” (bottom). Error bars are 95% confidence intervals; squares are proportional to sample size.

<table>
<thead>
<tr>
<th>Sample</th>
<th>RWA (gays/gay men and lesbians)</th>
<th>RWA (homosexuals)</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>0.32 [ 0.24, 0.39 ]</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>0.36 [ 0.23, 0.49 ]</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>0.31 [ 0.08, 0.53 ]</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>0.40 [ 0.31, 0.49 ]</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>0.35 [ 0.23, 0.48 ]</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>0.57 [ 0.43, 0.70 ]</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>0.35 [ 0.23, 0.48 ]</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>0.39 [ 0.27, 0.51 ]</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>0.33 [ 0.21, 0.45 ]</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>0.42 [ 0.31, 0.52 ]</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>0.66 [ 0.59, 0.73 ]</td>
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</tr>
<tr>
<td>12</td>
<td>0.54 [ 0.41, 0.68 ]</td>
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<td>ANES</td>
<td>0.39 [ 0.33, 0.44 ]</td>
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<tr>
<td>Study 2</td>
<td>0.29 [ 0.10, 0.48 ]</td>
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</tr>
<tr>
<td>Study 3</td>
<td>0.34 [ 0.16, 0.51 ]</td>
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</tr>
<tr>
<td>Study 4</td>
<td>0.07 [-0.12, 0.25 ]</td>
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<td>Study 5</td>
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<td>Rios (2013) Study 2</td>
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RE Model

<table>
<thead>
<tr>
<th>RWA (gays and Lesbians) (partial)</th>
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</thead>
<tbody>
<tr>
<td>0.36 [ 0.30, 0.43 ]</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>RWA (homosexuals) (partial)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.33 [ 0.28, 0.39 ]</td>
</tr>
<tr>
<td>0.49 [ 0.32, 0.65 ]</td>
</tr>
<tr>
<td>0.42 [ 0.27, 0.58 ]</td>
</tr>
<tr>
<td>0.15 [-0.03, 0.33 ]</td>
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</tr>
<tr>
<td>0.42 [ 0.13, 0.72 ]</td>
</tr>
<tr>
<td>0.56 [ 0.36, 0.76 ]</td>
</tr>
</tbody>
</table>

RE Model

| 0.38 [ 0.28, 0.47 ] |
Supplemental Online Materials

NOTE: For all studies, higher RWA, SDO, and threat scores indicate greater RWA, SDO, and threat, respectively (strongly disagree to strongly agree). Higher prejudice scores indicate greater prejudice. Reverse-coded items are indicated with an asterisk (*).

Reanalysis of Our Existing Samples

Materials Used in Our Twelve Existing Samples.

Sample 1

RWA (1 to 7):
Items 1, 2, 4, 9, 13, 14, 19, 23, 28, 33, 35, and 36 from the full 36-item ACT scale (see Sample 2 below)

SDO (1 to 7):
1. In setting priorities, we must consider all groups.*
2. We should not push for group equality.
3. Group equality should be our ideal.*
4. Superior groups should dominate inferior groups.

Prejudice: Feeling Thermometer (0 very cold, 100 very warm)

