

## Original Research Reports

# The Aggression-Submission-Conventionalism Scale: Testing a New Three Factor Measure of Authoritarianism

Philip T. Dunwoody\*<sup>a</sup>, Friedrich Funke<sup>b</sup>

[a] Department of Psychology, Juniata College, Huntingdon, PA, USA. [b] Faculty of Education, Technische Universität Dresden, Dresden, Germany.

### Abstract

Altemeyer's (1981) Right-Wing Authoritarianism scale is the most popular authoritarianism measure today. However, the use of a unidimensional scale to measure a three factor construct and an apparent tautology between items and predictive criteria have garnered criticism. Revisions take one of two main approaches: either they simplify the construct to be unidimensional and create new items or they retain Altemeyer's three factor theory and alter Altemeyer's original items to produce a three factor scale. We combine these two approaches by retaining Altemeyer's three factor theory while creating new items. Our new measure, the Aggression-Submission-Conventionalism (ASC) scale, allows for a test of Altemeyer's theory divorced of the original items. The ASC scale was designed to maximize discriminant validity while creating less tautological and more politically and religiously neutral items. A total of 649 participants in three convenience samples from the United States completed surveys showing the ASC scale to have good reliability and validity. The ASC scale was found to have similar predictive validity to other three factor scales but superior discriminant validity. Most importantly, we found a clear contribution of all three factors in predicting ethnocentrism, political intolerance, and anti-democratic attitudes. Authoritarian aggression emerged as the most important and consistent predictor with submission and conventionalism effects dependent upon the criterion. The ASC subscales all added unique variance above current unidimensional measures, with aggression consistently adding the most variance. Our findings support Altemeyer's three factor theory and show that unidimensional measures fail to capture the nuances of our ASC scale.

**Keywords:** anti-democratic attitudes/policies, fascism, right-wing authoritarianism, social dominance orientation, prejudice, political tolerance/intolerance

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\*Corresponding author at: Department of Psychology, Juniata College, 1700 Moore Street, Huntingdon, PA, 16652, USA. E-mail: Dunwoody@juniata.edu



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Right-Wing Authoritarianism (RWA) represents the most common theory and measure of authoritarianism today (Altemeyer, 1981, 1988, 1996). Despite the many advantages of RWA over earlier attempts to conceptualize and measure authoritarianism, this approach has been criticized for the use of a unidimensional scale to measure a three factor construct and the tautological nature of many of the RWA items. Newer approaches have redefined authoritarianism theory as unidimensional or modified Altemeyer's original items to construct a three factor scale.

The present research borrows from both of these approaches in an attempt to test Altemeyer's three factor theory using new items based on Altemeyer's theory.

*The Authoritarian Personality* by Adorno, Frenkel-Brunswik, Levinson, and Sanford (1950) was the first attempt to construct a theory and measure of authoritarianism. Adorno et al. hypothesized that some individuals were more susceptible to antidemocratic propaganda and policies than others and that this personality trait was measurable. They developed the Fascism (F) scale with three main goals. The first was "to construct a scale that would measure prejudice without appearing to have this aim and without mentioning the name of any minority group" (p. 279). The second was to "construct an instrument that would yield an estimate of fascist receptivity at the personality level" (p. 279). Lastly, the scale was to predict anti-democratic tendencies. Although *The Authoritarian Personality* generated much discussion, the approach was ultimately dismissed. The psychoanalytic underpinnings of the theory fell from favor in psychology and the F scale was shown to suffer from psychometric problems (Altemeyer, 1981). Consequently, research on authoritarianism declined through the 1960s and remained largely dormant until Altemeyer's publication of *Right-Wing Authoritarianism* in 1981.

Altemeyer (1981, 1988, 1996) did much to improve research on authoritarianism, mainly by providing an alternative to Adorno et al.'s (1950) theory and measure. Theoretically, he replaced the psychoanalytic underpinnings with Bandura's (1973) social learning theory. Empirically, he selected items based on reliability that focused on three factors: authoritarian submission, authoritarian aggression, and conventionalism. As the covariation of these traits, Altemeyer deliberately focused on right-wing authoritarianism as a particular susceptibility within North American populations who tend to be religious and uphold traditional social norms (see Altemeyer, 1981, Chapter 3).

According to Altemeyer (1996), authoritarian aggression is intentional harm (physical or psychological) toward another person (or group) if the aggressor believes that "proper authority approves it or that it will help preserve such authority" (p. 10). Authoritarian submission is "a general acceptance of the statements and actions [of those in authority] and a general willingness to comply with their instructions without further inducement" (p. 9). Conventionalism is "a strong acceptance of and commitment to the traditional social norms in one's society" (p. 11). We refer to these three constructs collectively as *Altemeyer's Big Three*. It is important to note that Altemeyer used an inductive approach by identifying items that co-varied and inferring that they tapped these three factors.

Several important precedents established by Adorno et al. (1950) were continued by Altemeyer. First, the main goals of measuring authoritarianism were to predict and explain support for antidemocratic policies, prejudice, and political intolerance. The second feature was the use of deliberately double and triple-barreled items. The third feature was the continued coexistence of a multidimensional construct with a unidimensional scale. This incongruence between the dimensionality of the construct and the measure has received increased attention in recent years (Feldman, 2003; Funke, 2005; Van Hiel, Cornelis, Roets, & De Clercq, 2007).

Funke (2005) and Van Hiel et al. (2007) both point out that measuring a multidimensional construct with a unidimensional scale is psychometrically problematic. Contributing to this concern is the design of RWA scale items as deliberately tapping at least two of the factors (i.e., "double barreled"). Accordingly, there is no one-to-one correspondence between a scale response and the factor it is intended to measure.

Because of the way the RWA scale has been constructed, researchers cannot separately analyze the three factors, leaving no way to validate Altemeyer's theory of authoritarianism. Without validation that these three factors hold together statistically, explanations based on these three factors are tenuous at best. Arguably, this approach has

at times resulted in post-hoc and speculative explanations of why the results can be explained by one of the three dimensions. Without a validated multidimensional measure, authoritarianism research will remain in a theoretical vacuum (see [Feldman, 2003](#), for a detailed critique of Altemeyer's RWA scale).

Other criticisms of the RWA scale stem from the fact that many of the items are similar to dependent measures that authoritarianism was meant to predict, such as tolerance and prejudice ([Feldman, 2003](#); [Oesterreich, 2005](#)). [Stenner \(2005\)](#) notes that the tautological nature of the RWA scale makes meaningful interpretation difficult as we are left knowing only that a host of items that measure intolerance and prejudice can predict other measures of intolerance and prejudice.

These difficulties have resulted in attempts to place the study of authoritarianism on sounder theoretical and psychometric ground. Some of these attempts define authoritarianism as a single construct; a continuum ranging from social conformity on one end to personal autonomy on the other. Examples include research by [Duckitt \(1989\)](#), [Feldman and Stenner \(1997\)](#), and [Feldman \(2003\)](#). Despite these important theoretical and empirical developments, Altemeyer's RWA scale remains popular as a measure and his three factor theory remains popular as an explanatory tool.

