Original Research Reports

Investigating Right Wing Authoritarianism With a Very Short Authoritarianism Scale

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Abstract

Authoritarianism has been an important explanatory concept for more than 60 years and a powerful predictor of social, political, and intergroup attitudes and behaviour. An important impediment to research on authoritarianism has been the length of the measures available, particularly with the contemporary emphasis on the need for social research to use larger, more representative samples and measure multiple constructs across multiple domains. We therefore developed a six-item Very Short Authoritarianism (VSA) scale that equally represented the three content subdimensions and two directions of wording of Altemeyer's widely used Right Wing Authoritarianism (RWA) scale. Over four samples (N = 1,601) from three countries the VSA scale showed satisfactory internal consistency and the expected hierarchical factor structure with three primary factors loading on a single higher-order factor. Additionally, the scale predicted variables such as nationalism, ethnocentrism, political orientation, political party/candidate support, attitudes towards ingroups or outgroups and anti-minority bias at moderate to strong levels with effects very close to those obtained for much longer established measures of RWA (including Altemeyer's scale). The VSA scale also showed clearly better reliability and validity than a short measure of authoritarian parental values that has been used to measure authoritarianism.

Keywords: authoritarianism, ideology, prejudice, attitudes, scale development, cross-national research

For more than six decades the construct of authoritarianism has been an important explanatory construct for social and personality psychologists studying socio-political and intergroup behaviour. Authoritarianism was first psychometrically operationalized by Adorno, Frenkel-Brunswik, Levinson, and Sanford (1950), but their F scale proved to be psychometrically flawed. As a result, it was refined and improved by Altemeyer (1981) as the Right Wing Authoritarianism (RWA) scale, which since then has remained the measure of choice for researchers. An important observation of Altemeyer's (1981) was that the items of his RWA scale encompassed three distinct content areas, that is, Authoritarian Submission, Authoritarian Aggression, and Conventionalism (see also, Mavor, Louis, & Sibley, 2010). Because he viewed these three facets as strongly intercorrelated and forming a single dimension he did

not measure them separately and the items of his RWA scale typically expressed in their content two or even three of these facets.

In the past three decades, a substantial body of research has arisen using the RWA scale or variations of it. This research has shown that RWA constitutes a stable pattern of individual differences with persons high in authoritarianism being higher in prejudice and ethnocentrism, more socially conservative, nationalistic, and politically right wing, preferring strict laws and rules, and supporting tough, punitive social control and authority. Persons low in RWA, on the other hand, tend to be generally more tolerant and liberal, favouring individual liberties, high levels of personal freedom, self-expression, individual self-regulation, and democracy (Altemeyer, 1996, 2007; Duckitt, 2009).

More recently, however, new measures have been developed from the RWA scale that replaced its double- or triple-barrelled items with three distinct sets of items to measure each of the three RWA facets separately as well as providing an overall authoritarianism score. Although several three-dimensional RWA scales have been developed (see, e.g., Funke, 2005; Mavor, Wilson, Sibley, & Louis, 2012), the best researched of these to date has been the Authoritarianism (or Authoritarian Aggression), Conservatism (or Authoritarian Submission), Traditionalism (or Conventionalism) (ACT) scale (Duckitt & Bizumic, 2013; Duckitt, Bizumic, Krauss, & Heled, 2010).

An important impediment to research on RWA has been the length of the measures. The original and generally used version of the RWA scale has 30 items (Altemeyer, 1996), and a more recent shorter version which has only been published online has 20 items (Altemeyer, 2007). The best validated newer three-dimensional alternative to Altemeyer's scale is the ACT scale, which is even longer with 36 items (12 items per subdimension).

Traditionally, psychometric instruments have used many items to maximize reliability and validity to enable individual level assessments. Such high reliabilities, however, are not as important when psychometric scales are used in research where only group statistics are needed, and can even have significant disadvantages. Assessment times in large-scale social surveys are typically expensive and severely limited (Rammstedt & Beierlein, 2014). The relatively high level of item redundancy in long scales can result in participant boredom, frustration, fatigue (Robins, Hendin, & Trzesniewski, 2001; Saucier, 1994), and respondent "satisficing" (Krosnick, 1999). Not surprisingly, therefore, it has been found that the length of questionnaire measures was negatively correlated with response rates (Edwards, Roberts, Sandercock, & Frost, 2004). These considerations have become increasingly important with greater emphasis on the need for social research to use larger and more representative samples and to measure multiple constructs across multiple domains.

As a result, very short versions of psychometric scales have been developed and are increasingly used. Examples include two-item measures of sensation seeking (Hoyle, Stephenson, Palmgreen, Lorch, & Donohew, 2002), value dimensions (Sandy, Gosling, & Koelkebeck, 2014), and justice sensitivity (Baumert et al., 2014), and four- and six-item measures of self-esteem and state anxiety respectively (Marteau & Bekker, 1992; Tambs & Røysamb, 2014). Table 1 in Rammstedt and Beierlein (2014) provides a more extensive list. Most prominently, the Big-Five dimensions of personality are now frequently measured using very short scales with four or two items or even one item per dimension (e.g., Donnellan, Oswald, Baird, & Lucas, 2006; Langford, 2003; Rammstedt & John, 2007).

Although the reliabilities of these short scales have tended to be lower than the longer original scales, they have invariably remained satisfactory for research purposes (Rammstedt & Beierlein, 2014). More importantly, these

short scales have typically shown good convergence with the original full scales and little, if any, decrement in criterion validity (Heene, Bollmann, & Bühner, 2014; Rammstedt & Beierlein, 2014; Thalmayer, Saucier, & Eigenhuis, 2011). As Yarkoni (2010) has noted: "such inventories allow investigators to measure participants' personalities in a fraction of the time required to administer the original inventory, while recapturing scores in the original inventory relatively accurately" (p. 180).

Because of the pressing need for shorter measures of RWA, significantly shortened versions of the RWA scale have been used. Some have simply selected a subset of items from the full RWA scale on a random or ad hoc basis (e.g., Duckitt, 2006; Smith, Hanley, Willson, & Alvord, 2015; Zick, Wolf, Küpper, Davidov, Schmidt, & Heitmeyer, 2008). Others have developed short forms using more systematic psychometric procedures. The most prominent of these are Funke's (2005) 12-item three-dimensional authoritarianism scale, a 14-item three-dimensional RWA scale developed by Mavor et al. (2012), a 14-item Italian version of the RWA scale (Rattazzi, Bobbio, & Canova (2007), a 15-item Swedish RWA scale (Zakrisson, 2005), an 11-item Dutch RWA scale (Van Hiel, Duriez, & Kossowska, 2006), and an 18-item short-form ACT scale (Duckitt et al., 2010). These shortened RWA scales, however, tend to share three serious disadvantages. First, except for the three three-dimensional scales, these scales have not systematically covered all three sub-components of RWA. Second, apart from the short ACT scale, none have been thoroughly validated as independent measures of RWA. And third, all are still significantly longer than the very short scales that have been successfully developed to measure other psychological constructs and therefore still too long to be suitable for many research purposes.

