

# Evidence for Cultural Variability in Right-Wing Authoritarianism Factor Structure in a Politically Unstable Context

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Felipe Vilanova<sup>1</sup> , Taciano L. Milfont<sup>2</sup>, Clara Cantal<sup>2</sup>,  
Silvia Helena Koller<sup>3</sup>, and Ângelo Brandelli Costa<sup>1</sup> 

## Abstract

Right-wing authoritarianism (RWA) has been a central explanatory concept and predictor of sociopolitical and intergroup attitudes over the last decades. Research indicates RWA is formed by the subdimensions of authoritarianism, traditionalism, and conservatism. The objective of this study was to assess the cross-cultural validity of this three-factor model in a politically unstable context where an alternative factor model was observed. Data from four Brazilian samples ( $N_{\text{total}} = 1,083$ ) were assessed to test whether a four-factor model (with conservatism split) identified in Brazil recently was better fitting than the three-factor model. Exploratory and confirmatory factor analyses and 3-year longitudinal evidence confirmed the four-factor model is the best RWA structure in the Brazilian context and that only the pro-trait conservatism items indexing submission to authority have adequate psychometric properties. Implications for future RWA propositions are discussed.

## Keywords

authoritarianism, right-wing authoritarianism, traditionalism, conservatism

In his seminal work, Altemeyer (1981, 1996, 1998) described right-wing authoritarianism (RWA) as a unidimensional personality trait that emerges from the covariation of three core components: “conventionalism” (adherence to social conventions that are perceived to be endorsed by established authorities), “authoritarian aggression” (general aggressiveness directed against various persons, which is perceived to be sanctioned by established authorities), and “authoritarian submission” (submission to authorities who are perceived to be established and legitimate). There are some assumptions when conceptualizing a construct as a personality feature, namely, its stability across different situations and its moderate-to-high correlations with other established personality measures. The first assumption was questioned when studies showed that RWA scores vary significantly across different situations (Duckitt & Fisher, 2003; Peterson & Gerstein, 2005). The second assumption was questioned when a meta-analysis showed that RWA tends to correlate weakly with almost all subdimensions of the Big Five personality model (Sibley & Duckitt, 2008). Hence, scholars started to suggest in the 2000s that RWA might be better conceptualized as a multidimensional social attitude construct (e.g., Duckitt, 2001; Duckitt & Fisher, 2003; Funke, 2005; Van Hiel, Pandelaere, & Duriez, 2004), which is influenced by personality but is not a direct expression of personality (Duckitt & Sibley, 2017).

RWA unidimensionality also received criticisms. The first criticism concerned the double and triple barreled nature of many items; that is, many items simultaneously expressed ideas of two or more components, becoming impossible to know which part of the item survey respondents answered to (Duckitt & Fisher, 2003; Funke, 2005). From a psychometric point of view, this could be considered a bad practice because the unidimensionality that may emerge from the data could have been spuriously created since only one answer is being provided for two or more qualitatively distinct information. Consider the following RWA item: “God’s laws about abortion, pornography, and marriage must be strictly followed before it is too late [Conventionalism], and those who break them must be strongly punished [Authoritarian Aggression]”

<sup>1</sup>Prejudice, Vulnerability and Psychosocial Processes Laboratory, Psychology Post-Graduation Program, Pontifícia Universidade Católica do Rio Grande do Sul, Porto Alegre, Rio Grande do Sul, Brazil

<sup>2</sup>Victoria University of Wellington, New Zealand

<sup>3</sup>North-West University, Vanderbijlpark, South Africa

## Corresponding Author:

Felipe Vilanova, Prejudice, Vulnerability and Psychosocial Processes Laboratory, Psychology Post-Graduation Program, Pontifícia Universidade Católica do Rio Grande do Sul, Avenida Ipiranga 6681, Building 11, Room 933, 90619-900 Porto Alegre, Rio Grande do Sul, Brazil.

Email: felipevilanova2@gmail.com

(Altemeyer, 1998, p. 87). Even aware of the psychometric objections to this practice, Altemeyer (1981) justified it by stating that his conceptualization of RWA consisted of the covariation between the three components, so when simultaneously assessing multiple ideas, the items were theoretically sound.

Altemeyer (1981, 1996) conducted many exploratory factor analyses (EFAs) in order to test RWA unidimensionality. Some of these EFA yielded two-factor models, but Altemeyer (1996) argued that these two factors do not compromise RWA unidimensionality as they seem to be method factors (i.e., pro-trait items clustering in one factor and con-trait items clustering in another factor). Although assuming this observed multidimensionality merely represents method effects is defensible, it has been observed that these factors overlap with item content, such that almost all pro-trait RWA items primarily expressed authoritarian aggression and almost all con-trait items expressed conventionalism (Duckitt & Fisher, 2003). Hence, the emergence of two factors in EFAs might be due not only to method variance but also to content variance. The significant content variance across the factors gave rise to new theories viewing the three components of RWA as three distinct dimensions, which in conjunction with recent conceptualizations of RWA as a social attitude, resulted in the conception of RWA as a socioattitudinal construct constituted by three distinct dimensions.