It is not hard to conceptualize a theoretical reason for Altemeyer's Big Three. Most authoritarianism theories, including unidimensional versions, emphasize social or group cohesion as a basic aspect of authoritarianism ([Duckitt, 1989](#); [Duckitt, Bizumic, Krauss, & Heled, 2010](#); [Feldman, 2003](#); [Stenner, 2005](#)). Research has shown that those high in authoritarianism tend to value security and conformity ([Cohrs, Kielmann, Maes, & Moschner, 2005](#); [Cohrs, Moschner, Maes, & Kielmann, 2005](#)). This desire for social cohesion fosters conventionalism, support for in-group leaders who represent social norms, and punishment of those who violate social conventions ([Duckitt, 1989](#)). As [Altemeyer \(1981, 1988, 1996\)](#) has defined authoritarianism, all of these components are necessary. Research by [Mavor, Louis, and Sibley \(2010\)](#) and by [Duckitt and Bizumic \(2013\)](#) supports Altemeyer's three factor theory. [Mavor et al. \(2010\)](#) found support in both exploratory and confirmatory factor analyses using Altemeyer's thirty item RWA scale ([Altemeyer, 1996](#)). [Duckitt and Bizumic \(2013\)](#) found superior fit for three factor solutions over single factor solutions using their own version of Altemeyer's RWA scale. They also found in a comparison of Serbian and New Zealand participants that although overall Serbs scored higher than New Zealanders, this was not true for each of the three factors. Although Serbs scored higher on authoritarian aggression and conventionalism, they scored significantly lower on authoritarian submission; a finding that is consistent with the overthrow of the Milošević government approximately one year prior to data collection. [Duckitt and Bizumic](#) also found a pattern of differential prediction, with authoritarian aggression predicting prejudice against dangerous groups but not dissident groups, and conventionalism predicting prejudice against dissident groups but not dangerous groups. Taken together, this is strong evidence that authoritarianism should be viewed as a multidimensional construct consistent with Altemeyer's theory.

[Funke \(2005\)](#) was the first to develop a multidimensional measure of authoritarianism based on Altemeyer's three constructs (the RWA<sup>3D</sup> scale). Confirmatory Factor Analysis (CFA) showed that the hypothesized three factor model fit several datasets better than a single factor model. However, there are some limitations to Funke's approach. Funke purposely modified Altemeyer's original items rather than create new items designed to tap the constructs more directly. The rationale was to solve the methodological problems gradually while preserving the construct validity of the original RWA scale. Funke's revision addressed one major criticism of the RWA scale (that of dimensionality), but does not address tautological problems inherent in Altemeyer's items. For example,

the RWA<sup>3D</sup> Authoritarian Aggression item, “It is important to protect the rights of radicals and deviants in all ways” does not address aggression, but rather political intolerance. Likewise, the RWA<sup>3D</sup> Conventionalism item, “Homosexual long-term relationships should be treated as equivalent to marriage” could easily be measuring prejudice and political intolerance. Consider the RWA<sup>3D</sup> Aggression item, “What our country really needs instead of more “civil rights” is a good stiff dose of law and order.” First, the item is not clearly focused on aggression. Second, support for a reduction in civil liberties is one thing that authoritarianism is meant to predict (see [Cohrs, Kielmann, et al., 2005](#), for an example). While Funke’s revision represents a major step forward for authoritarianism research, it is a necessary but insufficient step.

More recent research by [Duckitt et al. \(2010\)](#) uses a similar approach to that of [Funke \(2005\)](#). Like Funke, Duckitt et al. started with Altemeyer’s items and then attempted to de-double-barrel the items so that each item measured only one dimension. Starting with a large pool of items originally used by Altemeyer and then modified, Duckitt et al. produced a final scale with 12 items tapping each dimension. Duckitt et al. conceptualizes these three dimensions as ideological attitudes that express basic human values, such as those developed by [Schwartz \(1992\)](#). Prior work by [Cohrs, Moschner, et al. \(2005\)](#) and [Feldman \(2003\)](#) had also argued that values underlie the expression of authoritarian attitudes. Because Duckitt et al. emphasized attitudes that reflect human values, they used different labels for the three constructs. Authoritarian aggression was labeled authoritarianism (A), authoritarian submission was labeled conservatism (C), and conventionalism was labeled traditionalism (T). Duckitt et al. refer to their scale as the ACT scale. For the sake of linguistic simplicity and coherence within this paper, we use Altemeyer’s original labels even when referring to the work of Duckitt et al. Despite the name change, Altemeyer’s Big Three remain the core of the ACT scale and the items owe their linguistic heritage primarily to Altemeyer.

While most of the ACT items avoid the tautological problems of the RWA scale, a number of items still seem to directly tap intolerance and prejudice. For example, the Authoritarian Aggression scale includes statements such as, “we need greater tolerance” and “the strongest methods would be justified if they eliminated the troublemakers,” and the Authoritarian Submission scale includes the phrases, “protest against the government” and “People should be allowed to make speeches and write books urging the overthrow of the government.” Issues of intolerance and prejudice are also raised when explicitly religious items are included. Although the original version of the ACT scale did not include religious items, Duckitt et al.’s analysis of the data led them to argue that religion is a key component of traditionalism. For example, “God’s laws about abortion, pornography, and marriage must be followed before it is too late” is one of the Traditionalism items and the “Bible” and “sinful” ways of living are specifically referenced in other items. Explicit religious items carry with them the implied intolerance of homosexuality expressed by many Christians. Again, considering that authoritarianism is meant to predict prejudice and intolerance, the inclusion of such items creates the potential for tautology.

## The Present Study

We sought to build on previous research by developing a new three factor measure of authoritarianism that divorces Altemeyer’s three factor theory from the items originally used by Altemeyer. Divorcing Altemeyer’s three factor theory from its linguistic heritage should address many of the criticisms raised above and allow for a new test of Altemeyer’s theory. Whereas both [Funke \(2005\)](#) and [Duckitt et al. \(2010\)](#) started with Altemeyer’s items and ultimately created scales based on RWA items, we started with the definitions of Altemeyer’s Big Three (see above) and developed new items designed to tap these constructs in a more direct and narrow way. By taking this approach, we sought to test Altemeyer’s Big Three in a way that purges it of items selected through an inductive approach

and of items that seem directly linked to intolerance and prejudice. Because our new scale was based on Altemeyer's Big Three, we refer to it as the Aggression-Submission-Conventionalism (ASC) scale.

The scale was developed and tested in two student convenience samples (pilot data, not included here) and then validated in two additional student convenience samples reported here. An additional sample of both students and their parents was used to test the generalizability of the scale to a more heterogeneous population.

To partially test the construct validity of Altemeyer's Big Three, we tested the fit of three different three factor scales (our ASC scale, the RWA<sup>3</sup>D scale, and the ACT scale) as one factor constructs and three factor constructs via CFA. We expected the three factor CFAs to fit significantly better than the one factor CFAs.