There are also several shorter measures of authoritarianism that have used somewhat different items, content domains, or conceptualizations than Altemeyer's RWA scale. The most notable of these are Feldman's (2003) 17-item forced-choice Social Conformity versus Autonomy (SCA) scale, Stellmacher and Petzel's (2005) 12-item Group Authoritarianism (GA) scale, Dunwoody and Funke's (2016) 18-item Aggression-Submission-Conventionalism (ACS) scale, Van Hiel, Cornelis, Roets, and DeClercq's (2007) 14-item Aggression-Submission (AS) scale, and a four-item Authoritarian Child Rearing Values (ACRV) scale (Feldman & Stenner, 1997; Henry, 2011). Several of these measures, most notably the SCA, ACS and AS scales have shown strong correlations with the RWA scale and been reasonably well validated as alternatives to it. Nevertheless, with the single exception of the ACRV scale, all these measures also share the disadvantage of being too long for many research purposes.

The ACRV scale, however, with only four items would seem ideal for use in large-scale social surveys and findings using it as a measure of authoritarianism have been reported. It originated from an ad hoc additive combination of four child rearing value descriptors included in European Value Survey (EVS) and World Value Survey (WVS) questionnaires, which were thought to tap authoritarian or nonauthoritarian child rearing values. These four-item ACRV scales, however, had very poor internal consistency reliabilities (e.g., Stenner, 2005, obtained a pooled alpha of only .26; see also Brandt & Henry, 2012, Study 2), suggesting that the four items were not measuring a unidimensional construct, a conclusion confirmed by analyses conducted by Voicu (2012). An adaptation of this scale (ACRV-2) consisting of four very similar child rearing value item pairs used in forced-choice format (respondents choose between two values assumed to represent competing authoritarian and nonauthoritarian values) was used in the American National Election Survey (ANES). This ACRV-2 scale had clearly better reliabilities with alphas generally ranging between .54 and .66 (e.g., Feldman & Stenner, 1997; Henry, 2011; Hetherington & Suhay, 2011; Pérez & Hetherington, 2014), but still rarely reaching what would conventionally be regarded as a reasonably acceptable alpha of .70 (Schmitt, 1996).

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There are also other reasons why the forced-choice ACRV-2 scale may not be an appropriate measure of authoritarianism. First, the correlations reported between it and the well validated RWA or ACT scales have not been strong enough to suggest they might be measuring the same dimension (e.g., Dunwoody & Funke, 2016, r = .55; Hetherington & Suhay, 2011, r = .54; Smith et al., 2015, r = .38). Second, the content of the ACRV-2 items suggests that it largely taps the Authoritarian Submission facet of RWA and has no overlap at all with the Authoritarian Aggression facet (Smith et al., 2015). Third, although studies have reported that the ACRV-2 scale does correlate as expected with validity indicators of authoritarianism (e.g., Feldman & Stenner, 1997; Hetherington & Suhay, 2011), these correlations have generally been weaker than would be expected for the RWA scale and have not infrequently been nonsignificant (e.g., Pérez & Hetherington, 2014). Only one study has systematically compared the degree to which the ACRV-2 and RWA scales predict validity criteria of authoritarianism (Smith et al., 2015) and found that the ACRV-2 scale did predict certain validity criteria as expected, albeit at a much lower level than a shortened RWA scale. It was, however, nonsignificantly related to other validity criteria (political orientation, moral traditionalism, discrimination) which were strongly predicted by RWA (D. Smith, personal communication, 21 November 2016).

And finally, certain fundamental psychometric issues have been noted with forced-choice scales such as the ACRV-2. These include the problem of using ipsative measurement to compare individuals (Clark & Watson, 1995), the need for the item pairs being opposed to be equated in social desirability, and for their assumed opposition in meaning to be empirically demonstrated (Ray, 1990). Neither of two latter requirements has been demonstrated for the ACRV-2.

Our objective was therefore to develop and validate a psychometrically sound very short measure of RWA. A traditional or rational approach would be to select items from the RWA or ACT scales that had the highest item-total correlations in order to maximize internal consistency reliability. This would, however, be problematic for two reasons. The first is that the item content of the RWA (and ACT) scale covers three distinct content domains or sub-dimensions. Thus, simply selecting items solely on the basis of having the highest correlations with the total scale would clearly be unlikely to adequately represent all three RWA subcomponents. This, as Widaman, Little, Preacher, and Sawalani (2011) have noted, would risk narrowing the breadth of content covered by the shorter scale and so changing the nature of the underlying dimension measured.

Second, simply selecting items to maximize internal consistency would also be unlikely to produce a scale with equal numbers of protrait and contrait items in order to control direction of wording effects, as is the case for both RWA and ACT scales. This meant that the minimum number of items needed to adequately represent the full content range of the RWA (or ACT) scale and balance direction of wording effects within each content domain would be six items (i.e., three balanced two-item sets for each of the three subdimensions). This would be extremely difficult to do using any version of the Altemeyer's RWA scale because its items typically combine two or even three of the RWA subdimensions with the emphasis on each varying across items. The ACT scale (Duckitt et al., 2010), however, would be ideal for this purpose because its items shortened the longer and more cumbersome RWA items and tapped each of the three RWA subdimensions separately. Another advantage of using items from the ACT scales is that whereas items of the RWA scale sometimes had clear content overlap with important criterion variables of authoritarianism such as prejudice (see, e.g., Mavor, Louis, & Laythe, 2011), these items had been carefully excluded from the ACT scales in its development (Duckitt et al., 2010)[i].

On theoretical grounds, we therefore decided to select the two items (one protrait, one contrait) from each of the three ACT subdimensions that loaded maximally on the single factor underlying the full ACT scale and which had the highest correlations with the full ACT scale for a six-item Very Short Authoritarianism (VSA) scale. This item selection procedure was therefore designed to develop a VSA scale that would best assess overall RWA rather than the three subdimensions[ii] but in doing so would equally represent the three content subdimensions and the two directions of wording of the ACT scale and therefore of the RWA construct overall. In addition, we also compared how well the VSA and ACT scales performed in predicting well-established validity criteria of authoritarianism in both our original scale development study (Study 1) and three further samples (Studies 2 and 3).

In Study 1 we expected the VSA scale to positively correlate with measures of ethnocentrism and prejudice, such as social dominance orientation (SDO), negative attitudes to ethnic minorities, outgroups, immigrants and foreigners, support for restrictive citizenship criteria, but to be unrelated (or negatively related) to pro-ingroup attitudes and ethnic group equality acceptance. We also expected strong positive associations with pro-war attitudes, blind or uncritical patriotism, and nationalism and nonsignificant associations with more critically patriotic attitudes to one's country (i.e., Schatz, Staub, & Lavine's, 1999, Constructive Patriotism scale) and national identity.