In particular, Duckitt, Bizumic, Krauss, and Heled (2010) provided an explicit discussion of RWA as a multidimensional socioattitudinal construct. They proposed a three-factor model of RWA formed by “authoritarianism” (previously named “authoritarian aggression” by Altemeyer, 1981), expressing attitudes “favoring the use of strict, tough, harsh, punitive, coercive social control (pro-trait) versus leniency, indulgence, permissiveness, softness, to violation of social rules and laws (con-trait)”; “conservatism” (previously named “authoritarian submission”), expressing attitudes “favoring uncritical, respectful, obedient, submissive support for existing societal or group authorities and institutions (pro-trait) versus critical, questioning, rebellious, oppositional attitudes to them (con-trait)”; and “traditionalism” (previously named “conventionalism”), expressing attitudes “favoring traditional, old-fashioned social norms, values, and morality (pro-trait) versus modern, liberal secular, bohemian ‘alternative’ values, norms, and morality (con-trait)” (p. 690).

According to this approach, RWA is an expression of the broader motivational goal of attaining collective security, which arises from social threat and insecurity in general (Duckitt & Bizumic, 2013). Each RWA component expresses its own more specific goals and represents a particular way of attaining collective security. According to Duckitt et al. (2010, p. 690), the authoritarianism component expresses the motivational goal of “maintaining coercive social control” and “seems likely to stem from direct, real, physical threats to societal security, safety, and well-being.” The conservatism component expresses the motivational goal of “maintaining social order, harmony, cohesion, and consensus in society or the collective” and “seems likely to stem from threats to social order,

cohesion, consensus, and harmony.” Finally, the Traditionalism component expresses the motivational goal of “maintaining traditional lifestyles, norms, and morality” and “seems likely to stem from threats of disruptive social changes that create uncertainty and insecurity about social values and morality.”

## Cross-Cultural Differences in the Dimensionality of RWA

The RWA Scale proposed by Duckitt and colleagues (2010) has been cross-culturally adapted to the Brazilian context (Cantal, Milfont, Wilson, & Gouveia, 2015; Vilanova, DeSousa, Koller, & Costa, 2018). Notably, Vilanova, DeSousa, Koller, and Costa (2018) obtained a four-factor structure instead of the originally proposed three-factor structure, with the conservatism items clustering into two distinct factors. This clustering resembled a spurious methodological split because the two factors grouped negatively or positively worded items. However, Vilanova and colleagues (2018) noticed the two factors expressed qualitatively distinct information: While the con-trait items expressed contesting authority, the pro-trait items expressed submission to authority. Moreover, it is worth noting that this arguably methodological split between con-trait and pro-trait items only emerged for the conservatism items and not for the authoritarianism and traditionalism items, further indicating that the split reflects content variance. Vilanova and colleagues (2018) thus proposed a four-factor structure of RWA constituted by the factors of authoritarianism, traditionalism, submission to authority, and contestation to authority.

A four-factor structure composed of the original authoritarianism and traditionalism factors, and the division of the conservatism factor into two had already been reported with New Zealand data (Mavor, Louis, & Sibley, 2010). However, Mavor, Louis, and Sibley (2010) stated that “The submission factor splits into two as a result of the many items with complex loadings,” and they did not consider the four-factor solution further “since the complex structure of submission was already captured in the three-factor solution” (p. 30), and results from a confirmatory factor analysis (CFA) indicated that the three-factor structure yielded good fit indices to their data (root mean square error of approximation [RMSEA] = .055; comparative fit index [CFI] = .99; normed fit index [NFI] = .99). However, the factor loadings obtained through EFA by Vilanova, et al. (2018) using a different RWA Scale were not complex since a clear four-factor structure emerged in their Brazilian sample. Furthermore, a CFA indicated that the four-factor structure had a better fit to the data (RMSEA = .069, 90% CI [.065, .072]; CFI = .96; Tucker–Lewis index [TLI] = .95) than the originally proposed three-factor structure (RMSEA = .092, 90% CI [.089, .096]; CFI = .92; TLI = .92), which was confirmed by a  $\chi^2$  difference test,  $\chi^2(3) = 245.16, p < .001$ .