To test discriminant and convergent validity among the three factor scales, we first compared them using a multi-trait, multi-method matrix (Campbell & Fiske, 1959). We expected measures of authoritarianism to be at least moderately correlated with each other, and we expected that the subscales would show convergent and discriminant validity in a multi-trait, multi-method matrix. Since a major goal was to produce a three factor measure of authoritarianism that can shed light on the relative contributions of Altemeyer's Big Three, we expected our ASC measure to have the best discriminant validity of the three scales.

Also to test discriminant and convergent validity, we included a number of variables known, or expected, to correlate with authoritarianism based on theoretical reasoning and prior research. Because a significant body of research shows that authoritarianism is typically correlated with Social Dominance Orientation (SDO) in North American samples and that they predict many of the same outcome variables (e.g., Altemeyer, 2004; Cohrs, Moschner, et al., 2005; Dunwoody, Plane, Trescher, & Rice, 2014; McFarland, 2005; Pratto, Sidanius, Stallworth, & Malle, 1994; Thomsen, Green, & Sidanius, 2008), a measure of SDO was included (but see Roccato & Ricolfi, 2005, for a review and limitations on the correlation between RWA and SDO). Because previous research has also shown that authoritarianism is associated with political ideology and religiosity (Altemeyer, 1981; Duckitt et al., 2010), items measuring these constructs were also included. Political trust refers to the degree to which people trust in government and trust those in power to do what is right (Hetherington, 1998) and bears some conceptual similarity to authoritarianism as submission to authority implies trust of those in positions of authority (i.e., government). Specifically, authoritarian submission in the abstract is trust that political authorities know what is best and should be obeyed. Hence, we included a measure of political trust based on the wording used in the National Election Study (Hetherington, 1998).

In addition to examining how the summed ASC scores correlated with the above measures, we made some specific predictions about which factors of the ASC should correlate most highly with specific variables. Given that SDO is known to correlate negatively with empathy and altruism, and positively with prejudice, support for war, the military, and preferences for harsh punishment (Dunwoody et al., 2014; Pratto et al., 1994), we expected authoritarian aggression to be correlated most strongly with SDO. We also expected authoritarian submission to be correlated most strongly with political trust, and conventionalism to be correlated most strongly with measures of religiosity and self-reported conservatism.

To test predictive validity,<sup>1</sup> we selected several constructs true to the original focus of Adorno et al. (1950), namely prejudice, political intolerance, and support for anti-democratic policies. Since authoritarianism is meant to predict these constructs, multiple regression was used to assess the unique contribution of each factor and to

compare the results using different measures of authoritarianism. Because data were collected over several years, different variables were used in different samples.

Duckitt et al. (2010) found that the main predictor for anti-democratic social policies depended upon the specific anti-democratic policy. For example, scores on the subscales of Authoritarian Aggression and Submission (but not Conventionalism) uniquely predicted support for illegal wiretaps, whereas scores on Authoritarian Aggression and Conventionalism (but not Submission) uniquely predicted support for warrantless drug raids. Rather than make specific predictions about which subscales will predict which anti-democratic policies, we used support for these policies to compare the pattern of regression weights when using Funke's (2005) RWA<sup>3</sup>D scale, Duckitt et al.'s (2010) ACT scale, and our own ASC scale. We expected to find broadly similar patterns in the regression weights when comparing the three measures. Given that the ASC scale was developed with the goals of reducing explicit political bias and eliminating religious content (see Methods section for more detail), we expected greater differences between the ASC scale and the other measures when predicting relevant variables such as support for gay marriage.

Lastly, since some new measures of authoritarianism are unidimensional, one might wonder if three factor theories have any advantage over more parsimonious unidimensional theories. We compared two unidimensional measures (Feldman, 2003; Feldman & Stenner, 1997) against our new ASC scale. Specifically, we correlated these unidimensional measures with all three factor scales and then used hierarchical regression to see if the ASC subscales would add significant variance above the unidimensional scales when predicting traditional target variables.

## Methods

### Participants and Procedures

Two convenience samples consisting of college students were taken at a small private college in the northeastern United States. In addition, data from college students and their parent or legal guardian were collected for a more heterogeneous third sample. Only a subset of the survey variables in each sample were used for the present analyses. Although self-identified race was not included in the first sample, it can be assumed that the racial makeup is similar to the other samples. Samples 1 and 2 can be characterized as predominantly white, traditional college age ( $M = 19.06$  to  $19.11$ ,  $SD = 1.18$  to  $1.92$  years). The third sample was more heterogeneous in age, ranging from 18 to 63 years ( $M = 29.96$ ,  $SD = 15.27$ ). The specifics of each sample are listed below.

**Sample 1** — One hundred and seventy-three college students completed a 119-item survey in the fall of 2008. Seventy were male and 103 were female. Eighty-seven self-identified as Democrat, 39 as Republican, 39 as independent, and 8 as other. Ninety-five percent of the sample reported being a U.S. citizen.

**Sample 2** — One hundred and ninety-eight college students completed a 90-item survey in the fall of 2009 and spring of 2010. Eighty-five were male, 109 were female, and 4 did not self-identify. Seventy-nine self-identified as Democrat, 51 as Republican, 47 as independent, 17 as other, and 4 did not self-identify. Ninety-eight percent of the sample reported being a U.S. citizen. One hundred and eighty-seven self-identified as White, 4 as Asian, 3 as Black or African American, and 4 did not self-identify.

**Sample 3** — One hundred seventy-eight college students ( $M_{age} = 18.70$ ,  $SD_{age} = 0.90$ ) and 103 of their parents or legal guardians ( $M_{age} = 49.43$ ,  $SD_{age} = 5.89$ ) completed either a 175-item survey in the fall of 2013 or a 190-item survey in the spring of 2014. Of the 178 students, 74 were male, 103 female, and 1 did not identify; 67 identified as Democrat, 50 as Republican, 40 as Independent, 6 as Libertarian, 3 as Green and 12 as other; 12 as Asian, 8 as African-American, 10 as Hispanic, 2 as Pacific Islander, 150 as White, and 2 as other. Of the 103 parents/legal guardians, 27 were male and 75 female; 35 identified as Democrats, 39 as Republicans, 23 as Independents, 1 as Libertarian, and 4 as other; 3 identified as Asian, 3 as African American, 4 as Hispanic, 91 as White, and 1 as other.

Questionnaires for Samples 1 and 2 were completed in class using bubble sheets and some students received extra credit or research credit depending on the course in which they were enrolled. Sample 3 consisted of students enrolled in Introduction to Psychology as well as one parent or legal guardian. This survey was completed on participants' own time via SurveyMonkey. Completion of all questionnaires took between 20 and 50 minutes. Participants all read an informed consent document which emphasized that participation was voluntary and that their responses would be anonymous. All surveys were approved by the local Institutional Review Board prior to data collection.

## Measures

Scores for each measure were calculated only if participants responded to all items for that measure (i.e., listwise deletion; we did not impute missing values). As such, *Ns* differ based on item completion of the measures used within each analysis. Where appropriate, ranges are shown in the note of each table.