Sample 2

RWA: full (1 to 7) 36-item ACT Scale (Duckitt et al., 2010)
1. It’s great that many young people today are prepared to defy authority.*
2. What our country needs most is discipline, with everyone following our leaders in unity.
3. Students at high schools and at university must be encouraged to challenge, criticize, and confront established authorities.*
4. Obedience and respect for authority are the most important virtues children should learn.
5. Our country will be great if we show respect for authority and obey our leaders.
6. People should be ready to protest against and challenge laws they don’t agree with.*
7. People should be allowed to make speeches and write books urging the overthrow of the government.*
8. The more people there are that are prepared to criticize the authorities, challenge and protest against the government, the better it is for society.*
9. People should stop teaching children to obey authority.*
10. The real keys to the “good life” are respect for authority and obedience to those who are in charge.
11. The authorities should be obeyed because they are in the best position to know what is good for our country.
12. Our leaders should be obeyed without question.
13. Nobody should stick to the “straight and narrow.” Instead people should break loose and try out lots of different ideas and experiences.*
14. The “old-fashioned ways” and “old-fashioned values” still show the best way to live.
15. God’s laws about abortion, pornography, and marriage must be strictly followed before it is too late.
16. There is absolutely nothing wrong with nudist camps.*
17. This country will flourish if young people stop experimenting with drugs, alcohol, and sex, and pay more attention to family values.
18. There is nothing wrong with premarital sexual intercourse.*
19. Traditional values, customs, and morality have a lot wrong with them.*
20. Everyone should have their own lifestyle, religious beliefs, and sexual preferences, even if it makes them different from everyone else.*
21. The radical and sinful new ways of living and behaving of many young people may one day destroy our society.
22. Trashy magazines and radical literature in our communities are poisoning the minds of our young people.
23. It is important that we preserve our traditional values and moral standards.
24. People should pay less attention to the bible and the other old-fashioned forms of religious guidance, and instead develop their own personal standards of what is moral and immoral.*
25. Strong, tough government will harm not help our country.*
26. Being kind to loafers or criminals will only encourage them to take advantage of your weakness, so it’s best to use a firm, tough hand when dealing with them.
27. Our society does NOT need tougher government and stricter laws.*
28. The facts on crime and the recent public disorders show we have to crack down harder on troublemakers, if we are going preserve law and order.
29. Our prisons are a shocking disgrace. Criminals are unfortunate people who deserve much better care, instead of so much punishment.*
30. The way things are going in this country, it’s going to take a lot of “strong medicine” to straighten out the troublemakers, criminals, and perverts.
31. We should smash all the negative elements that are causing trouble in our society.
32. The situation in our country is getting so serious, the strongest methods would be justified if they eliminated the troublemakers and got us back to our true path.
33. People who say our laws should be enforced more strictly and harshly are wrong. We need greater tolerance and more lenient treatment for lawbreakers.*
34. The courts are right in being easy on drug offenders. Punishment would not do any good in cases like these.*
35. What our country really needs is a tough, harsh dose of law and order.
36. Capital punishment is barbaric and never justified.*

SDO: Same as Sample 1

Prejudice: Feeling Thermometer (0 very cold, 100 very warm)

Sample 3

RWA: Shortened (1 to 7) 11-item version of Altemeyer’s (1998) 32-item RWA scale
1. Our country desperately needs a mighty leader who will do what has to be done to destroy the radical new ways and sinfulness that are ruining us.
2. The only way our country can get through the crisis ahead is to get back to our traditional values, put some tough leaders in power, and silence the troublemakers spreading bad ideas.
3. Our country needs free thinkers who will have the courage to defy traditional ways, even if this upsets many people.*
4. Everyone should have their own life-style, religious beliefs, and sexual preferences, even if it makes them different from everyone else.*
5. The “old-fashioned way” and “old-fashioned values” still show the best way to live.
6. Atheists and others who have rebelled against the established religions are no doubt every bit as good and virtuous as those who attend church regularly.*
7. God's laws about abortion, pornography, and marriage must be strictly followed before it is too late, and those who break them must be strongly punished.
8. There are many radical, immoral people in our country today, who are trying to ruin it for their own godless purposes, whom the authorities should put out of action.
9. A "woman's place" should be wherever she wants to be. The days when women are submissive to their husbands and social conventions belong strictly in the past.*
10. There is no "ONE right way" to live; everybody has to create their own way.*
11. This country would work a lot better if certain groups of troublemakers would just shut up and accept their group's traditional place in society.

SDO: Shortened (1-7) 10-item version of Sidanius & Pratto’s (1999) 16-item SDO scale
1. Some groups of people are simply inferior to other groups.
2. It’s OK if some groups have more of a chance in life than others.
3. If certain groups stayed in their place, we would have fewer problems.
4. It’s probably a good thing that certain groups are at the top and other groups are at the bottom.
5. Sometimes other groups must be kept in their place.
6. It would be good if all groups could be equal.*
7. Group equality should be our ideal.*
8. All groups should be given an equal chance in life.*
9. We would have fewer problems if we treated people more equally.*
10. No one group should dominate in society.*

Prejudice: (1 to 7) Warmth scale
1. How warm do you feel toward the following groups? – Gay men
2. How warm do you feel toward the following groups? – Lesbians

Sample 4

RWA: Same as Sample 2

SDO: Same as Sample 1

Prejudice: Feeling Thermometer (0 very cold, 100 very warm)

Prejudice: Social Distance (1 to 7)
1. How close of a relationship would you be willing to have with someone who is a member of one of the following groups? – Gays and lesbians

Sample 5

*RWA (1 to 7): Items 1 – 6; 13, 14, 19 – 21; 26 – 30; and 36 from the 36-item ACT Scale (see Sample 2).