Study 1: Development and Initial Validation of the VSA Scale

Method

Participants and Procedure

The participants were 309 undergraduate students who volunteered to complete a paper and pencil survey. The students completed the questionnaires in their own time and returned them to the researcher. Their mean age was 21.6 (SD = 4.41) and 57% were female. There were 208 (67%) Australian citizens, 22 (7%) Chinese citizens, 13 (4%) Singaporean citizens, 65 (21%) citizens of other countries, and one participant did not indicate their citizenship. There were 152 (49%) Anglo-Australians, 73 (24%) Chinese, 10 (3%) Japanese, and 74 (24%) members of other ethnic groups. After completion, all participants were debriefed and offered a sweet, and first-year psychology students received course credit.

The participants completed one of two versions of the questionnaire. The versions were equivalent but the order of the measures differed to control for order effects. All items, apart from background variables and affective thermometer ratings, asked participants to indicate agreement/disagreement with statements on a nine-point Likert-type scale (i.e., *very strongly agree/disagree*, *strongly agree/disagree*, *somewhat agree/disagree*, *slightly agree/disagree*, *unsure or neutral*).

Measures

The 18 items of the shortened version of the ACT scale (Duckitt et al., 2010) were used for the development of the ultra-short VSA scale. These items comprised three balanced six-item sets (i.e., equal numbers of protrait and contrait items) assessing each of the three ACT subdimensions (i.e., authoritarianism, conservatism, and traditionalism). These three item sets had consistently shown the highest item-total correlations for each of the

subdimensions from the total 36 items of the full ACT scale (Duckitt et al., 2010). The alpha coefficient for this 18-item ACT scale in this study was .87.

The questionnaire also included the following measures of pro-war attitudes and nationalism (to test concurrent validity) as well as constructive (critical) patriotism and national identity (to assess discriminant validity). Kosterman and Feshbach's (1989) Nationalism scale was used with items slightly modified to fit the Australian context. The words "America" and "US" in the original items were changed to "my country" or "my nationality" and two of the original items that were inappropriate for Australia were excluded. An item example is "Generally, the more influence my country has on other countries, the better off they are". The alpha coefficient for this six-item scale was .72. Schatz, Staub, and Lavine's (1999) nine-item Blind Patriotism and seven-item Constructive Patriotism scales were used again with items modified by changing the words "America" and "U.S." to "our country" or "my country". Item examples are "Our country is virtually always right" (Blind Patriotism), and "Because I identify with my country, some of its actions make me feel sad" (Constructive Patriotism). The alpha coefficients were .79 and .86 respectively. Nationalism was also measured using the 36-item multidimensional scale developed by Bizumic and Iino's (2017) by adapting Bizumic, Duckitt, Popadic, Dru, and Krauss's (2009) Ethnocentrism scale to assess nationalism. This scale used balanced six-item subscales to measure six nationalism subdimensions (i.e., national preference, national superiority, national purity, national exploitativeness, national cohesion, and national devotion). Because the subscales were all strongly correlated, only the total nationalism score was used in this research (α = .91). National identity was measured using a two-item balanced measure (i.e., "I have a sense of identification with my nation" and "I feel NO attachment to my nation"; reverse scored) (α = .63), and pro-war attitudes were measured using a shortened four-item balanced version of Stagner's (1942) Attitudes Toward War scale (e.g., "War is the only way to right tremendous wrongs") (α = .71).

The questionnaire also included the following measures of social dominance, ethnocentrism, and prejudice against foreigners, immigrants and outgroups (to test concurrent validity) and of ethnic group equality acceptance (to assess discriminant validity). Social dominance orientation (SDO) was measured using a balanced set of eight items from Sidanius and Pratto's (1999) SDO scale (α = .83) (e.g., "It's OK if some groups have more chance in life than others"). Support for restrictive citizenship criteria for immigrants was measured using a single item (i.e., "Immigrants wanting citizenships of my nation should pass examinations for cultural knowledge, history, and tradition of our nation notwithstanding the fluency of national language"). Anti-foreigner attitudes were measured using three items from Blank and Schmidt's (2003) Outgroup Devaluation scale. The word "Germany" in the original scale was replaced with "my country". An item example is "Foreigners living in my country should choose their partners among their own countrymen (and -women)" (α = .68). Anti-immigrant attitudes were measured using a four-item balanced Xenophobia scale (see Hjerm, 1998). Again, items referring to a specific nation were replaced with "my country". An item example is "Immigrants take jobs away from people who were born in my country" (α = .76).

Further, ethnocentric attitudes were measured using a shortened 12-item version of Bizumic et al.'s (2009) multidimensional Ethnocentrism scale. One positive and one negative item were chosen from each of the six subscales (purity, preference, superiority, exploitativeness, group cohesion and devotion). Item examples are: "On the whole, people from my culture tend to be better people than people from other cultures", and "In dealing with other cultures we should always be honest with them and respect their rights and feelings" (reverse scored). Because the subscales were all strongly intercorrelated, only the total ethnocentrism score was used in this research (α = .79). Affective thermometer warmth to the majority (Anglo-Australian) group and a range of outgroups and ethnic minorities (immigrants, foreigners, Chinese, Arabs, Indigenous Australians) was assessed by asking participants to

rate the "warmth" of their feelings to each group on a scale from -50 (*very unfavourable*) to +50 (*very favourable*). Anti-ethnic minority bias indicators were computed by subtracting the warmth ratings for the three Australian ethnic minorities (Chinese, Arabs, Indigenous Australians) from the warmth ratings for Anglo-Australians. And finally, ethnic group equality acceptance was assessed using a single item to indicate agreement that all ethnic groups in one's nation were of equal status ("All the ethnic groups in my nation have equal status.")

Results

Expectation maximization was used to impute missing data (0.8% of the data). Correlations between the measures were as theoretically expected. Thus, the measures of nationalism, blind patriotism, and pro-war attitudes correlated strongly with each other, but only weakly positively, nonsignificantly, or negatively with national identity, patriotism, and constructive patriotism. The measures of ethnocentrism, SDO, anti-immigrant attitudes, anti-foreigner attitudes, and bias towards ethnic minorities were all significantly positively correlated and were nonsignificantly or negatively correlated with ethnic group equality acceptance and warmth towards ethnic majority Anglo-Australians.

Development of the VSA Scale

In order to select items for the VSA scale we conducted a single factor exploratory principal axis factor analysis (EFA) and identified those two items (one protrait, one contrait) from each of the three ACT subdimensions that loaded maximally on the single factor underlying the full ACT scale. An item analysis using item-total correlations identified the same six items (see Appendix A). This procedure ensured that the items selected for would equally represent the three content subdimensions and the two directions of wording of the ACT scale that best predicted the total ACT score. As expected, the VSA and ACT scale scores were very highly correlated (r = .94). Item statistics, item-total correlations, and item loadings from the EFA for the six VSA items are shown in Appendix B.

Reliability and Factor Structure of the VSA Scale

The alpha coefficient for the six-item VSA scale was .73 (McDonald's omega was .74), with a mean inter-item correlation of .31. An EFA for these six items produced eigenvalues of 2.59 for a first factor and 1.09 for a second factor. Parallel analysis indicated that this second eigenvalue was well below the value of 1.50 that would be generated by chance from random data using the same number of items and participants. This supported a one-factor solution (Reise, Waller, & Comrey, 2000).