### The Aggression-Submission-Conventionalism Scale

All three samples included our new ASC scale (see [Table 1](#) for descriptive statistics and the [Appendix](#) for items). In creating this scale, we started with the definitions of Altemeyer's Big Three as cited in the introduction. We then generated items, both protrait and contrait, that appeared to tap each construct at an abstract level. We were careful to avoid references to specific groups to avoid tautological problems and allow the scale to function in a variety of contexts. We were also careful to avoid any specific references to religion because we again wanted to allow the scale to function in a variety of contexts, including various cultures and religious contexts, as religiosity might not be inherent to Altemeyer's Big Three. Although religiosity is certainly relevant, and even related to authoritarianism, we wanted to be able to identify potential nonreligious authoritarians. In addition, religious items raise issues related to prejudice and intolerance (e.g., homosexuality) relevant to specific religious perspectives. We were also careful to avoid language that would be perceived as politically loaded. We attempted to create a scale that was more politically neutral in its orientation than prior authoritarianism scales by emphasizing the intellectual nature of each construct. Lastly, we tried to ensure that items tapped only one dimension of Altemeyer's Big Three so that we could properly test for discriminant validity.

An initial version of the ASC scale was tested in a pilot study containing 268 participants. This first draft of the ASC scale correlated at .81 with [Altemeyer's 30-item RWA scale \(1996\)](#). Five trained undergraduate researchers were then provided with the definitions of Altemeyer's Big Three and asked to rate the degree to which each item tapped each construct on a five-point rating scale. An item was retained if it had an average rating that was above the midpoint for the construct it was designed to measure, and if the average rating for that same item on the other two constructs was below the midpoint. This analysis ensured that items primarily tapped one construct so as to maximize discriminant validity. The final version of the scale contains 18 items, 6 for each subscale, balanced

for protrait and contrait items. For the final version of the ASC scale, scores within each subscale were summed and the subscales were then added together for a total ASC score. See [Appendix](#) for the final version of the ASC scale.

### Other Authoritarianism Scales

Various measures of authoritarianism were used as comparisons for our new measure of authoritarianism. [Funke's \(2005\)](#) 12-item RWA<sup>3</sup>D scale was used in Samples 1 and 3 (Cronbach's  $\alpha$  of .80 and .86 respectively). [Duckitt et al.'s \(2010\)](#) 18-item ACT scale was used in Samples 2 and 3 (Cronbach's  $\alpha$  of .84 and .89 respectively). Although the full version of the ACT has 36 items, Duckitt et al. also used the first six items of each subscale with adequate reliabilities and we did the same. Two unidimensional authoritarianism scales were also used. [Feldman's \(2003\)](#) 17-item Social Conformity vs. Autonomy (SCA) scale (Cronbach's  $\alpha$  = .82) and [Feldman and Stenner's \(1997\)](#) 4-item Child Rearing Values (CRV) scale were used in Sample 3 (Cronbach's  $\alpha$  = .62).

### Other Discriminant and Convergent Validity Measures

A variety of measures were selected to test discriminant and convergent validity based on prior research and theory. These measures include the following:

**Social Dominance Orientation** — Social Dominance Orientation was used in all samples. Samples 1 and 2 used the 16-item SDO scale ([Pratto et al., 1994](#)); Sample 3 used a 4-item Short SDO scale ([Pratto et al., 2013](#)). Sample items used include “Some groups of people are simply inferior to other groups” (Samples 1 and 2) and “Group equality should be our ideal” (reverse coded, Sample 3). Cronbach's  $\alpha$  was .91, .93, and .74 in Samples 1 through 3 respectively.

**Political Ideology** — Self-identified political ideology was measured via a five-point rating scale anchored with “strongly liberal” and “strongly conservative” in all samples. Because higher values are associated with the conservative response, this variable is labeled *conservatism* in the results.

**Religiosity** — Self-identified religiosity was measured via a five-point rating scale anchored with “not at all religious” and “strongly religious” in all samples.

**Political Trust** — Political trust was measured via a five-point rating scale anchored with “almost never” and “almost always” in Sample 2. The item, based on the National Election Study item reported by [Hetherington \(1998\)](#), read, “How much of the time do you think you can trust the federal government in Washington to do what is right?”

### Predictive Validity Measures

These variables include measures of political intolerance, prejudice, and support for anti-democratic policies. They are each described below.

**Political Intolerance** — Political intolerance was measured via a six-item scale developed by the first author. Items were generated that focused on the general principle of political tolerance, which refers to granting the full slate of civil liberties, especially free speech, to those outside the norm and with whom you may disagree. Sample items include “People who disagree with me politically deserve the same rights as I do” (reverse coded) and “Freedom of speech should not be granted to those who threaten government stability”. Although these items are similar to some of the original items in Altemeyer's RWA scale, they are conceptually distinct from our ASC scale

items. Whereas our political intolerance items all refer to limiting “speech” or “rights”, our ASC Aggression items all refer to “force”, “violence”, or “punishment” sanctioned by authorities. As mentioned earlier, the RWA scale has been criticized for the tautological inclusion of items related to political intolerance. We sought to avoid this issue by more clearly separating the concepts (and scale items) of authoritarian aggression and political intolerance. Participants responded to all political intolerance items via a five-point rating scale anchored with “strongly disagree” and “strongly agree”. The scale is balanced for protrait and contrait items. Contrait items were reverse scored and the sum of all items was computed for each participant. This scale was used in all samples and is called the Political Intolerance Scale (see [Appendix](#) for items). Cronbach’s  $\alpha$  was .86, .88, and .75 in Samples 1 through 3 respectively.

**Prejudice** — Different measures of prejudice were used in different samples. In Sample 1 we used an 11-item version of the Symbolic Racism Scale ([Sears & Henry, 2003](#)) using only items that could be fit to an agree-disagree rating scale. Sample items include “It’s really a matter of some people not trying hard enough; if Blacks would only try harder they could be just as well off as Whites” and “Blacks work just as hard to get ahead as most other Americans” (reverse coded). Reliability of the scale was good with a Cronbach’s  $\alpha$  of .86. In Sample 2, we used a seven-item anti-Black attitude scale (Cronbach’s  $\alpha = .63$ ) as well as an eight-item sexism scale (Cronbach’s  $\alpha = .91$ ) adopted from [McFarland \(2010\)](#). Sample items for anti-Black attitudes and sexism include “Over the past few years, blacks have gotten more economically than they deserve” and “Over the past few years, women have gotten more from government than they deserve” respectively. In Sample 3, we used a version of Altemeyer’s Manitoba Ethnocentrism scale as modified by [McFarland \(2010\)](#) (Cronbach’s  $\alpha = .89$ ). Sample items include “There is nothing wrong with intermarriage among the races” (reverse coded) and “As a group, Indians are naturally lazy, dishonest, and lawless.”