*SDO (1 to 7) 16-item scale from Ho et al. (2012)

1. Having some groups on top really benefits everybody.
2. It's probably a good thing that certain groups are at the top and other groups are at the bottom.
3. An ideal society requires some groups to be on top and others to be at the bottom.
4. Some groups of people are simply inferior to other groups.
5. Groups at the bottom are just as deserving as groups at the top.*
6. No one group should dominate in society.*
7. Groups at the bottom should not have to stay in their place.*
8. Group dominance is a poor principle.*
9. We should not push for group equality.
10. We shouldn't try to guarantee that every group has the same quality of life.
11. It is unjust to try to make groups equal.
12. Group equality should not be our primary goal.
13. We should work to give all groups an equal chance to succeed.*
14. We should do what we can to equalize conditions for different groups.*
15. No matter how much effort it takes, we ought to strive to ensure that all groups have the same chance in life.*
16. Group equality should be our ideal.*

Prejudice: Feeling Thermometer (0 very cold, 100 very warm)

Sample 6

*RWA (1 to 7): Same as Sample 3

*SDO (1 to 7): Same as Sample 3

Prejudice: Warmth scale (Same as Sample 3)

*Prejudice – Discrimination (1-7)

1. Apartment complexes should not accept gay men as renters.
2. Apartment complexes should not accept lesbians as renters.
3. Job discrimination against gay men is wrong.*
4. Job discrimination against lesbians is wrong.*
5. Gay male couples should be able to adopt children the same as heterosexual couples.*
6. Lesbian couples should be able to adopt children the same as heterosexual couples.*
7. Gay men should not be allowed to work closely with children.
8. Lesbians should not be allowed to work closely with children.
Prejudice – Stereotypes (1-7)
1. Gay men are more likely to molest children than are heterosexual men.
2. Lesbians are more likely to molest children than are heterosexual women.
3. Gay men typically are mentally ill.
4. Lesbians typically are mentally ill.
5. Most gay men have identifiable feminine characteristics.
6. Most lesbians have identifiable masculine characteristics.
7. The children of gay men are likely to grow up to be homosexual themselves.
8. The children of lesbians are likely to grow up to be homosexual themselves.

Prejudice – Contact (1-7)
1. It would be upsetting to me to find out I was alone with a gay man.
2. It would be upsetting to me to find out I was alone with a lesbian.
3. I would feel nervous being in a group of gay men.
4. I would feel nervous being in a group of lesbians.
5. I would not feel uncomfortable working closely with a gay man.*
6. I would not feel uncomfortable working closely with a lesbian.*
7. I would not want a gay man to live in the house next to mine.
8. I would not want a lesbian to live in the house next to mine.

Sample 7

RWA: Same as Sample 2
SDO: Same as Sample 1

Prejudice: Feeling Thermometer (0 very cold, 100 very warm)

Sample 8

RWA: Same as Sample 2
SDO: Same as Sample 1

Prejudice: Feeling Thermometer (0 very cold, 100 very warm)

Sample 9

RWA: Same as Sample 2
SDO: Same as Sample 1

Prejudice: Feeling Thermometer (0 very cold, 100 very warm)

Sample 10
Running Head: RWA PREDICTS PREJUDICE AGAINST GAYS AND LESBIANS

RWA: Same as Sample 2

SDO: Same as Sample 1

Prejudice: Feeling Thermometer (0 very cold, 100 very warm)

Sample 11

RWA: Same as Sample 3

SDO: Same as Sample 3

Prejudice – Discrimination: Same as Sample 6

Prejudice – Stereotypes: Same as Sample 6

Prejudice – Contact: Same as Sample 6

Sample 12

RWA: Same as Sample 3

SDO: Same as Samples 3

Prejudice – Contact (1-7)
1. It would be upsetting to find out I was alone with a gay man.
2. I would feel comfortable working closely with a gay man.*
3. I would feel nervous in a group of gay men.
4. If I knew someone were a lesbian, I would go ahead and form a friendship with that individual.*
5. If a lesbian approached me in a public restroom, I would be disgusted.
6. I enjoy the company of lesbians.*

Prejudice – Discrimination (1-7)
1. Gay men should be required to register with the police department where they live.
2. Gay men should not be discriminated against.*
3. Gay men should not hold responsible positions.
4. Job discrimination against lesbians is wrong.*
5. Lesbians should be allowed to serve in the military.*
6. Apartment complexes should not accept lesbian renters.

ANES Predictors

Anti-egalitarianism
Our society should do whatever is necessary to make sure that everyone has an equal opportunity to succeed.

We have gone too far in pushing equal rights in this country.

One of the big problems in this country is that we don't give everyone an equal chance.

This country would be better off if we worried less about how equal people are.