A confirmatory factor analysis of the six items of the VSA scale indicated acceptable fit for a one-factor solution (χ^2 = 20.42, df = 8, RMSEA = .071, SRMR = .038, GFI = .98, CFI = .98) (a correlated error was permitted between the two traditionalism items). Not surprisingly, however, fit for a three-factor solution with each protrait and contrait item from the three ACT subdimensions loading on its factor was better (χ^2 = 8.71, df = 6, RMSEA = .038, SRMR = .024, GFI = .99, CFI = .99), and better than any possible two-factor or other solution. These three factors, however, were strongly correlated (.41, .68, .92), suggesting that all might load on a single higher-order factor. This was supported by a 1*3 higher-order factor solution that produced the same fit indices as the three-factor solution, as would be expected with only three primary factors, but more importantly revealed substantial positive loadings for all three primary factors on the single second order factor (=> .55)[iii].

Preliminary Validation of the VSA Scale

The correlations of the VSA and ACT scales with the validity criteria are shown in Table 1. The correlations for the ACT scale were exactly as expected. Thus, the ACT scale correlated positively and strongly with the two indices

of nationalism and blind patriotism, somewhat more weakly, though still highly significantly, with pro-war attitudes, and nonsignificantly with constructive patriotism and national identity. The correlations with the measures of SDO, ethnocentrism, and prejudice were computed for the ethnic majority group, Anglo-Australians. The ACT scale had powerful positive correlations with SDO, ethnocentrism, anti-immigrant and anti-foreigner attitudes, and restrictive citizenship criteria but a nonsignificant correlation with ethnic group equality acceptance. The ACT scale was also significantly positively correlated with warmth towards the Anglo-Australian ethnic ingroup and bias against the three ethnic minorities (Chinese, Arabs, Indigenous Australians) and negatively correlated with affective warmth to foreigners and immigrants.

Table 1

Correlations of the ACT and VSA Scales With Validity Criteria of Authoritarianism

| | Zero-order correlations | | Correlations corrected for unreliability[a] | |
Validity criterion	ACT	VSA	ACT	VSA
Nationalism (Bizumic & Iino, 2017)	.66**	.58**	.71	.68
Nationalism (Kosterman & Feshbach, 1989)	.48**	.43**	.51	.50
Blind Patriotism (Schatz et al., 1999)	.60**	.53*	.64	.62
Constructive Patriotism (Schatz et al., 1999)	.01	-.01	.01	-.01
National Identification	.05	.00	.05	.00
Pro-war Attitudes	.25**	.20**	.27	.23
Ethnocentrism	.52**	.43**	.56	.50
SDO	.49**	.40**	.53	.47
Anti-immigrant Attitudes	.57**	.50**	.61	.59
Anti-foreigner Attitudes	.53**	.49**	.57	.57
Restrictive Citizenship Criteria	.51**	.46**	.55	.54
Ethnic Group Equality Acceptance	.03	.04	.03	.05
Affective warmth – Immigrants	-.24**	-.17*	-.26	-.20
Affective warmth – Foreigners	-.21*	-.15[†]	-.23	-.18
Affective warmth – Anglo-Australians	.18*	.17*	.19	.20
Anti-minority bias against:				
Chinese	.32**	.24**	.34	.28
Arabs	.45**	.39**	.48	.46
Indigenous Australians	.45**	.41**	.48	.47

Note. The correlations for the measures of ethnocentrism, SDO, prejudice and intergroup bias were computed only for the majority Anglo-Australians with an *n* of 152; all other correlations were for the total sample (*N* = 309).
[a]The alpha coefficients for single-item and bias indices were taken as equal to 1.0.
[†]*p* < .10. *p* < .05. **p* < .01.

The pattern of correlations for the VSA scale with the validity criteria exactly replicated those for the ACT scale in statistical significance. Not surprisingly due to its lower alpha, the correlations for the VSA scale were weaker than those for the ACT scale, but the difference was relatively slight. The mean validity correlation (excluding nonsignificant effects and neglecting direction) for the ACT scale was .43 and that for the VSA scale .37. We checked if this was due to the difference in reliability by re-computing the correlations for the VSA scale correcting for its unreliability (Table 1 third column). The mean validity correlation for the VSA scale corrected for unreliability was .43, which was only marginally lower than the .46 for the ACT scale corrected for unreliability.

Discussion

By selecting the one protrait and one contrait item from each of the three ACT subdimensions that best predicted the total ACT score (and loaded most strongly on its latent variable) we ensured that the six-item VSA scale equally represented all the three primary content dimensions of authoritarianism as well as was fully balanced to control direction of wording effects. The alpha coefficient for the VSA scale was satisfactory, though, not surprisingly, lower than that for the much longer ACT scale (.73 versus .87). The internal consistency of the VSA scale as indexed by the mean inter-item correlation was marginally higher than that of the ACT scale (.31 versus .26), suggesting that the lower alpha was due to it having fewer items.

Exploratory and confirmatory factor analyses supported a single authoritarianism factor underlying the scale at least at a higher-order level. Although a three-factor solution produced equally good fit, two of the latent factors (Authoritarian Aggression and Authoritarian Submission) were extremely highly correlated (i.e., .92), suggesting that it would not be practical to score and use three two-item subscales of the VSA scale, at least in respect of those two subdimensions.

The correlations between the ACT scale and the validity criteria closely replicated effects found in previous research for both the ACT and RWA scales. The correlations for the VSA scale with the validity criteria exactly replicated those for the ACT scale in terms of statistical significance for both concurrent and discriminant effects but were slightly lower in magnitude. This has been characteristic of all ultra-short scales and would be expected due to their inevitably lower reliability than longer scale versions (Heene et al., 2014; Rammstedt & Beierlein, 2014). Thus, when the validity correlations for the VSA and ACT scales were corrected for unreliability, the differences between their correlations were minimal.

These findings provide preliminary evidence for reliability, factorial structure, and validity of an ultra-short authoritarianism scale. Nevertheless, important caveats are that this evidence was obtained in the same sample in which the VSA scale was developed, and derives from undergraduate students within one national context (Australia). The next study, therefore, investigated the generalizability of these findings by reporting new research on the reliability and validity of the VSA scale from community samples in two countries.

Study 2: Validating the VSA Scale in the UK and USA

Two new samples were recruited in the UK and the USA to investigate the reliability, factor structure, concurrent and discriminant validity of the VSA scale in these new contexts. The validity indicators included traditional target variables used in authoritarianism research, such as indices of nationalism, patriotism, ethnocentrism, political orientation and party or candidate support, social dominance, prejudice, as well as ingroup and outgroup warmth ratings and anti-minority bias.