**Antidemocratic Attitudes** — Support for antidemocratic government policies was measured in Sample 2 by asking participants to rate the degree to which they supported or opposed particular policies described in vignettes on a rating scale. These vignettes included modern topics as well as items adapted from [Altemeyer \(1981\)](#) and [Duckitt et al. \(2010\)](#). These items included support for wiretapping phones without a warrant in the name of terrorism, support for “enhanced interrogation techniques” for terrorism suspects, support for holding enemy combatants in prison indefinitely without trial if a trial would disclose national security secrets (suspension of habeas corpus), support for the use of illegally obtained evidence (obtained without a proper warrant) in drug cases, and (lack of) support for gay marriage as a civil right (see [Appendix](#) for all items). All responses were summed for a global measure of antidemocratic tendencies (Cronbach’s  $\alpha = .63$ ). Support for antidemocratic government policies was measured in Sample 3 using items adapted from [Hetherington and Suhay \(2011\)](#). These items measured support for warrantless wiretapping, support for cameras in public places, opposition to criticizing the U.S. president, support for media censorship related to terrorism, support for torture of terrorist suspects, and support for issuing national ID cards to be present upon request by police (see [Appendix](#) for all items). Likewise, all responses were summed for a global measure of antidemocratic tendencies (Cronbach’s  $\alpha = .59$ ).

## Results

### Descriptives and Reliability

Table 1 shows the means for each ASC subscale, the ASC total, and the relevant reliabilities (Cronbach's  $\alpha$ ). Each subscale has a midpoint of 18, and the total ASC scale a midpoint of 54. Observed means approximate midpoints and reliabilities are acceptable. Sample 3 was used to compare the students with their parent or legal guardian. The parent/guardian scores were higher than student scores for every ASC subscale and total ( $p$ s < .05). Reliabilities were slightly higher for the students.

Table 1

ASC Scale Means, Standard Deviations, and Cronbach's Alphas

Sample	Scale	<i>M</i>	<i>SD</i>	$\alpha$
Sample 1	Aggression	16.49	4.59	.80
	Conventionalism	18.28	3.36	.66
	Submission	15.20	3.86	.75
	Total	50.01	8.72	.81
Sample 2	Aggression	16.96	4.65	.81
	Conventionalism	18.39	3.58	.66
	Submission	15.18	3.90	.71
	Total	50.53	8.77	.80
Sample 3: Total	Aggression	17.64	4.48	.86
	Conventionalism	19.04	3.63	.79
	Submission	14.72	3.15	.72
	Total	51.46	8.45	.85
Sample 3: Students	Aggression	17.06	4.80	.88
	Conventionalism	18.29	3.67	.79
	Submission	14.43	3.23	.74
	Total	49.89	8.84	.86
Sample 3: Parents	Aggression	18.57	3.76	.77
	Conventionalism	20.23	3.16	.74
	Submission	15.22	2.97	.69
	Total	53.91	7.18	.80

Note. *N* (Sample 1) = 172 to 173; *N* (Sample 2) = 191 to 195; *N* (Sample 3 Students) = 152 to 167; *N* (Sample 3 Parents) = 95 to 99.

### Construct Validity

Table 2 shows the CFA statistics comparing the single factor and three factor models for all samples. All models are based on six item-parcels, in which all items of one subdimension and one coding direction respectively have been aggregated. Both competing models contain three correlated factors, one for each subdimension of authoritarianism. For the one factor models the correlations were constrained to 1. The loadings were freely estimated. In addition, all negative item parcels had unit loadings on an orthogonal method factor (CT-C(*M*-1)-models) (Eid, Lischetzke, Nussbeck, & Trierweiler, 2003; Eid, Nussbeck, et al., 2008). In general, the three factor models fit better than the one factor models. The better fit of three factor models is expected, but only if the model is not

misspecified. That is, the theoretically similar items have to load on the respective factors. Thus the results are not trivial for two reasons: A significant  $\chi^2$ -difference test ( $\Delta\chi^2$ , 3 *df*) indicates (a) that one factor models are significantly worse than the theory-driven three factor models, and (b) the specification of the models based on the three theoretical subdimensions with a balance between convergent and discriminant validity is applicable.

Table 2 reports a good model fit based on the various indices for the three factor models. All one factor models are significantly worse than the three factor models. The deficient fit of the one factor models can be seen in significant *p*-values, which indicate a significant difference between the theoretical model and the empirical data. Moreover, beyond the significant  $\Delta\chi^2$  test, the Root Mean Square Error of Approximation (RMSEA) should be minimized, desirably below  $RMSEA \leq .05$  (cf. Steiger, 2007). All one factor models (which assume no discrimination between the three subdimensions) fail this criterion.

Table 2

Confirmatory Factor Analysis Model Fit (Comparing 1 Factor vs 3 Factor Models, Both With Orthogonal Method Factor)

Scale	Sample	Model	$\chi^2$	<i>df</i>	<i>p</i>	RMSEA		sRMR	GFI	CFI	cAIC
						( <i>p</i> close fit)					
ASC	Sample 1	1 Factor	40.209	8	<.001	.153 (.000)		.078	0.926	0.787	120.20
		3 Factor	12.098	5	.033	.091 (.127)		.044	0.977	0.953	110.55
	Sample 2	1 Factor	55.822	8	<.001	.175 (.000)		.094	0.920	0.755	137.44
		3 Factor	2.762	5	.737	.000 (.882)		.020	0.995	1.000	103.21
	Sample 3	1 Factor	134.683	8	<.001	.242 (.000)		.120	0.859	0.703	220.51
		3 Factor	15.535	5	.008	.088 (.085)		.034	0.982	0.975	121.17
RWA <sup>3</sup> D	Sample 1	1 Factor	30.149	8	<.001	.127 (.005)		.065	0.944	0.892	110.14
		3 Factor	15.764	5	.008	.112 (.045)		.052	0.970	0.947	114.22
	Sample 3	1 Factor	39.053	8	<.001	.120 (.001)		.052	0.954	0.945	124.88
		3 Factor	10.850	5	.054	.066 (.260)		.026	0.987	0.990	116.48
ACT	Sample 2	1 Factor	76.495	8	<.001	.210 (.000)		.089	0.886	0.779	158.11
		3 Factor	27.943	5	<.001	.153 (.001)		.054	0.955	0.926	128.39
	Sample 3	1 Factor	121.414	8	<.001	.229 (.000)		.086	0.855	0.826	207.24
		3 Factor	20.596	5	.001	.107 (.021)		.038	0.975	0.976	126.23

Note. *N* (Sample 1) = 173; *N* (Sample 2) = 198; *N* (Sample 3) = 282. RMSEA = Root Mean Square Error of Approximation; sRMR = Standardized Root Mean Square Residual; GFI = Goodness of Fit Index; CFI = Comparative Fit Index; cAIC = Consistent Akaike Information Criterion. Both models are congeneric measurement models with an additional orthogonal method factor (equal loadings,  $\tau$ -essential) to model the wording effect of the contrait-parcels. All  $\Delta\chi^2$  are significant, indicating that onedimensional models fit the data significantly worse than the theory-based three factor models. RMSEA and sRMR should be below .05, at least below .06 and .08 respectively, CFI/GFI above .95, to show a good fit to the data (Hu & Bentler, 1999).