'It is not really that big a problem if some people have more of a chance in life than others.

'If people were treated more equally in this country we would have many fewer problems.'

**Traditionalism**

The world is always changing and we should adjust our view of moral behavior to those changes.

We should be more tolerant of people who choose to live according to their own moral standards, even if they are very different from our own.'

**Conceptual and Close Replications of Rios (2013) Study 1**

**Materials Used in Close Replication of Rios Study 1**

**RWA (1 to 7) (Used in Conceptual Replication only)**

1. It's great that many young people today are prepared to defy authority.*
2. What our country needs most is discipline, with everyone following our leaders in unity.
3. Students at high schools and universities must be encouraged to challenge, criticize, and confront established authorities.*
4. Obedience and respect for authority are the most important virtues children should learn.
5. Our country will be great if we show respect for authority and obey our leaders.
6. People should be ready to protest against and challenge laws they don't agree with.*
7. Nobody should stick to the "straight and narrow"; instead, people should break loose and try out lots of different ideas and experiences.*
8. The "old-fashioned ways" and "old-fashioned values" still show the best way to live.
9. It is important that we preserve our traditional values and moral standards.
10. Traditional morality and traditional values have a lot wrong with them.*
11. The sinful ways of living and behaving of many young people may one day destroy our society.
12. People who say our laws should be enforced more strictly and harshly are wrong. We need greater tolerance and more lenient treatment for law breakers.*
13. Being kind to loafers or criminals will only encourage them to take advantage of your weakness, so it's better to use a firm, tough hand when dealing with them.
14. Our society does NOT need a government with stricter and more punitive laws.*
15. The facts on crime and the recent public disorders show we have to crack down harder on troublemakers if we are going to preserve law and order.
16. The courts should go easy on drug offenders. Punishment would not do any good in cases like these.*
17. The way things are going in this country, it's going to take a lot of "strong medicine" to straighten out the troublemakers.

RWA (1-7) *(Used in Close Replication only)*
1. Our country desperately needs a mighty leader who will do what has to be done to destroy the radical new ways and sinfulness that are ruining us.
2. The only way our country can get through the crisis ahead is to get back to our traditional values, put some tough leaders in power, and silence the troublemakers spreading bad ideas.
3. Our country will be destroyed someday if we do not end the perversions eating away at our moral fiber and moral beliefs.
4. What our country needs most is disciplined citizens, following national leaders in unity.
5. There is no "ONE right way" to live life; everybody has to create their own way.*
6. God's laws about abortion, pornography, and marriage must be strictly followed before it is too late, and those who break them must be strongly punished.

***Remaining materials were included in both close and conceptual replications of Rios (2013) Study 1***

SDO (1-7)
1. Some groups of people are just more worthy than others.
2. In getting what your group wants, it is sometimes necessary to use force against other groups.
3. Superior groups should dominate inferior groups.
4. To get ahead in life, it is sometimes necessary to step on other groups.
5. If certain groups of people stayed in their place, we would have fewer problems.
6. It's probably a good thing that certain groups are at the top and other groups are at the bottom.
7. Inferior groups should stay in their place.
8. Sometimes other groups must be kept in their place.
9. It would be good if all groups could be equal.*
10. Group equality should be our ideal.*
11. We should do what we can to equalize conditions for different groups.*
12. Increased social equality would be a good thing.*
13. All groups should be given an equal chance in life.*
14. We would have fewer problems if we treated different groups more equally.*
15. We should strive to make incomes more equal.*
16. No one group should dominate in society.*

Threat – Symbolic (1-5)
1. Gay men and lesbians [homosexuals] should learn to conform to the rules and norms of society.
2. Gay men and lesbians [homosexuals] are undermining our culture.
3. Gay men and lesbians [homosexuals] are undermining traditional values.
4. The values and beliefs of gay men and lesbians [homosexuals] regarding moral and religious issues are very different from the beliefs and values of most heterosexuals.

Threat – Realistic (1-5)
1. Gay men and lesbians [homosexuals] dominate our society more than they should.
2. Gay men and lesbians [homosexuals] hold too many positions of power and responsibility in our society.
3. Gay men and lesbians [homosexuals] have more economic power than they deserve in society.
4. Gay and lesbian [homosexual] couples should NOT be eligible for the same health-care benefits received by heterosexual couples.