This was not the first time that when cross-culturally adapting an RWA Scale to contexts other than the ones where the scale was developed a factor structure different than the originally proposed was obtained (e.g., Etchezahar, 2012; Gray &

Durrheim, 2006). As RWA is contemporarily conceptualized as a social attitude (Duckitt, Bizumic, Krauss, & Heled, 2010; Feldman, 2003), authoritarianism may manifest differently across nations, so it makes sense that the instruments that assess it in diverse social contexts may display different factor structures. Even in their seminal paper, Duckitt and colleagues (2010) recognized that “the relationship between the three scales might vary across cultures” (p. 710). Their data showed that the pattern of intercorrelation between the three scales observed in a Romania sample was different from the pattern obtained in samples from New Zealand, United States, and Israel. Explaining this difference, they noted: “This disassociation of the Authoritarianism dimension from Conservatism and Traditionalism in Romania might be due to the difficulties experienced in that society following the collapse of Communism” (Duckitt et al., 2010, p. 706).

The factor structure that emerged through EFA and was confirmed by CFA in the adaptation of the RWA Scale proposed by Duckitt et al. (2010) to Brazil support cross-cultural variation. However, beyond the statistical results, there are also theoretical reasons that could support the independence of the clustering of the con-trait conservatism items observed by Vilanova and colleagues (2018). First, content analysis comparing the 6 pro-trait and the 6 con-trait items of the conservatism factor (Duckitt et al., 2010) demonstrates that many items do not refer to the same grammatical objects. Across the 6 pro-trait items, there are three grammatical objects: “leaders” (Items 2, 5, and 12), “authority” (Items 4, 5, 10, and 11), and “those who are in charge” (Item 10). Across the 6 con-trait items, the three grammatical objects are “authority” (Items 1, 8, 9, and 3), “government” (Items 7 and 8), and “laws” (Item 6). Hence, among the six grammatical objects, only “authority” is common across the conservatism items.

We hypothesize that the conceptions of “government” and “laws” (grammatical objects of the con-trait items) are so unstable in countries that undergo significant changes of laws and governments in a short period of time that it is reasonable to expect that items using such terms form a different cluster than items using “leaders” and “those who are in charge” (grammatical objects of the pro-trait items). The instability of the components of the first cluster versus the stability of the components of the second cluster in politically unstable nations could be the reason why the pro-trait conservatism items were not clustered together with the con-trait items in Brazil but clustered more clearly together in politically stable countries (Duckitt et al., 2010).

When discussing politically unstable nations, we use the index of political stability to refer to nations in which there is a high “likelihood of a disorderly transfer of government power, armed conflict, violent demonstrations, social unrest, international tensions, terrorism, as well as ethnic, religious or regional conflicts” (The Global Economy, 2019). According to this index, which rank-orders 195 countries from the most stable country (Monaco) to the most unstable country (Yemen), Romania is in the 95th position and Brazil in the 130th position.

## Which Real-World Events Support Pro- and Con-Trait Items Dissociation?

Some recent political events in Brazil could illustrate why the conception of government and laws might be unstable and dissociated from the notions of leaders and those who are in charge in some countries. In 2016, Dilma Rousseff was the president of Brazil. Her government was considered to follow a center-left orientation, and she defended policies such as big investment in science and technology, increase of percentage of gross domestic product (GDP) in government spending, and support for full-time jobs instead of part-time jobs. Rousseff was impeached in 2016, and Michel Temer, who was the vice president, took charge as the new president. Temer’s government was considered to follow a more center-right orientation, and in his government, federal funds for science were slashed by nearly half, the percentage of the GDP in government spending was reduced and a bill of law that prohibits the increase of the government spending above the inflation rate was sent to the Congress and approved, and a bill of law that increases the number of part-time jobs was also sent to the Congress and approved.

In 2018, the far-right candidate Jair Bolsonaro was elected. After the election, he stated that he will continue the austerity politics initiated by Temer’s government (Schreiber, 2019). In his inaugural address, he claimed he would combat the “socialist ideology, which criminalizes police officers and defends outlaws.” He instituted a presidential decree that made it easier to have a gun at home and proposed a bill of law that gives police officers permission to kill “bandits” during operations. As he is against “gender ideology,” Bolsonaro also supports a bill of law that seeks to punish teachers who teach “ideologically biased” subjects. He openly supports mass incarceration and has proposed to build new prisons in the country. Finally, for the first time since 1985, more than 20% of the government ministers are military personnel (Alencastro & Beck, 2018).

Although democracy is still stable, Brazil has experienced three very different governments in the last 3 years (2016, 2017 and 2018). Each government was led by very dissimilar politicians who supported distinct viewpoints, policies, and bills of laws. It is thus reasonable to expect that in politically unstable nations such as Brazil, the conceptions regarding government and laws are probably distinct from these conceptions in politically stable nations.