### Convergent and Discriminant Validity

Ignoring for the moment the individual subscales, which are examined in more detail below, we found our total ASC scale correlated with the other authoritarianism scales at: .43 with CRV (Sample 3), .66 with SCA (Sample 3), .71 and .73 with RWA<sup>3</sup>D (Samples 1 and 3 respectively), and .69 and .74 with ACT (Samples 2 and 3), all *ps* < .001.

Two matrices were created with the first comparing the ASC scale to Funke's (2005) RWA<sup>3</sup>D scale and the second comparing the ASC scale to Duckitt et al.'s (2010) ACT scale (data from Sample 3). Table 3 shows results from the students in the lower-left and from the parents/guardians in the upper-right. As suggested by Campbell and Fiske (1959), we examined Table 3 to see if the strongest correlations would be along the trait diagonal (shown in italics). The ASC Aggression scale showed good convergent and discriminant validity in both samples. The ASC Submission scale correlated most strongly with the RWA<sup>3</sup>D Submission scale, the RWA<sup>3</sup>D Submission scale correlated most strongly with the ASC Aggression and Conventionalism scales. While the ASC Conventionalism scale was most strongly correlated with the RWA<sup>3</sup>D Conventionalism scale in the student sample, this was not true in the parent sample.

Table 3

Multitrait-Multimethod Correlation Matrix for RWA<sup>3</sup>D Scale and ASC Scale, Sample 3 Students (Lower-Left) and Parents (Upper-Right).

	RWA <sup>3</sup> D Agg	RWA <sup>3</sup> D Sub	RWA <sup>3</sup> D Con	ASC Agg	ASC Sub	ASC Con
RWA <sup>3</sup> D Agg	–	.57**	.49**	<b>.63**</b>	.11	.56**
RWA <sup>3</sup> D Sub	.49**	–	.66**	.55**	<b>.26**</b>	.40**
RWA <sup>3</sup> D Con	.43**	.75**	–	.38**	.20 <sup>†</sup>	<b>.45**</b>
ASC Agg	<b>.68**</b>	.49**	.47**	–	.21*	.41**
ASC Sub	.20*	<b>.46**</b>	.40**	.28**	–	.19 <sup>†</sup>
ASC Con	.34**	.51**	<b>.59**</b>	.36**	.38**	–

Note. Agg = Aggression; Sub = Submission; Con = Conventionalism; *N* (students) = 152 to 167; *N* (parents) = 93 to 97.

Correlations along the trait diagonal (indicating convergent validity) are shown in bold.

<sup>†</sup>*p* < .10. \**p* < .05. \*\**p* < .01.

Likewise, the ACT and ASC scales were compared in Table 4. ASC Aggression showed good convergent and discriminant validity in both the student and parent samples. While the ASC Submission scale correlated most strongly with the ACT Submission scale in both samples, the reverse was not true. The ACT Submission scale correlated most strongly with ASC Submission in the student sample, but with ASC Aggression in the parent sample. The ASC Conventionalism scale correlated most strongly with the ACT Conventionalism scale in the student sample but with the ACT Aggression scale in the parent sample.

Table 4

Multitrait-Multimethod Correlation Matrix for ACT Scale and ASC Scale, Sample 3 Students (Lower-Left) and Parents (Upper-Right).

	ACT Agg	ACT Sub	ACT Con	ASC Agg	ASC Sub	ASC Con
ACT Agg	–	.68**	.29**	<b>.64**</b>	.24*	.56**
ACT Sub	.61**	–	.55**	.51**	<b>.34**</b>	.46**
ACT Con	.55**	.68**	–	.33**	.25*	<b>.33**</b>
ASC Agg	<b>.62**</b>	.52**	.37**	–	.21*	.41**
ASC Sub	.24**	<b>.59**</b>	.39**	.28**	–	.19 <sup>†</sup>
ASC Con	.47**	.55**	<b>.59**</b>	.36**	.38***	–

Note. Agg = Aggression; Sub = Submission; Con = Conventionalism. For ease of interpretation, Duckitt's ACT scale factors are labeled with the more traditional terms of Aggression, Submission, and Conservatism. *N* (students) = 146 to 162; *N* (parents) = 96 to 98.

Correlations along the trait diagonal (indicating convergent validity) are shown in bold.

<sup>†</sup>*p* < .10. \**p* < .05. \*\**p* < .01.

The RWA<sup>3</sup>D scale had an average intercorrelation of .56 and .57 among the student and parent subsamples respectively, with Authoritarian Submission and Conventionalism failing to achieve good discriminant validity (correlating at .75 and .66) (see Table 3). The ACT scale had an average intercorrelation of .61 and .51 in the student and parent samples respectively, with a highest correlation of .68 (see Table 4). The ASC had better discriminant validity among the subscales with an average correlation of only .34 and .27 in the student and parent samples respectively and a highest correlation among the subscales of only .41.

Table 5 shows variables that authoritarianism should correlate with based on past research and theory. More specifically, we expected the subscales to correlate in meaningful ways with the listed criterion variables as specified in the Introduction.

Table 5

*Correlations Between Three Factor Scales and Constructs Known to Correlate With Authoritarianism*

	ASC				RWA <sup>3</sup> D				ACT			
	Agg	Sub	Con	Total	Agg	Sub	Con	Total	Agg	Sub	Con	Total
<b>SDO</b>												
Sample 1	.48**	.41**	.20**	.50**	.33**	.49**	.36**	.48**				
Sample 2	.48**	.41**	.02	.47**					.22**	.41**	.20**	.42**
Sample 3: Students	.43**	.20*	.33**	.46**	.40**	.48**	.39**	.50**	.35**	.40**	.38**	.44**
Sample 3: Parents	.28**	.08	.25**	.28**	.48**	.38**	.26**	.46**	.32**	.30**	.21*	.32**
<b>Political Trust</b>												
Sample 2	.10	.30**	.20**	.28**					.12	.24**	.14	.25**
<b>Conservatism</b>												
Sample 1	.42**	.33**	.29**	.55**	.49**	.36**	.48**	.55**				
Sample 2	.49**	.23**	.29**	.49**					.50**	.38**	.44**	.58**
Sample 3: Students	.41**	-.03	.42**	.38**	.46**	.44**	.57**	.60**	.41**	.40**	.49**	.52**
Sample 3: Parents	.41**	.08	.31**	.39**	.25*	.45**	.63**	.53**	.30**	.32**	.56**	.49**
<b>Religiosity</b>												
Sample 1	.12	.04	.20**	.15	.27**	.19*	.38**	.36**				
Sample 2	.08	.17*	.21**	.20**					.23**	.14	.39**	.32**
Sample 3: Students	.20*	.29**	.39**	.37**	.16*	.41**	.64**	.50**	.32**	.48**	.56**	.53**
Sample 3: Parents	.18 <sup>†</sup>	.14	.22*	.25*	.02	.30**	.44**	.31**	.07	.24*	.54**	.36**

*Note.* Agg = Aggression; Sub = Submission; Con = Conventionalism. For ease of interpretation, Duckitt's ACT scale factors are labeled with the more traditional terms of Aggression, Submission, and Conservatism. *N* (Sample 1) = 173; *N* (Sample 2) = 198; *N* (Sample 3 Students) = 178; *N* (Sample 3 Parents) = 103.