Method

Participants and Procedures

Sample 1 consisted of 522 UK citizens, who completed an online questionnaire, and who were recruited from the general population by the Maximiles panelling service. Their mean age was 53.4 (*SD* = 16.1) and 48% were female. There were 411 (79%) White English, 42 White Scottish (8%), 16 (3%) White Welsh, 7 (1%) White Northern Irish,

and 46 (9%) members of other ethnic groups. Participants received points for completing the survey which could be redeemed for rewards or gift vouchers. Sample 2 consisted of 375 US citizens recruited through the Crowd-Flower service (a website that allows researchers to access community samples for a financial compensation, which in this case was 40 US cents) who also completed an online questionnaire. The mean age was 35.6 (*SD* = 12.8) and 58.4% were female. There were 285 (76%) White Anglo-Americans, 24 (6%) African-Americans, 33 (9%) Hispanic-Americans, 24 (6%) Asian-Americans, 4 (2%) Native-Americans, and 2 (1%) participants were members of other ethnic groups.

Most of the items in the questionnaires, apart from background variables and voting intention, asked participants to indicate their agreement/disagreement with statements on a nine-point Likert-type scale as in Study 1. Other items used affective thermometer or seven-point ratings to indicate degree of support or political orientation.

Measures

The six-item VSA scale was used in both surveys. The alphas were .78 in the UK sample and .71 in the US sample (the McDonald's omegas were .79 in the UK and .71 in the US). The following measures of nationalism, ethnocentrism, and political orientation were also used in both surveys. Kosterman and Feshbach's (1989) Nationalism scale was used with the original eight items used in the USA (α = .86), whereas in the UK the same six items that had been used in Study 1 (i.e., with wording adapted for a country other than the USA) were used (α = .73). Nationalism was also assessed using Bizumic and Iino's (2017) Nationalism scale. In the UK sample the full 36 items that had been used in Study 1 were used (α = .93), whereas a shortened 12-item version was used in the USA (α = .83). Ethnocentric attitudes were measured using a shortened 12-item version of Bizumic et al.'s (2009) Ethnocentrism scale as in Study 1 (α = .81). Political orientation was measured using a single-item seven-point rating of liberalism versus conservatism (i.e., *strongly liberal/conservative*, *somewhat liberal/conservative*, *slightly liberal/conservative*, *moderate*).

Affective warmth towards a number of target groups was measured using an affective thermometer (-50 to +50) scale as in Study 1. Certain target groups were included in both questionnaires, whereas others were included in only one. Groups expected to be positively evaluated by persons high in authoritarianism were groups associated with traditional values (i.e., virgins, conservatives, highly patriotic people, elderly/older people), ingroups (UK citizens/Americans/White Anglo-Americans), law and order or punishment (executioners, people who spank children), high-status establishment groups (rich people, upper management), and persons associated with anti-outgroup sentiment (racists). Several of these groups were taken from a measure used previously to validate the Moral Foundations Questionnaire (Graham et al., 2011). Groups expected to be negatively evaluated by persons high in authoritarianism were foreigners who criticize the UK (only included in the UK sample), and US ethnic minorities (Asian-Americans, Hispanic-Americans, African-Americans). Anti-ethnic minority bias indicators were computed by subtracting the warmth ratings for the three US ethnic minorities from the warmth ratings for White Anglo-Americans.

The US survey also included seven-point single-item ratings of support for Sanders, Clinton and Trump (i.e., *completely support/oppose*, *support/oppose*, *slightly support/oppose*, *neutral*), who at the time of the survey were the leading candidates in the US presidential election campaign.

The UK survey included a several additional scales and items. First, Schatz, Staub, and Lavine's (1999) nine-item Blind Patriotism scale (α = .84) as used in Study 1. Second, a shortened six-item balanced version of Sidanius

and Pratto's (1999) Social Dominance Orientation (SDO) scale (α = .87). Third, a six-item Pro-British Empire Attitudes scale (e.g., "The British Empire was a force for good" and "I often feel nostalgia for the British Empire") (α = .93). Fourth, a six-item Pro-English Language Attitudes scale (e.g., "Everyone in the world should speak English" and "Languages other than English should disappear") (α = .83). And fifth, voting intention in the next UK election coded for the four main political parties, being the United Kingdom Independence Party (UKIP), Conservative Party, Labour Party, and Liberal Democratic Party (LDP).

Results

Reliability and Factor Structure of the VSA Scale

The alpha coefficient for the VSA scale was .78 in the UK sample with a mean inter-item correlation of .38, and .71 in the US sample with a mean inter-item correlation of .29.

Consistent with the findings in Study 1, confirmatory factor analyses of the six items of the VSA scale in both the UK and US samples indicated that fit for a three-factor solution (with the two items from each ACT subdimension loading on its own sub-factor) was better than fit for any alternate one- or two-factor solutions. The fit indices in the UK sample were: χ^2 = 14.42, df = 5, RMSEA = .060, SRMR = .023, GFI = .99, CFI = .99 (with one correlated error); and in the US sample were: χ^2 = 5.30, df = 3, RMSEA = .045, SRMR = .022, GFI = 1.00, CFI = 1.00 (with correlated errors between the three contrait items). Once again, the three factors in each solution were significantly positively correlated, with particularly powerful correlations between the Authoritarian Aggression and Submission sub-factors (.96 and .95) and weaker correlations between them and the Conventionalism sub-factor (ranging from .35 to .62). This suggested a single higher-order factor in both samples, and again consistent with Study 1, higher-order solutions with all three primary factors loading on a single higher-order factor produced the same fit indices as the three-factor solutions and strong positive loadings (ranging from .47 to 1.31) for each of the primary factors on the single higher-order factor in both samples.

Validity Correlations of the VSA Scale

The correlations of the VSA scale with the validity indicators for the UK and US samples are shown in Table 2 and were consistent with theoretical expectation. Thus, the VSA scale correlated positively and highly significantly with the two measures of nationalism, the measure of ethnocentrism, and the single-item rating of more conservative (as opposed to liberal) political orientation in both the samples. Correlations for the scales specific to the UK sample, that is, Blind Patriotism, SDO, Pro-British Empire Attitudes, and Pro-English Language Attitudes scales, were similarly positive and highly significant. In the US sample, the VSA scale correlated significantly negatively with support for Sanders (the left-wing presidential candidate), significantly positively with support for Trump (the right-wing candidate), and nonsignificantly with support for Clinton (generally seen as the centrist candidate).

The correlations of the VSA scale with the single-item affective warmth ratings towards various groups and anti-minority bias were also were consistent with expectation. Thus, significant positive correlations were found for warmth towards groups associated with traditional values (i.e., virgins, conservatives, highly patriotic people, elderly/older people), ingroups (UK citizens/Americans), law and order or punishment (executioners, people who spank children), and high-status establishment groups (rich people, upper management). In the UK sample the VSA scale was significantly negatively correlated with warmth towards foreigners who criticize the UK and positively correlated with warmth towards racists. In the USA correlations computed for White Anglo-Americans were

significantly positive with affective warmth towards the ethnic ingroup (White Anglo-Americans) and with bias towards ethnic minorities (Asian-Americans, African-Americans, Hispanic-Americans).