## The Present Study

In order to test our proposition that a four-factor model, with submission to authority and contestation to authority forming distinct factors, is the best multidimensional conceptualization of RWA in Brazil, we test three hypotheses in the present study. First, we hypothesized that (1) the factor structure proposed by Vilanova and colleagues (2018) would be replicated in other Brazilian samples. Then, we tested two preregistered hypotheses (<https://osf.io/q2765/>): (2) the Pearson correlation between submission to authority and contestation to authority is medium at best (i.e., lower than .5), and (3) the contestation to authority

score is less stable across time than the submission to authority score, given that conceptions regarding government and laws are more unstable than conceptions regarding leaders and those who are in charge.

## Method

The samples of two different previously published studies (Cantal et al., 2015; Vilanova et al., 2018) and two new longitudinal samples will be analyzed in the present article. Sample 1 is from Study 2 in the article published by Cantal, Milfont, Wilson, and Gouveia (2015), when participants completed a short version of the RWA Scale proposed by Duckitt and colleagues (2010). Sample 2 is from Vilanova and colleagues (2018) who proposed the four-factor structure for the Brazilian context. Although they have already reported that the four-factor model had better fit indices than the three-factor model, the correlations between submission to authority and contestation to authority were not reported. Samples 3 and 4 contain longitudinal data. Participants who took part in the study of Vilanova and colleagues (2018) were first assessed in 2016 and were reassessed in 2017 (Sample 3) and in 2018 (Sample 4). This longitudinal data will be reported for the first time in the present study. Software G\*Power 3.1.9.2 indicated that to test Hypothesis 2 with .05  $\alpha$  error probability with .95 statistical power and effect size of .40, at least 63 participants would be necessary, and the literature (Bujang & Baharum, 2017) recommended that to test Hypothesis 3, at least 45 subjects would be necessary for the planned longitudinal analysis. Our samples fulfill all these requirements.

## Participants

Sample 1 (Cantal et al., 2015) included 367 Brazilians (58.9% female) aged 18 years or older ( $M = 29.70$ ;  $SD = 10.80$ ) who completed an online survey in January 2014. Sample 2 (Vilanova et al., 2018) included 518 Brazilians (59.8% male) aged between 18 and 79 years ( $M = 39.31$ ;  $SD = 17.93$ ) who completed an online survey between October and November 2016. Of the 518 participants, 380 provided their e-mails for future contact and were invited to answer the RWA Scale again in December 2017 to January 2018 (T2, 1 year after first data collection) and September to October 2018 (T3, 2 years after first data collection and period that presidential campaign and elections happened). These periods were chosen to reassess RWA because in 2017, the aforementioned bills of laws proposed by Michel Temer had been sent to the Congress and voted, therefore changing the conceptions of laws that Brazilians had in comparison to 2016. The election period in 2018 was chosen as T3 because election propandas were being streamed, Bolsonaro was consolidated as the next president of Brazil, and had said which bills of laws he would support and who he would appoint as ministers, consequently changing the conceptions of government and, once again, bills of laws. Sample 3 included 132 individuals (61.4% male) who participated in both T1 and T2, whose ages ranged from 19 to 84 years

( $M = 43.24$ ;  $SD = 18.27$ ), and Sample 4 included 66 individuals (60.6% male) who participated in all three waves, whose ages ranged from 20 to 72 years ( $M = 43.14$ ;  $SD = 17.21$ ).

Before answering the instruments, all participants expressed their consent by providing their agreement in an informed consent form. Anonymity was granted, and only researchers had access to the data. All samples were recruited through convenience sampling, and the study design was approved by the ethics committees of the respective universities to which projects were associated.

## Measures

Participants in Sample 1 completed a short version of the RWA Scale proposed by Duckitt and colleagues (2010), which was translated and adapted into Brazilian-Portuguese by Cantal, et al. (2015). It is composed of 18 items, 6 for each factor originally proposed: authoritarianism, conservatism, and traditionalism. Responses are given on a 9-point agreement scale ranging from  $-4$  (*very strongly disagree*) to  $+4$  (*very strongly agree*).

Participants in Samples 1 to 4 completed the full version of the RWA Scale proposed by Duckitt and colleagues (2010), which was independently adapted to the Brazilian context by Vilanova et al. (2018). It is composed of 34 items split into four factors: authoritarianism (AT), traditionalism (TR), submission to authority (SA; composed by the original pro-trait conservatism items), and contestation to authority (CA; composed by the original con-trait conservatism items). Responses are given on a 5-point agreement scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

## Data Analysis

First, an EFA was conducted to investigate the factor structure of the RWA in Sample 1 using a weighted least squares mean and variance adjusted (WLSMV) estimation method and oblimin rotation. Factors that met the Kaiser–Guttman criterion (i.e., eigenvalue  $> 1$ ) were retained and factor loadings above .30 were deemed adequate. Subsequently, a parallel analysis was performed to confirm the number of factors to be extracted. Cronbach's  $\alpha$  coefficients and McDonald's  $\omega$  were then calculated to investigate their internal consistency.