*Prejudice – Dislike (1-9) (Rios’ [2013] Study 1 prejudice measure)*
1. To what extent do you like or dislike gay men and lesbians?
2. My attitude toward gay men and lesbians is:

*Prejudice (1-5) (Rios’ [2013] Study 2 prejudice measure)*
1. I would not mind having a gay/lesbian friend.*
2. Finding out that an artist was gay/lesbian would have no effect on my appreciation of his/her work.*
3. I won't associate with known gay men and lesbians if I can help it.
4. I would look for a new place to live if I found out my roommate was gay/lesbian.
5. Being gay/lesbian is a mental illness.
6. I would not be afraid for my child to have a gay/lesbian teacher.
7. Gay men and lesbians dislike members of the opposite sex.
8. I do not really find the thought of gay/lesbian sex disgusting.
9. Gay men and lesbians are more likely to commit deviant sexual acts, such as child molestation, rape, and voyeurism (Peeping Toms), than are heterosexuals.
10. Gay men and lesbians should be kept separate from the rest of society (i.e., separate housing, restricted employment).
11. Two gay men or lesbians holding hands or displaying affection in public is revolting.
12. The love between two gay men or lesbians is quite different from the love between two persons of the opposite sex.
13. I see the gay/lesbian movement as a positive thing.*
14. Being gay/lesbian, as far as I'm concerned, is not sinful.*
15. I would not mind being employed by a gay man or lesbian.*
16. Gay men and lesbians should be forced to have psychological treatment.*
17. The increasing acceptance of gay men and lesbians in our society is aiding in the deterioration of morals.*
18. I would not decline membership in an organization just because it had gay/lesbian members.*
19. I would vote for a gay man or lesbian in an election for public office.*
20. If I knew someone were gay/lesbian, I would still go ahead and form a friendship with that individual.*
21. If I were a parent, I could accept my son or daughter being gay/lesbian.*

*Prejudice: Feeling Thermometer (0 very cold, 100 very warm)*

Additional Analyses by ACT Dimension
Twenty-one item prejudice measure. In Step 1, there were main effects of Traditionalism ($b = .37, SE = .03, 95\% CI [.26, .47], \beta = .58, t = 6.95, p < .001$) and SDO ($b = .23, SE = .04, 95\% CI [.15, .31], \beta = .33, t = 5.90, p < .001$). No other main effects were significant, $p_s > .096$. In Step 2, there were no significant interactions, $p_s > .116$.

Feeling thermometer prejudice measure. In Step 1, there were main effects of Traditionalism ($b = 9.46, SE = 1.73, 95\% CI [6.05, 12.88], \beta = .53, t = 6.95, p < .001$), Conservatism ($b = -4.70, SE = 2.10, 95\% CI [-8.85, -.55] \beta = -.23, t = 2.24, p = .026$) and SDO ($b = 6.86, SE = 1.27, 95\% CI [4.35, 9.37], \beta = .35, t = 5.40, p < .001$). No other main effects were significant, $p_s > .745$. In Step 2, there were no significant interactions, $p_s > .174$.

Symbolic threat. In Step 1, there were main effects of Traditionalism ($b = .53, SE = .06, 95\% CI [.40, .66], \beta = .66, t = 8.43, p < .001$) and SDO ($b = .31, SE = .05, 95\% CI [.22, .41], \beta = .35, t = 6.68, p < .001$) on symbolic threat. No other main effects were significant, $p_s > .212$. In Step 2, there were no significant interactions between Condition and any of the three ACT dimensions ($p_s > .193$), although there was a significant SDO × Condition interaction ($b = -.20, SE = .09, 95\% CI [-.38, -.01], \beta = -.17, t = 2.08, p = .039$).

Analyses on Composite Prejudice Measure (Exploratory Analysis)

Conceptual replication: Full ACT scale. The composite prejudice measure was regressed on RWA, SDO, and the Condition variable (Step 1), and the RWA × Condition and SDO × Condition interactions. Step 1 revealed significant main effects of RWA ($b = .27, SE = .04, 95\% CIs [.18, .35], \beta = .38, t = 6.45, p < .001$) and SDO ($b = .24, SE = .04, 95\% CIs [.16, .32], \beta = .35, t = 6.04, p < .001$). Contrary to the SCL hypothesis, there was no significant RWA × Condition interaction ($b = -.03, SE = .08, 95\% CIs [-.20, .13], \beta = -.04, t = .41, p = .683$).
Conceptual replication: By ACT dimension. The composite prejudice measure was regressed on the dummy-coded condition variable (0 = homosexual; 1 = gay men and lesbians) and the mean-centered variables for Authoritarianism, Conservatism, Traditionalism, and SDO in Step 1, and the Authoritarianism × Condition, Conservatism × Condition, Traditionalism × Condition, and SDO × Condition interactions in Step 2. Step 1 revealed a significant main effect of Traditionalism ($b = .38, SE = .05, 95\%\text{CIs } [.28, .47], \beta = .62, t = 7.72, p < .001$); no other main effects were significant (all $p$s > .06). Further, Step 2 revealed no significant interactions between Condition and any of the other independent variables ($p$s > .151).