<sup>†</sup>*p* < .10. \**p* < .05. \*\**p* < .01.

As predicted, the ASC Aggression scale was most strongly correlated with SDO in all three samples. Although this pattern was consistent across all samples when using the ASC scale, it was not found with the RWA<sup>3</sup>D and the ACT scales. However, all scales showed that SDO was correlated with all components of authoritarianism. As predicted, the ASC Submission scale had the highest correlation with political trust; this was also true of the ACT scale.

Contrary to predictions, self-reported conservatism had the highest correlation with ASC Aggression, and not with ASC Conventionalism, in Samples 1 and 2. In Sample 3, conservatism was most strongly correlated with ASC

Aggression in the parent sample and almost equally with ASC Aggression and Conventionalism in the student sample. Almost all subscales for all measures were correlated with self-reported conservatism. As predicted, conventionalism had the highest correlation with religiosity in all samples for all three scales. As expected, the ACT and RWA<sup>3</sup>D correlated more strongly with religiosity than the ASC scale.

**Predictive Validity**

Table 6 shows the beta weights for the ASC, RWA<sup>3</sup>D, and ACT scales in predicting the traditional target variables. We report regressions for Sample 3 separately for students and parents because we wanted to test generalizability across samples. However, doing so also reduced the sample size significantly and makes the beta coefficients less stable. For this reason, we also report the regressions for Sample 3 total (students and parents combined) and focus on only the Sample 3 total in the following description.

Table 6

*Beta Coefficients and R<sup>2</sup> for Traditional Target Variables of Authoritarianism*

Criterion Variables	ASC				RWA <sup>3</sup> D				ACT			
	Agg	Sub	Con	R <sup>2</sup>	Agg	Sub	Con	R <sup>2</sup>	Agg	Sub	Con	R <sup>2</sup>
<b>Symbolic Racism</b>												
Sample 1	.19*	.16*	.09*	.11**	.12	.14	.08	.08**				
<b>Anti-Black Attitude</b>												
Sample 2	.22**	.24**	-.02	.15**					.04	.26**	.21**	.18**
<b>Sexism</b>												
Sample 2	.18*	.25**	-.04	.12**					-.13 <sup>†</sup>	.35**	.18*	.17**
<b>Ethnocentrism</b>												
Sample 3: Students	.46**	.08	.21**	.36**	.30**	.32**	.22*	.50**	.22*	.16 <sup>†</sup>	.37**	.43**
Sample 3: Parents	.51**	.02	.15	.35**	.47**	.14	.20 <sup>†</sup>	.48**	.39**	.24 <sup>†</sup>	.14	.44**
Sample 3: Total	.47**	.07	.21**	.37**	.33**	.27**	.24**	.50**	.30**	.20*	.28**	.44**
<b>Political Intolerance</b>												
Sample 1	.23**	.52**	.03	.41**	.12	.50**	.05	.34**				
Sample 2	.11	.51**	-.13*	.31**					-.27**	.58**	.20**	.38**
Sample 3: Students	.42**	.26*	.09	.35**	.35**	.40**	.01	.51**	.11	.43**	.15	.38**
Sample 3: Parents	.27*	.20*	.18 <sup>†</sup>	.22**	.44**	.35**	.07	.43**	.23*	.48**	-.05	.40**
Sample 3: Total	.37**	.24**	.08	.28**	.37**	.42**	-.02	.46**	.17*	.46**	.01	.35**
<b>Anti-Democratic Attitude</b>												
Sample 2	.35**	.08*	.23**	.25**					.40**	.15*	.19*	.35**
Sample 3: Students	.47**	.16*	.14 <sup>†</sup>	.36**	.34**	.37**	-.02	.36**	.40**	.41**	-.12	.42**
Sample 3: Parents	.35**	.23*	.23*	.36**	.47**	.15	.16	.47**	.41**	.35**	.06	.53**
Sample 3: Total	.43**	.18**	.17**	.36**	.39**	.26**	.08	.39**	.38**	.38**	-.04	.46**

Note. Agg = Aggression; Sub = Submission; Con = Conventionalism. For ease of interpretation, Duckitt's ACT scale factors are labeled with the more traditional terms of Aggression, Submission, and Conservatism. N (Sample 1) = 173; N (Sample 2) = 198; N (Sample 3 Students) = 178; N (Sample 3 Parents) = 103.

<sup>†</sup>p < .10. \*p < .05. \*\*p < .01.

For the ASC, Aggression had a significant beta coefficient in eight of the nine regressions and had the highest coefficient in five. Submission had a significant beta coefficient in seven of nine regressions and had the highest coefficient in four. Conventionalism had a significant beta coefficient in four of nine regressions and never had

the highest coefficient. Across all criterion variables in Table 6, the ACT scale had a predictive advantage (i.e., higher  $R^2$ ) over the ASC scale, but typically not over the RWA<sup>3</sup>D scale.

Table 7 shows a very similar pattern of beta coefficients for the ASC and ACT scales (RWA<sup>3</sup>D was not included in Sample 2) in predicting the five antidemocratic policies included in Sample 2. The biggest difference appeared in predicting support for gay marriage. Not surprisingly, the ACT Conventionalism scale had a larger beta coefficient than the ASC Conventionalism scale when predicting support for gay marriage. Given that Duckitt et al. (2010) included religious items in their measure and we deliberately excluded religious items, this difference in scale content likely accounts for the observed difference in beta coefficients. Despite the deliberate exclusion of religious items, the ASC Conventionalism scale was still a significant (negative) predictor of support for gay marriage as a civil right. The ACT scale predicted more variance on average than the ASC scale (average  $R^2$  of .18 versus .13); however, this was not true for each item. The ASC had a predictive advantage in two items while the ACT had a predictive advantage in three.

Table 7

*Beta Coefficients for ASC and ACT Scales Predicting Support for Anti-Democratic Policies in Sample 2*

Criterion Variables	ASC				ACT			
	Agg	Sub	Con	$R^2$	Agg	Sub	Con	$R^2$
<i>Support for...</i>								
Warrantless Wiretaps	.22*	.15 <sup>†</sup>	.12	.13**	.33**	.15 <sup>†</sup>	.04	.20**
Enhanced Interrogation	.39**	-.09	.12 <sup>†</sup>	.17**	.27**	.19*	-.07	.14**
Suspension of habeas corpus	.30**	.03	.34**	.27**	.33**	.08	.16*	.22**
Use of illegal evidence	.04	.15 <sup>†</sup>	.02	.03	.20*	.17*	.04	.12**
Gay marriage as a civil right	-.16*	-.01	-.16*	.07**	-.15*	.12	-.43**	.20**

*Note.* Agg = Aggression; Sub = Submission; Con = Conventionalism. For ease of interpretation, Duckitt's ACT scale factors are labeled with the more traditional terms of Aggression, Submission, and Conservatism.  $N = 198$ .