Next, we conducted CFA in all samples to assess whether the three-factor structure proposed by Duckitt and colleagues (2010) and the four-factor structure proposed by Vilanova and colleagues (2018) would display acceptable fit indices. The CFA was conducted using the WLSMV estimation method, and fit indices considered were the CFI, the TLI, and the RMSEA. Values of CFI and TLI  $> .90$  and values of RMSEA  $< .08$  were deemed adequate (Holgado-Tello, Chacón-Moscoso, Barbero-García, & Vila-Abad, 2010). We also report the  $\chi^2$  difference test when comparing competing models as well as Akaike information criterion (AIC), Bayesian information criterion (BIC), and Expected cross validation index (ECVI) values using robust maximum likelihood estimator.

**Table 1.** Rotated Factor Loadings Obtained Through Exploratory Factor Analysis in Sample 1.

Item	AT	TR	CA	SA
Strong, tough government will harm not help our country	<b>-0.602</b>	-0.082	-0.032	0.126
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	<b>0.552</b>	0.069	0.113	0.030
Our society does NOT need tougher government and stricter laws	<b>-0.630</b>	0.035	0.098	0.075
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	<b>0.645</b>	0.053	-0.031	0.161
Our prisons are a shocking disgrace. Criminals are unfortunate people who deserve much better care, instead of so much punishment	<b>-0.600</b>	0.067	0.112	0.255
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	<b>0.679</b>	-0.051	0.036	0.243
Nobody should stick to the "straight and narrow." Instead, people should break loose and try out lots of different ideas and experiences	-0.154	<b>-0.478</b>	0.208	0.251
The "old-fashioned ways" and "old-fashioned values" still show the best way to live	0.283	<b>0.444</b>	-0.043	0.248
God's laws about abortion, pornography, and marriage must be strictly followed before it is too late	0.066	<b>0.759</b>	0.024	0.146
There is absolutely nothing wrong with nudist camps	0.028	<b>-0.650</b>	0.183	0.058
This country will flourish if young people stop experimenting with drugs, alcohol, and sex and pay more attention to family values	0.144	<b>0.545</b>	-0.046	0.224
There is nothing wrong with premarital sexual intercourse	0.071	<b>-0.996</b>	-0.038	0.048
It's great that many young people today are prepared to defy authority	-0.009	0.001	<b>0.751</b>	-0.028
What our country needs most is discipline, with everyone following our leaders in unity	0.190	0.099	-0.136	<b>0.500</b>
Students at high schools and at university must be encouraged to challenge, criticize, and confront established authorities	-0.042	-0.065	<b>0.717</b>	0.076
Obedience and respect for authority are the most important virtues children should learn	0.139	0.294	-0.051	<b>0.456</b>
Our country will be great if we show respect for authority and obey our leaders	0.133	0.152	-0.281	<b>0.446</b>
People should be ready to protest against and challenge laws they don't agree with	0.071	0.065	<b>0.732</b>	-0.089
Eigenvalue	6.46	1.90	1.70	1.13

Note. Factor loadings above .30 in bold. AT = authoritarianism; TR = traditionalism; CA = contestation to authority; SA = submission to authority.

In order to investigate evidence of discriminant validity, zero-order and partial Pearson's correlations were calculated between all factors in Samples 1, 2, 3, and 4. Partial correlations controlled for the mean of the factors that were not being tested. For example, when calculating the correlation between the mean of the authoritarianism and traditionalism factors, the means of the contestation to authority and submission to authority factors were entered as covariates. Finally, intraclass correlations (Koo & Li, 2016) as well as an autoregressive path model were performed to investigate the longitudinal stability of the four RWA factor scores across the three measurement waves in Sample 4.

## Results

### Testing Hypothesis 1

To test the first hypothesis, we ran EFA and CFA in Sample 1. Results of the factor extraction in the EFA yielded four eigenvalues above 1 (6.46, 1.90, 1.70 and 1.13), indicating a four-factor solution. As shown in Table 1, all items presented factor loadings higher than .30 in the hypothesized factors, and the content analysis of the items revealed that factors were, respectively, authoritarianism, traditionalism, contestation to authority, and submission to authority. We then compared the three-factor and four-factor models with CFA. The three-factor model proposed by Duckitt and colleagues (2010) had poor fit to the data (RMSEA = .110, 90% CI [.103, .118]; CFI = .87; TLI = .85; AIC = 30,211.29; BIC = 30,363.60;

ECVI = 1.51), and it was a poorer fitting model,  $\chi^2(3) = 138.23, p < .001$ , than the four-factor model described in Table 1 (RMSEA = .082, 90% CI [.074, .090]; CFI = .93; TLI = .92; AIC = 30,070.29; BIC = 30,234.31; ECVI = 1.13). These results replicate findings reported by Vilanova et al. (2018), suggesting a four-factor solution in the Brazilian context.