Close replication. The composite prejudice measure was regressed on RWA, SDO, and the Condition variable (Step 1), and the RWA × Condition and SDO × Condition interactions. Step 1 revealed significant main effects of RWA ($b = .23, SE = .04, 95\%\text{CIs } [.16, .31], \beta = .40, t = 6.21, p < .001$) and SDO ($b = .24, SE = .05, 95\%\text{CIs } [.14, .35], \beta = .30, t = 4.65, p < .001$). Step 2 revealed a marginally significant RWA × Condition interaction ($b = -.14, SE = .07, 95\%\text{CIs } [-.28, -.01], \beta = -.16, t = 1.84, p = .067$). Simple slopes revealed that RWA more strongly predicted prejudice in the “homosexuals” condition ($b = .30, SE = .05, 95\%\text{CIs } [.20, .40], \beta = .50, t = 5.79, p < .001$) than in the “gay men and lesbians” condition ($b = .16, SE = .05, 95\%\text{CIs } [.06, .27], \beta = .29, t = 4.06, p = .003$), consistent with the weak version of the SCL hypothesis. Further, people high in RWA were more prejudiced in the “homosexuals” than “gay men and lesbians” condition ($b = -.35, SE = .16, 95\%\text{CIs } [-.67, -.02], \beta = -.18, t = 2.11, p = .036$), whereas people low in RWA did not differ between conditions in their levels of expressed prejudice ($b = .09, SE = .16, 95\%\text{CIs } [.22, .41], \beta = .05, t = .59, p = .559$).

Mediation of RWA-Prejudice Relationship by Symbolic Threat
Within each condition (i.e., “homosexuals” or “gay men and lesbians”) we examined whether symbolic threat significantly mediated the RWA-prejudice relationship. Using Preacher and Hayes’ (2008) INDIRECT macro for IBM SPSS for Windows, RWA was entered as the independent variable, the composite prejudice measure as the dependent variable, symbolic threat as the mediator, and SDO as a covariate.

**Conceptual replication.** For homosexuals, RWA predicted threat \( (b = .41, SE = .06, t = 6.15, p < .001) \), and threat predicted prejudice \( (b = .53, SE = .06, t = 8.37, p < .001) \). The effect of RWA on prejudice \( (b = .29, SE = .06, t = 5.11, p < .001) \) was reduced to non-significance when threat was included in the model \( (b = .07, SE = .05, t = 1.40, p = .165) \). The indirect effect of RWA on prejudice through threat was significant \( (b = .22, SE = .04, 95\% \text{ CL} .14, .31) \). For gay men and lesbians, RWA predicted threat \( (b = .45, SE = .07, t = 6.10, p < .001) \), and threat predicted prejudice \( (b = .63, SE = .05, t = 11.85, p < .001) \). The effect of RWA on prejudice \( (b = .26, SE = .06, t = 4.11, p < .001) \) was reduced to non-significance when threat was included in the model \( (b = -.03, SE = .05, t = .65, p = .517) \). The indirect effect of RWA on prejudice through threat was significant \( (b = .29, SE = .06, 95\% \text{ CL} .17, .42) \).

**Close replication.** For homosexuals, RWA predicted threat \( (b = .45, SE = .05, t = 8.79, p < .001) \), and threat predicted prejudice \( (b = .59, SE = .09, t = 6.56, p < .001) \). The effect of RWA on prejudice \( (b = .29, SE = .05, t = 5.57, p < .001) \) was reduced to non-significance when threat was included in the model \( (b = .03, SE = .06, t = .52, p = .603) \). The indirect effect of RWA on prejudice through threat was significant \( (b = .27, SE = .05, 95\% \text{ CL} .17, .37) \). For gay men and lesbians, RWA predicted threat \( (b = .37, SE = .05, t = 6.83, p < .001) \), and threat predicted prejudice \( (b = .69, SE = .07, t = 9.85, p < .001) \). The positive effect of RWA on prejudice \( (b = .16, SE = .05, t = 3.06, p = .003) \) was reversed to a negative effect when threat was included in
the model \((b = -.09, SE = .05, t = 2.06, p = .042))\). The indirect effect of RWA on prejudice through threat was significant \((b = .26, SE = .07, 95\% \text{ CL} .14, .40)\).