The results for *voting intention in the UK* were also as expected following the generally accepted right-left divide in British politics. Thus, the highest mean VSA scores were for those intending to vote for the two right-wing parties, that is UKIP (*M* = .67, *SD* = 1.52) and the Conservative Party (*M* = .28, *SD* = 1.33), and the lowest means were for those intending to vote for the two left-wing parties, that is, the Liberal Democratic (*M* = -.82, *SD* = 1.47) and Labour Party (*M* = -.56, *SD* = 1.58). A one way ANOVA indicated highly significant differences between means, $F(3, 386) = 16.96$, $p < .001$. Multiple comparison tests (Tukey HSD) showed that the VSA means for the two right wing parties, which did not differ significantly from each other (*p* = .27; *d* = .24), were both significantly higher than those for the two left-wing parties (*p* < .001; Cohen's *d* varied from .70 to .96), which also did not differ significantly from each other (*p* = .76; *d* = .17).

Table 2

Correlations of the VSA Scale With Validity Indicators of Authoritarianism for the UK (N = 522) and US Samples (N = 375)

Validity criterion	UK	USA
Nationalism (Bizumic & Iino, 2017)	.50**	.49**
Nationalism (Kosterman & Feshbach, 1989)	.41**	.46**
Ethnocentrism	.46**	.36**
Political Orientation (Conservative)	.40**	.44**
Blind Patriotism (Schatz et al., 1999)	.52**	-
SDO	.29**	-
Pro-British Empire Attitudes	.44**	-
Pro-English Language Attitudes	.30**	-
Support Sanders	-	-.36**
Support Clinton	-	-.04
Support Trump	-	.24**
Affective warmth ratings for:		
UK citizens/Americans[a]	.25**	.30**
White Anglo-Americans	-	.25**
Foreigners Who Criticize the UK[b]	-.35**	-
Virgins	.09*	.26**
Executioners	.21**	.12*
Rich people	.25**	.30**
Upper management	.20**	.28**
Elderly people / Older people[a]	.22**	.23**
Conservatives	.28**	-
Highly patriotic people	.42**	-
Racists	.24**	-
People who spank children	.21**	-
Anti-minority bias against:		
Asian-Americans[b]	-	.29**
African-Americans[b]	-	.20**
Hispanic-Americans[b]	-	.22**

[a]Wording for UK sample is given first and for US sample second. [b]These effects were computed for only the ethnic majority groups (i.e., White Anglo-Americans in the USA, *n* = 285, and White English, Northern Irish, Scottish, and Welsh in the UK, *n* = 476).
*p < .05. **p < .01.

Discussion

The reliability coefficients for the VSA scale were satisfactory exceeding the customarily acceptable level of .70 in both samples (Schmitt, 1996), and the mean inter-item correlations also indicated a highly satisfactory level of internal consistency. Confirmatory factor analysis in both samples also supported the factor structure found in Study 1 with three primary factors corresponding to the three ACT subdimensions that loaded strongly on a single higher-order authoritarianism factor. These analyses also supported the finding in Study 1 that two of the three primary factors (i.e., Authoritarian Aggression and Submission) were too strongly correlated to be empirically differentiable. This reinforced the tentative conclusion from Study 1 that it would not be practical to score the VSA scale for three separate two-item subscales.

The correlations with validity indicators of authoritarianism clearly supported the validity of the VSA scale in both samples. The correlations with those indicators that had also been included in Study 1 (i.e., ethnocentrism, blind patriotism, SDO, and the two measures of nationalism) produced strong positive effects of similar magnitude to those found in Study 1. The VSA effects for political orientation (both samples), US Presidential candidate support, and voting intention in the UK were also clearly consistent with theoretical expectation. This was also the case for the correlations of the VSA scale with the affective warmth ratings and anti-minority bias. Correlations with groups associated with traditional values, law and order or punishment, and high-status establishment groups were positive and significant, as were the correlations reflecting pro-ingroup sentiment and anti-outgroup or ethnic minority bias.

Overall, therefore, the findings from two new samples supported both the psychometric adequacy and validity of the VSA scale in two new countries using community samples. Study 1 had shown that the six-item VSA scale was generally able to predict validity indicators of authoritarianism at a level comparable to that of the 18-item ACT scale, given their difference in reliability. This comparison, however, may have been misleadingly favourable to the VSA scale because all its items were included in the ACT scale. A better indication of its predictive efficacy would require comparisons with other well-established measures of authoritarianism without direct item content overlap and this was the objective of the next study.

Study 3: Comparative Validation of the VSA, RWA, and ACRV-2 Scales

The primary objective of this study was to compare the predictive validity of the VSA scale with the most widely used measure of authoritarianism, Altemeyer's (1996) RWA scale. A second objective was to compare the VSA scale with the only other very short scale that has been used to measure authoritarianism, that is, the four-item ACRV-2 scale. As noted previously, the items of the ACRV-2 scale pertain to child rearing values and differ in format and content from established authoritarianism measures such as the RWA or ACT scales. They also do not appear to tap all three the content domains of RWA. Since the items of the VSA scale equally represent all the three facets of authoritarianism, we expected that it would predict better than the ACRV-2 scale across the full range of authoritarian attitudes and behaviours.

This study therefore set out to compare the VSA and ACRV-2 scales with the RWA scale in their capacity to predict important validity criteria of authoritarianism. These were nationalism, generalized ethnocentrism, political orien-

tation, affective warmth towards ethnic majority (White Anglo-Americans) and other social groups theoretically expected to be related to authoritarianism (i.e., foreigners, protestors, gays, drug users, Republicans, and Democrats) and anti-ethnic minority bias (against African- and Hispanic-Americans).

Method

Participants and Procedure

The participants were 395 US citizens recruited through CrowdFlower who completed an online questionnaire for a compensation of 50 US cents. The mean age was 36.3 (*SD* = 13.0), and 60.0% were female. There were 319 (81%) White Anglo-Americans, 23 (6%) African-Americans, 22 (6%) Hispanic-Americans, 24 (6%) Asian-Americans, 5 (1%) Native-Americans, and 2 (1%) participants were members of other ethnic groups. Most of the items in the questionnaire, apart from background variables, political orientation and warmth ratings, asked participants to indicate agreement/disagreement with statements on a nine-point Likert-type scale (as in Studies 1 and 2).

Measures

The questionnaire included the six items of the VSA scale (α = .76; McDonald's ω = .76), the 30 items of Altemeyer's (1996) RWA scale (α = .96), and the four forced-choice item pairs of the ACRV-2 scale as originally used by Feldman and Stenner (1997), that is, "independence versus respect for elders", "obedience versus self-reliance", "curiosity versus good manners", and "considerate versus well-behaved". Following Brandt and Henry (2012), choice between the item pairs was rated on a seven-point rating scale because this had resulted in a markedly better alpha than previous studies. The alpha in this study was .71.