For the sake of completeness, we examined results from the parallel analysis. This analysis indicated that only the first three eigenvalues were higher than those obtained from random data permutation (1.34, 1.38, 1.22, and 1.18), thus suggesting extraction of a three-factor solution: retaining authoritarianism, traditionalism, and contestation to authority but excluding the submission to authority items. This three-factor model had good fit to the data (RMSEA = .092, 90% CI [.082, .102]; CFI = .93; TLI = .92; AIC = 25,385.30; BIC = 25,514.18; ECVI = .92), but it was not a better fitting model than the four-factor model,  $\chi^2(42) = 52.42, p = .13$ . Finally, we compared the fit to the data of the three-factor model proposed by Duckitt and colleagues (2010) and the four-factor model proposed by Vilanova and colleagues (2018) on the other three samples, and all supported the four-factor solution. Fit indices are shown in Table 2.

### Testing Hypothesis 2

Table 3 presents the correlation results. As evidence of discriminant validity, small-to-moderate correlations were found between submission to authority and contestation to authority

**Table 2.** Model Fit for Four-Factor and Three-Factor Substantive Models.

Sample	Model	RMSEA	$\chi^2/df$	CFI	TLI	Akaike information criterion (AIC)	Bayesian information criterion (BIC)	Expected cross validation index (ECVI)
Sample 1	Three factor proposed by Duckitt et al. (2010; AT, TR, SA + CA)	.11	5.47	.87	.85	30,211.29	30,363.60	1.51
	Four-Factor (AT, TR, SA, CA)	.08	3.46	.93	.92	30,070.29	30,234.31	1.13
Sample 2	Three-factor proposed by Duckitt et al. (2010; AT, TR, SA + CA)	.09	5.42	.92	.92	50,902.40	51,204.15	5.44
	Four-factor (AT, TR, SA, CA)	.07	3.45	.96	.95	50,215.19	50,529.69	4.11
Sample 3	Three-factor proposed by Duckitt et al. (2010; AT, TR, SA + CA)	.08	1.93	.93	.93	12,351.74	12,556.41	10.94
	Four-factor (AT, TR, SA, CA)	.07	1.63	.96	.95	12,191.54	12,404.86	9.72
Sample 4	Three-factor proposed by Duckitt et al. (2010; AT, TR, SA + CA)	.10	1.61	.95	.94	5,900.41	6,055.88	19.37
	Four-factor (AT, TR, SA, CA)	.08	1.39	.97	.96	5,785.81	5,947.84	17.63

Note. AT = authoritarianism; TR = traditionalism; SA = submission to authority (pro-trait “conservatism” items); CA = contestation to authority (con-trait “conservatism” items).

**Table 3.** Bivariate Correlations and Internal Consistency Indices in Sample 1, Sample 2, Sample 3, and Sample 4.

Sample	Variables	1	2	3	4	$\alpha$	$\omega$
Sample 1	1. Contestation to authority	—	-.10 <sup>a</sup>	-.09 <sup>a</sup>	-.22 <sup>*,a</sup>	.74	.70
	2. Submission to authority	-.33 <sup>*,b</sup>	—	.33 <sup>*,a</sup>	.46 <sup>*,a</sup>	.71	.60
	3. Authoritarianism	-.27 <sup>*,b</sup>	.50 <sup>*,b</sup>	—	.15 <sup>*,a</sup>	.76	.75
	4. Traditionalism	-.37 <sup>*,b</sup>	.60 <sup>*,b</sup>	.42 <sup>*,b</sup>	—	.84	.82
Sample 2	1. Contestation to authority	—	-.08 <sup>a</sup>	-.34 <sup>*,a</sup>	-.18 <sup>*,a</sup>	.86	.85
	2. Submission to authority	-.49 <sup>*,b</sup>	—	.43 <sup>*,a</sup>	.30 <sup>*,a</sup>	.90	.89
	3. Authoritarianism	-.60 <sup>*,b</sup>	.69 <sup>*,b</sup>	—	.28 <sup>*,a</sup>	.94	.93
	4. Traditionalism	-.51 <sup>*,b</sup>	.61 <sup>*,b</sup>	.63 <sup>*,b</sup>	—	.87	.88
Sample 3	1. Contestation to authority	—	-.15 <sup>a</sup>	-.13 <sup>a</sup>	-.25 <sup>*,a</sup>	.81	.83
	2. Submission to authority	-.43 <sup>*,b</sup>	—	.38 <sup>*,a</sup>	.26 <sup>*,a</sup>	.90	.88
	3. Authoritarianism	-.44 <sup>*,b</sup>	.61 <sup>*,b</sup>	—	.37 <sup>*,a</sup>	.93	.93
	4. Traditionalism	-.48 <sup>*,b</sup>	.57 <sup>*,b</sup>	.62 <sup>*,b</sup>	—	.85	.86
Sample 4	1. Contestation to authority	—	.17 <sup>a</sup>	-.37 <sup>*,a</sup>	-.22 <sup>a</sup>	.85	—
	2. Submission to authority	-.37 <sup>*,b</sup>	—	.53 <sup>*,a</sup>	.28 <sup>*,a</sup>	.87	—
	3. Authoritarianism	-.58 <sup>*,b</sup>	.75 <sup>*,b</sup>	—	.36 <sup>*,a</sup>	.95	—
	4. Traditionalism	-.52 <sup>*,b</sup>	.67 <sup>*,b</sup>	.74 <sup>*,b</sup>	—	.89	—