Close and Conceptual Replications of Rios (2013) Study 2 (Studies 4 and 5)

\textit{RWA (1 – 7)}

\textit{Note: The conceptual replication included all 20 items. The close replication only contained the first 10 items.}

1. Our country desperately needs a mighty leader who will do what has to be done to destroy the radical new ways and sinfulness that are ruining us.
2. The majority of those who criticize proper authorities in government and religion only create useless doubts in people's minds.
3. The situation in our country is getting so serious, the strongest method would be justified if they eliminated the troublemakers and got us back to our true path.
4. What our country really needs instead of more "civil rights" is a good stiff dose of law and order.
5. Obedience and respect for authority are the most important values children should learn.
6. The facts on crime, sexual immorality and the recent public disorders all show we have to crack down harder on deviant groups and troublemakers, if we are going to save our moral standards and preserve law and order.
7. What our country needs most is disciplined citizens, following national leaders in unity.
8. The only way our country can get through the crisis ahead is to get back to our traditional values, put some tough leader in power, and silence the troublemakers spreading bad ideas.
9. Once our government leaders give us the "go ahead", it will be the duty of every patriotic citizen to help stomp out the rot that is poisoning our country from within.
10. What our country really needs is a strong, determined leader who will crush evil, and take us back to our true path.
11. Atheists and others who have rebelled against the established religions are no doubt every bit as good and virtuous as those who attend church regularly.*
12. A lot of our rules regarding sexual behavior are just customs which are not necessarily any better or holier than those which other people follow.*
13. There is absolutely nothing wrong with nudist camps.*
14. Feminists should be praised for being brave enough to defy "traditional family values."* 
15. Everyone should have their own lifestyle, religious beliefs, and sexual preferences, even if it makes them different from everyone else.*
16. People should pay less attention to the Church and the Pope, and instead develop their own personal standards of what is moral and immoral.*
17. It is good that nowadays young people have greater freedom "to make their own rules" and to protest against things they don't like.*
18. There is no "ONE right way" to live life; everybody has to create their own way.*
19. There is nothing wrong with premarital sexual intercourse.*
20. We should treat protestors and radicals with open arms and open minds, since new ideas are the lifeblood of progressive change.*
Essentialism (1 – 5)

Note: All 15 items were included in the materials, as per Rios (2013) Study 2. However, as in Rios (2013) study 2, only the first 5 items (the discreteness scale) were used in our analyses.

1. Sexual orientations are categories with clear and sharp boundaries: People are either homosexual [gay/lesbian] or heterosexual.
2. Homosexual people [Gay men and lesbians] have a necessary or defining characteristic, without which they would not be homosexual [gay/lesbian].
3. Heterosexual and homosexual [gay/lesbian] people are not fundamentally different.*
4. Bisexual people are fooling themselves and should make up their minds.
5. Knowing that someone is homosexual [gay/lesbian] or heterosexual tells you a lot about them.
6. Being homosexual [gay/lesbian] or heterosexual is caused by biological factors.
7. Whether a person is homosexual [gay/lesbian] or heterosexual is pretty much set early on in childhood.
8. People cannot change whether they are homosexual [gay/lesbian] or heterosexual.
9. Being homosexual [gay/lesbian] and being heterosexual are innate, genetically based tendencies.
10. Doctors and psychologists can help people change whether they are homosexual [gay/lesbian] or heterosexual.
13. In all cultures there are people who consider themselves homosexual [gay/lesbian].
14. The proportion of the population that is homosexual [gay/lesbian] is roughly the same all over the world.
15. It is only in the last century that homosexuals [gay men and lesbians] have appeared in large numbers.

Analyses with Composite Prejudice Measures

Close replication. The composite prejudice measure was regressed on RWA, SDO, and the Condition variable (Step 1), and the RWA × Condition and SDO × Condition interactions.

Step 1 revealed significant main effects of RWA ($b = .16$, $SE = .04$, 95%CIs [.09, .23], $\beta = .31$, $t = 4.27$, $p < .001$) and SDO ($b = .14$, $SE = .05$, 95%CIs [.05, .23], $\beta = .21$, $t = 2.94$, $p = .004$).