In addition, the questionnaire included the following validity indicators of authoritarianism. Nationalism was measured using a shortened fully balanced six-item version of Bizumic and Iino's (2017) Nationalism scale that had been used in Studies 1 and 2. The alpha was .53, which is low, but given the shortness of the scale and the breadth of item content (one item was drawn from each of the six subscales) seemed acceptable for use in research (Schmitt, 1996). Ethnocentric attitudes were measured using a shortened fully balanced 6-item version of Bizumic et al.'s (2009) Ethnocentrism scale that had been used in Study 1 and 2 (α = .68). Political orientation was measured using a seven-point single-item rating of liberalism versus conservatism as in Study 2. Affective thermometer warmth to the ethnic majority (i.e., White Anglo-American) group and a range of outgroups was assessed by asking participants to rate the "warmth" of their feelings to the following groups on a scale ranging from -50 (*very unfavourable*) to +50 (*very favourable*): White Anglo-Americans, African-Americans, Hispanic-Americans, foreigners, protestors, gays, drug users, Republicans, and Democrats. Anti-minority bias indicators were computed for the ethnic majority White Anglo-Americans by subtracting the warmth ratings for African- and Hispanic-Americans from the warmth ratings for White Anglo-Americans.

Results

Reliability and Factor Structure of the VSA Scale

As mentioned above, the alpha coefficient for the VSA scale was .76 (as was the McDonald's omega), and the mean inter-item correlation was .34. Confirmatory factor analyses of the six items of the VSA scale again indicated better fit for a three-factor solution (with the two items from each of the three ACT subdimensions loading on their own sub-factor) (χ^2 = 6.23, *df* = 3, RMSEA = .052, SRMR = .023, GFI = .99, CFI = 1.00, with correlated errors between the three contrait items) than for any alternate one- or two-factor solutions. Once again, the three factors were strongly positively correlated, with a particularly powerful correlation between the Authoritarian Submission

and Aggression sub-factors, and weaker correlations between them and the Conventionalism sub-factor (i.e., .68 and .53). All three primary factors loaded strongly on a single higher-order factor (ranging from .56 to 1.22).

VSA Validity Correlations

The validity correlations for the VSA scale are shown in Table 3. Importantly, the VSA scale was very highly correlated with the RWA scale (.86, computed with the one item shared by both scales deleted from the RWA scale), whereas the correlation of the ACRV-2 with the RWA scale was substantially lower (.64) and similar in magnitude to the correlation between the VSA and ACRV-2 scales (.60).

Table 3

Correlations of the VSA, RWA, and ACRV-2 Scales With Validity Indicators of Authoritarianism for the Second US Sample (N = 395)

Validity criterion	VSA	RWA	ACRV-2
RWA	.86**[b]	-	.64**
ACRV-2	.60**	-	-
Nationalism	.51**	.58**	.39**
Ethnocentrism	.47**	.59**	.38**
Political Orientation (Conservative)	.58**	.61**	.41**
Affective warmth ratings for:			
White Anglo-Americans[a]	.24**	.19**	.22**
Foreigners	-.21**	-.29**	-.16**
Protestors	-.40**	-.43**	-.28**
Gays	-.41**	-.53**	-.33**
Drug Users	-.26**	-.23**	-.25**
Republicans	.43**	.46**	.27**
Democrats	-.18**	-.27**	-.13**
Anti-minority bias against:			
African-Americans[a]	.31**	.33**	.25**
Hispanic-Americans[a]	.33**	.35**	.29**

[a]These effects were computed for only the ethnic majority group (i.e., White Anglo-Americans, *n* = 319). [b]One item shared by both scales was deleted from the RWA scale to compute this correlation.
*$p < .05$. **$p < .01$.

The correlations of the VSA scale with the important authoritarianism validity criteria of nationalism, ethnocentrism, and conservative political orientation were, as theoretically expected, all strongly positive and highly significant (mean *r* = .52), and not much below the correlations for the RWA scale (mean *r* = .59). The corresponding correlations for the ACRV-2 scale were also positive and significant but notably weaker (mean *r* = .39).

The correlations for the RWA and VSA scales with the affective warmth ratings and anti-ethnic minority bias were also as expected theoretically and significant, with those for White Anglo-Americans, Republicans, bias against African- and Hispanic-Americans positive and those for foreigners, protestors, gays, drug users, and Democrats negative. The difference in the effects obtained for the VSA and RWA scales was small (the mean *r,* disregarding sign, was .34 for the RWA and .31 for the VSA scale). The correlations for the ACRV-2 scale were also as expected and significant, but again lower in magnitude than for the VSA scale (the corresponding mean *r* was .24).

Discussion

The results once again showed satisfactory reliability and internal consistency for the VSA scale. The reliability for the short ACRV-2 scale was also satisfactory though below that of the VSA scale. In addition, confirmatory factor analysis again showed best fit for a solution with three primary factors all loading strongly on a single higher-order authoritarianism factor. The subfactor correlations again showed that the Authoritarian Aggression and Submission subfactors were too strongly correlated to be empirically differentiated, and that it would therefore not be feasible to score the VSA scale for these two subfactors.

An important finding was that the VSA scale was very powerfully correlated with the RWA scale indicating that both were measuring the same dimension. This was not the case for the ACRV-2 scale, which would appear to be measuring a related but somewhat distinct dimension from both RWA and VSA scales. This was not surprising given the different item content of the ACRV-2 scale and its failure to cover the full range of the three conceptual components underlying RWA.

The correlational findings clearly supported the validity of the VSA scale. Not only were the correlations with the validity criteria and affective thermometer ratings all consistent with theoretical expectation and significant, but in magnitude they were only marginally lower than those obtained for the RWA scale. Although the validity correlations for the ACRV-2 scale were also consistent with theoretical expectation and statistically significant, the effects for the VSA scale were always larger and sometimes substantially so (e.g., nationalism, political orientation, warmth to protestors and Republicans).

Overall, therefore, the findings of this study were consistent with those from Studies 1 and 2 in showing satisfactory reliability and internal consistency for the VSA scale and supporting a factor structure in which three primary factors reflecting the three main conceptual components of authoritarianism all loaded strongly on one single higher-order factor. In addition, the validity correlations supported the validity of the VSA scale with effects similar to and only slightly lower than for the full 30-item RWA scale. And finally, the VSA scale clearly outperformed the other ultra-short scale which has been used to measure authoritarianism, the ACRV-2, on all psychometric and validational comparisons.

General Discussion and Conclusions

The new ultra-short VSA scale performed satisfactorily in all four samples, including one student and three community samples. Its psychometric properties were acceptable for a very short scale with all Cronbach's alphas (and McDonald's omegas) exceeding .70 in all samples and mean inter-item correlations indicating high levels of internal consistency. The factor structure also consistently showed good fit for three primary sub-factors (corresponding to the three components of RWA identified by Altemeyer, 1996), which all loaded strongly on a single higher-order authoritarianism factor. Fit for this model was also consistently best when compared to fit for any possible alternative models over all samples. Nevertheless, because two of the primary factors in the 3*1 factor model were too highly correlated in all studies (i.e., Authoritarian Aggression and Submission) to be adequately empirically differentiable, scoring the VSA scale for these sub-factors does not seem feasible. Developing and validating subscale scores was of course not an objective of the current research that focussed entirely on selecting items to assess overall RWA and validating a short overall RWA scale.