Note. It was not possible to calculate  $\omega$  for Sample 4 due to the small sample size. RMSEA = root mean square error of approximation; CFI = comparative fit index; TLI = Tucker–Lewis Index;  $\alpha$  = Cronbach’s  $\alpha$ ;  $\omega$  = McDonald’s  $\omega$ .

<sup>a</sup>Partial correlations. <sup>b</sup>Zero-order correlations.

\* $p < .05$ . \*\* $p < .001$ .

in Sample 1,  $r(365) = -.33, p < .001, 95\% \text{ CI} [-.24, -.42]$ , Sample 2,  $r(516) = -.49, p < .001, 95\% \text{ CI} [-.42, -.55]$ , Sample 3,  $r(130) = -.43, p < .001, 95\% \text{ CI} [-.28, -.56]$ , and Sample 4,  $r(64) = -.37, p = .003, 95\% \text{ CI} [-.14, -.56]$ . Furthermore, when conducting bivariate partial correlations controlling for the two other factors, the correlation became statistically nonsignificant: Sample 1,  $r(363) = -.10, p = .062$ , Sample 2,  $r(514) = -.08, p = .086$ , Sample 3,  $r(128) = -.15, p = .09$ , and Sample 4,  $r(62) = .17, p = .17$ . These correlation results provide indication that submission to authority and contestation to authority are not strongly correlated and confirm Hypothesis 2. The  $\alpha$  and  $\omega$  results in Table 3 also confirm the internal reliability of all four factors.

### Testing Hypothesis 3

The intraclass correlation coefficients (ICCs) were calculated based on a single measurement, absolute-agreement two-way mixed-effects model (Koo & Li, 2016). The ICC for authoritarianism was .92 (95% CI [.89, .95]), for traditionalism was .84 (95% CI [.77, .89]), for submission to authority was .78 (95% CI [.69, .85]), and for contestation to authority was .61 (95% CI [.48, .72]). Although the confidence intervals for submission to authority and contestation to authority overlap, contestation to authority was overall less stable across 3 years, providing partial support for Hypothesis 3. Complementing these analyses, we conducted a longitudinal path model fixing the autoregressive paths of the four RWA factors from T1 to

T2 and T2 to T3 to equality and then conducting univariate Wald tests of parameter constraint to confirm whether the overtime stability of factor scores differ. Providing full support for Hypothesis 3, the autoregressive path of contestation to authority ( $B = .49$ ) was statistically smaller,  $\chi^2(3) = 22.34$ ,  $p < .001$ , than the autoregressive paths of authoritarianism ( $B = .87$ ), traditionalism ( $B = .82$ ), and submission to authority ( $B = .78$ ).

### Further Preliminary Tests

To provide preliminary evidence of predictive validity of the Brazil-based RWA factors, we computed a regression analysis with the four factors predicting prejudice against sexual and gender diversity in Sample 2. The revised version of the Prejudice against Sexual and Gender Diversity Scale (Costa, Machado, Bandeira, & Nardi, 2016) was used to assess prejudiced attitudes toward lesbians, gays, and transgenders. It is a self-report measure composed of 18 items (e.g., "I would not feel comfortable to consult a gay physician"), and responses are given on a 5-point agreement scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). This scale had good internal consistency in the original development sample (Cronbach's  $\alpha = .93$ ; Costa et al., 2016) and in our Sample 2 (Cronbach's  $\alpha = .94$ ; McDonald's  $\omega = .96$ ).

The results showed that contestation to authority did not reliably predict prejudice against sexual and gender diversity ( $\beta = .03$ ,  $p = .71$ , 95% CI  $[-.13, .19]$ ), while prejudice against sexual and gender diversity was reliably predicted by traditionalism ( $\beta = .45$ ,  $p < .001$ , 95% CI  $[.26, .80]$ ), submission to authority ( $\beta = .27$ ,  $p = .008$ , 95% CI  $[.07, .51]$ ), and marginally by authoritarianism ( $\beta = .14$ ,  $p = .118$ , 95% CI  $[-.03, .23]$ ). Thus, contestation to authority is not only less stable longitudinally but it also has lower predictive power than the other RWA factors in our samples.