Inconsistent with the SCL hypothesis, Step 2 revealed no significant RWA × Condition interaction ($b = -.04$, $SE = .08$, 95%CIs [-.19, .11], $\beta = -.06$, $t = -.55$, $p = .332$).
Conceptual replication. Step 1 revealed significant main effects of RWA ($b = .36$, $SE = .05$, 95%CIs [.26, .45], $\beta = .47$, $t = 7.32$, $p < .001$) and SDO ($b = .15$, $SE = .05$, 95%CIs [.06, .24], $\beta = .21$, $t = 3.22$, $p = .001$). Inconsistent with the SCL hypothesis, Step 2 revealed no significant RWA × Condition interaction ($b = -.02$, $SE = .10$, 95%CIs [-.21, .18], $\beta = -.01$, $t = -.15$, $p = .880$).

Mediation of RWA-Prejudice Relationship by Essentialism

Within each condition (i.e., “homosexuals” or “gay men and lesbians”) we examined whether essentialism significantly mediated the RWA-prejudice relationship. Using Preacher and Hayes’ (2008) INDIRECT macro for IBM SPPS for Windows, RWA was entered as the independent variable, the composite prejudice measure as the dependent variable, essentialism as the mediator, and SDO as a covariate.

Close replication. For homosexuals, RWA predicted essentialism ($b = .32$, $SE = .04$, $t = 7.71$, $p < .001$), and essentialism predicted prejudice ($b = .50$, $SE = .11$, $t = 4.78$, $p < .001$). The effect of RWA on prejudice ($b = .19$, $SE = .05$, $t = 3.82$, $p < .001$) was reduced to non-significance when essentialism was included in the model ($b = .03$, $SE = .06$, $t = .47$, $p = .637$). The indirect effect of RWA on prejudice through essentialism was significant ($b = .16$, $SE = .04$, 95% CL .09, .25). For gay men and lesbians, RWA predicted essentialism ($b = .23$, $SE = .05$, $t = 4.23$, $p < .001$), and essentialism predicted prejudice ($b = .53$, $SE = .08$, $t = 6.36$, $p < .001$). The effect of RWA on prejudice ($b = .14$, $SE = .06$, $t = 2.50$, $p = .014$) was reduced to non-significance when essentialism was included in the model ($b = .02$, $SE = .06$, $t = .32$, $p = .751$). The indirect effect of RWA on prejudice through essentialism was significant ($b = .12$, $SE = .04$, 95% CL .06, .22).
Conceptual replication. For homosexuals, RWA predicted essentialism \((b = .32, SE = .07, t = 4.75, p < .001)\), and essentialism predicted prejudice \((b = .43, SE = .10, t = 4.40, p < .001)\). The effect of RWA on prejudice \((b = .37, SE = .07, t = 5.29, p < .001)\) was significantly reduced when essentialism was included in the model \((b = .23, SE = .07, t = 3.24, p = .002)\), as the indirect effect of RWA on prejudice through essentialism was significant \((b = .14, SE = .06, 95\% CL .04, .27)\). For gay men and lesbians, RWA predicted essentialism \((b = .28, SE = .06, t = 4.85, p < .001)\), and essentialism predicted prejudice \((b = .52, SE = .11, t = 4.96, p < .001)\). The effect of RWA on prejudice \((b = .35, SE = .07, t = 5.14, p < .001)\) was significantly reduced when essentialism was included in the model \((b = .20, SE = .07, t = 2.96, p = .004)\), as the indirect effect of RWA on prejudice through essentialism was significant \((b = .15, SE = .04, 95\% CL .08, .23)\).
Table S1

*Correlations, Ms, and SDs for measures in close (below diagonal) and conceptual (above diagonal) replication of Rios (2013) Study 1*

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*M (close replication)*  
3.07 2.45 3.92 2.02 35.31 2.20

*SD (close replication)*  
1.60 1.17 2.03 .87 26.75 1.11

*M (conceptual replication)*  
3.73 2.67 4.05 2.08 35.45 2.27

*SD (conceptual replication)*  
1.26 1.36 2.08 .94 26.70 1.21

* ***p < .001

Notes: Higher scores on symbolic threat and prejudice measures indicate more threat and prejudice.
Table S2

Correlations, Ms, and SDs for measures in close (below diagonal) and conceptual (above diagonal) replication of Rios (2013) Study 2

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M (close replication) | 2.98    | 2.56    | 3.61    | 1.95    | 34.67   | 2.49    |
SD (close replication) | 1.61    | 1.31    | 1.82    | .85     | 23.52   | .87     |
M (conceptual replication) | 3.03    | 2.57    | 3.51    | 2.01    | 32.00   | 2.49    |
SD (conceptual replication) | 1.15    | 1.22    | 1.85    | .81     | 23.63   | .84     |

**p < .01; ***p < .001

Notes: Higher scores on symbolic threat and prejudice measures indicate more threat and prejudice.