It was interesting, however, that one of the three sub-factors in the higher-order CFAs, that is, Conventionalism, did seem reasonably well differentiated from the other two sub-factors. The alphas for a two-item Conventionalism subscale would also have been adequate (i.e., >.70) in all four samples (whereas those for the other two sub-factors would have been well below this level) suggesting that these two items might well provide a usable short measure of the Conventionalism RWA subdimension if it was adequately validated as such in future research. This pattern of RWA sub-component differentiation has been reported previously, notably in Mavor et al.'s (2011) three-dimensional RWA research, as well as for research on the ACT scales (Duckitt et al., 2010). Future research could investigate the feasibility of developing a very short three-dimensional RWA scale that would reliably measure all three RWA subdimensions but that would require a different item selection strategy (i.e., selecting items that loaded most highly on RWA subdimensions) to the one used in this research (i.e., selecting items that loaded most highly on the total RWA/ACT score), where the objective was to develop a short scale to provide only an overall RWA score. Currently the shortest available short three-dimensional RWA scales therefore remain Funke's (2005) 12-item scale and Mavor et al.'s (2012) 14-item scale.

The evidence for the validity of the VSA scale in this research was good. The VSA scale consistently correlated as expected theoretically with well-established validity criteria of authoritarianism, and when compared its effects were only slightly weaker than those for the ACT and RWA scales (Studies 1 and 3), with the difference partly accounted for by its somewhat lower reliability.

The comparison of the VSA scale with the only other ultra-short measure used for authoritarianism, the forced-choice ACRV-2, in Study 3 produced noteworthy findings. First, the VSA scale outperformed ACRV-2 on all comparative criteria, with better reliability and consistently better prediction of validity criteria. Second, the ACRV-2 scale did, however, achieve an acceptable alpha just exceeding .70, probably due to the use of a seven-point rating for its items in contrast to the two-, three- or five-point scales used in most prior research with markedly lower reliabilities (e.g., Feldman & Stenner, 1997; Henry, 2011; Hetherington & Suhay, 2011; Pérez & Hetherington, 2014), and did predict validity criteria as theoretically expected. Nonetheless, in addition to its inferior reliability and validity compared to the VSA scale, the ACRV-2 scale does have several other important disadvantages as a measure of authoritarianism. First, it does not cover all the components of authoritarianism identified by Altemeyer (1996) and seems to measure a somewhat different dimension to established measures of RWA. And second, the ACRV-2 scale has several psychometric problems common to forced-choice scales, such as the use of ipsative measures to compare individuals (see, e.g., Clark & Watson, 1995), the failure to show that the item pairs being opposed are equated in social desirability, and the failure to empirically validate their assumed opposition in meaning (Ray, 1990).

Finally, several important caveats of this research should be noted. The validational evidence reported here was obtained from three Anglophone countries only and student and online samples over the last several years. Australia, the UK, and the USA are democratic, economically well-off, and individualistic countries, which have similar characteristics, such as the English language, education, and legal system. All three countries also belong to the protestant religious tradition, even though the UK and Australia appear to be more secular than the US. Therefore, our investigation is primarily concerned with a study of authoritarianism in this relatively specific context and time period. Accordingly, research in non-English speaking countries using the VSA scale in translated form with more representative general population samples is clearly indicated, particularly research that could establish cross-cultural measurement invariance.

Finally, it should also be noted that although very short measures do have important advantages for researchers, we do not propose that the VSA scale replace well-established full-length measures of authoritarianism such as the RWA and ACT scales when their use is feasible. Our findings, however, do suggest that the VSA scale might be a valuable option for researchers when time and space are in short supply.

Notes

i) Items expressive of religious fundamentalism were initially excluded from the ACT scale but later included after repeated analyses indicated that they were an integral component of the Traditionalism subdimension. This was consistent with the finding by Mavor, Macleod, Boal, and Louis (2009) that RWA Conventionalism and Religious Fundamentalism correlated .99 with unreliability corrected.

ii) If we had intended to develop a scale that would best measure the three RWA subdimensions we would have used a different item selection procedure, that is, one which selected those two items (one protrait and one contrait) that loaded most strongly on each of the three specific subdimensions, and which had the highest item-total correlations with each subscale total. Instead, we selected those six items that loaded most strongly on the single factor from all ACT items and which correlated most strongly with the full ACT scale score in order to develop the best possible short measure of overall RWA.

iii) The factor loadings for primary factors on the single higher-order factor were .55 (Conventionalism), .75 (Aggression) and 1.23 (Submission). It has sometimes been suggested that solutions with loadings greater than 1 are not admissible; however, as Jöreskog (1999) has noted, this misinterprets these coefficients as correlations whereas they are actually regression coefficients. They can therefore exceed 1 and this would be particularly likely when there was a high degree of collinearity in the data (as was the case here with two of the primary factors correlating .92) and with relatively under-identified small models (i.e., as here, with only two indicators per primary and three per secondary factor).

Competing Interests

The authors have declared that no competing interests exist.

Author Contributions

The authors contributed equally to this article and their names appear in alphabetic order.

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Appendices

Appendix A: Items of the VSA Scale

- It's great that many young people today are prepared to defy authority. (Conservatism or Authoritarian Submission) (R)

- What our country needs most is discipline, with everyone following our leaders in unity (Conservatism or Authoritarian Submission)

- God's laws about abortion, pornography, and marriage must be strictly followed before it is too late. (Traditionalism or Conventionalism)

- There is nothing wrong with premarital sexual intercourse. (Traditionalism or Conventionalism) (R)

- Our society does NOT need tougher government and stricter laws. (Authoritarianism or Authoritarian Aggression) (R)

- 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. (Authoritarianism or Authoritarian Aggression)

Note. R indicates the item is reverse scored.

Appendix B: Item Characteristics in Study 1

Table B1

Descriptive Item Statistics, Item-Total Correlations and EFA Factor Loadings for the Six VSA Items in Study 1 (N = 309)

Gist item	*M*	*SD*	Skewness	Kurtosis	Item-total correlation	EFA factor loading
1. Young defy authority	-0.60	2.00	.34	-.27	.40	.42
2. Follow our leaders	-1.05	2.07	.33	-.71	.62	.67
3. God's laws on abortion	-1.92	2.40	.97	-.14	.63	.68
4. Premarital intercourse	-1.68	2.49	.93	-.29	.55	.60
5. Not need stricter laws	-0.47	1.90	.19	-.29	.46	.48
6. Harder on troublemakers	-0.06	2.01	-.25	-.50	.59	.63

Note. Values for all six items ranged from -4 to +4. The EFA factor loadings (from a single factor principal axis analysis) and the corrected item-total correlations are from analyses for all 18 ACT items.

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