## Discussion

Recent research indicates that RWA is better conceptualized as a multidimensional socioattitudinal construct formed by authoritarianism, conservatism, and traditionalism (e.g., Duckitt & Bizumic, 2013; Mavor et al., 2010). However, a study conducted in Brazil showed that a four-factor model, splitting the conservatism factor into submission to authority and contestation to authority, fitted the data better (Vilanova et al., 2018). The aim of the present study was to replicate the four-factor structure of RWA and to investigate the validity of the factors in Brazil.

Results from both EFA and CFA considering an independent Brazilian sample and a shorter version of the RWA Scale proposed by Duckitt et al. (2010) confirmed the four-factor model observed by Vilanova and colleagues (2018) in which the original conservatism factor was divided into submission to authority and contestation to authority. Small-to-moderate Pearson correlations between submission to authority and contestation to authority across all four samples supported their

discriminant validity, and additional analysis in one of the samples showed submission to authority predicted prejudice against sexual and gender diversity but contestation to authority did not. Moreover, ICCs and autoregressive paths showed that contestation to authority was less stable than the other RWA factors across a 3-year period.

Taken as a whole, the results indicate that the original conservatism items might be more temporally unstable and contextually influenced than the original authoritarianism and traditionalism items in the RWA Scale proposed by Duckitt et al. (2010). Duckitt and colleagues argue that "in societies where the rule of law has largely broken down, the issue of support for coercive social control (authoritarianism) may come to have a different ideological significance than it does in well-functioning and well-ordered societies" (p. 707). Similarly, we propose that in societies that go through abrupt political changes in a short period of time, the issues expressed by pro- and con-trait items of the original conservatism items may come to have a different ideological significance than it does in well-functioning and well-ordered societies.

In particular, we noted grammatical distinctions that might explain why the content of conservatism items might elicit different reactions in more unstable sociopolitical contexts. While pro-trait conservatism items focus on "leaders" and "those who are in charge," the con-trait items focus on "government" and "laws." Conceptions of "government" and "laws" are more likely to shift in unstable countries due to significant sociopolitical changes in laws and governments in a short period of time. The instability of government and laws underlies the division of this conceptual group and indicates that whereas in other contexts right-wing authoritarians could submit uncritically to laws, governments, leaders, and those who are in charge, in Brazil, this uncritical submission could be restricted to leaders and those who are in charge. As government and laws frequently change (as happened in Brazil in the last three years), it may not be considered a fundamentally stable aspect of society and thus not be considered something that demands uncritical submission in order to maintain collective security. Hence, uncritical submission toward many groups might be entangled in RWA in politically stable countries, but in other contexts, this relationship might not be so general.

Future directions and limitations of the present study should be considered. First, data from only one politically unstable country were assessed, so future studies should try to analyze our propositions in other countries. Second, of those participants invited in T1 to take part in the longitudinal study, about 17% participated in all three waves. Although it is a 3-year longitudinal study and longitudinal studies are not so common in RWA research, the percentage that took part in all steps is small, so future studies should try to reduce this longitudinal dropout rate.

Considering our results, important directions for future propositions of RWA should be considered: They should not refer to different grammatical objects in pro- and con-trait items. As RWA is a social attitude and may thus differ across contexts, the items may have different significances in

different regions of the world. Therefore, instead of differentiating the groups to which pro- and con-trait items refer, future RWA propositions should try to refer to the same groups in its pro- and con-trait components. Finally, studies that seek to use the RWA version proposed by Duckitt and colleagues (2010) in Brazil should use the four-factor structure proposed by Vilanova and colleagues (2018) rather than the original three-factor model.


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### ORCID iD

Felipe Vilanova  <https://orcid.org/0000-0002-2516-9975>

Ângelo Brandelli Costa  <https://orcid.org/0000-0002-0742-8152>

### Supplemental Material

The supplemental material is available in the online version of the article.

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### Author Biographies

**Felipe Vilanova** is a Graduate Student at the Pontificia Universidade Católica do Rio Grande do Sul. His main research themes are Authoritarianism and Corruption.

**Taciano L. Milfont** is an Associate Professor at the Victoria University of Wellington. His main research theme is Attitudes Towards the Environment.

**Clara Cantal** has a PhD in Political Psychology from the Victoria University of Wellington and currently conducts research in a New Zealand Public Sector organisation. She is interested in factors explaining political conservatism.

**Silvia Helena Koller** is an Associate Professor at the North-West University. Her main research theme is Social Development.

**Ângelo Brandelli Costa** is an Associate Professor at the Pontificia Universidade Católica do Rio Grande do Sul. His main research theme is Gender and Sexuality.

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