<sup>†</sup> $p < .10$ . \* $p < .05$ . \*\* $p < .01$ .

Table 8 shows beta coefficients for the ASC, RWA<sup>3</sup>D, and ACT scales in predicting six specific anti-democratic attitudes used in Sample 3. The pattern of beta weights was generally, but not always, consistent across the student, parent, and combined samples. Although there was general consistency, it is difficult to know whether the observed differences between the student and parent samples represent real differences or greater fluctuation in the beta weights due to the smaller sample sizes. For this reason, we focused our summary on the combined student and parent sample.

Aggression was the strongest unique predictor in all three scales for torturing terrorist suspects and required national ID cards. Aggression was the strongest unique predictor for warrantless wiretapping in the ASC and RWA<sup>3</sup>D scales (but not the ACT scale). Aggression was the strongest unique predictor for media censorship in the RWA<sup>3</sup>D and ACT scales (but not the ASC scale). Submission was the strongest unique predictor for opposition to criticizing the president in the ASC and ACT scales (but not the RWA<sup>3</sup>D scale). Submission was the strongest unique predictor for public surveillance in the RWA<sup>3</sup>D and ACT scales (but not the ASC scale). On average, all three measures predicted similar variance across the six variables. The ASC scale had a predictive advantage in three of the six

regressions while the ACT had a predictive advantage in three. The RWA<sup>3</sup>D scale was generally between the ASC and ACT scales in predictive ability.

Table 8

Beta Weights and R<sup>2</sup> in Predicting Support for Specific Anti-Democratic Policies

Criterion Variables	ASC				RWA <sup>3</sup> D				ACT			
	Agg	Sub	Con	R <sup>2</sup>	Agg	Sub	Con	R <sup>2</sup>	Agg	Sub	Con	R <sup>2</sup>
<b>Warrantless Wiretaps</b>												
Sample 3: Students	.25**	-.02	.18**	.12**	.08	.25*	.01	.09**	.28**	.21 <sup>†</sup>	-.14	.13**
Sample 3: Parents	.23*	.20*	.06*	.13**	.36**	.02	.04	.16**	.02	.27 <sup>†</sup>	.04	.10*
Sample 3: Total	.24**	.08	.14**	.12**	.19**	.15	.05	.11**	.17*	.21*	-.01	.11*
<b>Public Surveillance</b>												
Sample 3 Students	.15 <sup>†</sup>	.14	.08	.08**	.07	.30*	-.10	.07**	.14	.25*	.02	.12**
Sample 3: Parents	.21 <sup>†</sup>	.19 <sup>†</sup>	.06	.12**	.16	.08	.26 <sup>†</sup>	.17**	.28*	.10	.18	.21**
Sample 3: Total	.17**	.16*	.09	.10**	.11	.19*	.07	.10**	.18*	.20*	.07	.16**
<b>Criticizing President</b>												
Sample 3: Students	.20*	.24**	.07	.15**	.17 <sup>†</sup>	.22 <sup>†</sup>	.01	.12**	.03	.35**	.03	.14**
Sample 3: Parents	.06	.17	-.04	.03	.18	-.16	.31*	.11*	.02	.15	.22 <sup>†</sup>	.12**
Sample 3: Total	.15*	.21*	.03	.09**	.17*	.06	.12	.09**	-.02	.29**	.09	.11**
<b>Media Censorship</b>												
Sample 3: Students	.21*	.18*	.03	.11**	.11	.07	.02	.03	.24*	.25*	-.31**	.10**
Sample 3: Parents	.16	.31**	.19 <sup>†</sup>	.23**	.20	.14	-.04	.08 <sup>†</sup>	.25 <sup>†</sup>	.08	.10	.13**
Sample 3: Total	.20*	.22*	.13 <sup>†</sup>	.16**	.15*	.06	.06	.05*	.21**	.17 <sup>†</sup>	-.08	.09**
<b>Torturing Terrorists</b>												
Sample 3: Students	.59**	-.12	.09	.36**	.46**	.11	-.08	.24**	.35**	.12	-.11	.14**
Sample 3: Parents	.36**	-.01	.17	.21**	.42**	.26*	-.06	.33**	.48**	.03	-.09	.23**
Sample 3: Total	.52**	-.07	.07	.29**	.45**	.17*	-.09	.26**	.39**	.10	-.12	.17**
<b>National ID Cards</b>												
Sample 3: Students	.23**	.16 <sup>†</sup>	.08	.13**	.23**	.28*	.03	.21**	.28**	.29**	-.04	.24**
Sample 3: Parents	.25*	.05	.18 <sup>†</sup>	.15**	.29*	.17	.05	.19**	.28*	.40**	-.15	.33**
Sample 3: Total	.24**	.10*	.10	.13**	.25**	.21*	.06	.20**	.30**	.34**	-.09	.27**

Note. Agg = Aggression; Sub = Submission; Con = Conventionalism. For ease of interpretation, Duckitt's ACT scale factors are labeled with the more traditional terms of Aggression, Submission, and Conservatism. N (Sample 3 Students) = 178; N (Sample 3 Parents) = 103.

<sup>†</sup>p < .10. \*p < .05. \*\*p < .01.

Lastly, we examined the correlations between unidimensional measures and three factor measures and tested the incremental validity of our ASC scale over these unidimensional measures in Sample 3. As before, we analyzed Sample 3 separately for both students and parents, as well as combined. Since the results are relatively consistent, we discuss only the results for the combined sample.

Feldman's (2003) SCA scale correlated much more strongly with all other authoritarianism measures than the CRV scale (Feldman & Stenner, 1997) (see Table 9). Table 10 shows the results of hierarchical regression with either SCA or CRV entered first (Model 1) and the ASC subscales entered next (Model 2). We sought to test whether predictive variance was added with the ASC subscales by examining the change in R<sup>2</sup> and to identify which subscales accounted for this increase via significant beta weights. A consistent pattern of one or more ASC

subscales adding unique variance would imply that these factors are not captured fully in the unidimensional scales.

Table 9

*Correlations Between Unidimensional Measures and all Three of the Three Factor Authoritarianism Scales*

	ASC				RWA <sup>3</sup> D				ACT			
	Agg	Sub	Con	Total	Agg	Sub	Con	Total	Agg	Sub	Con	Total
<b>SCA</b>												
Sample 3: Students	.53**	.37**	.57**	.67**	.50**	.72**	.76**	.79**	.65**	.70**	.72**	.81**
Sample 3: Parents	.46**	.21 <sup>†</sup>	.61**	.59**	.53**	.70**	.69**	.75**	.60**	.71**	.58**	.74**
Sample 3: Total	.53**	.34**	.60**	.66**	.52**	.72**	.75**	.78**	.64**	.72**	.69**	.80**
<b>Child Rearing</b>												
Sample 3: Students	.33**	.29**	.44**	.47**	.38**	.60**	.53**	.61**	.37**	.56**	.50**	.56**
Sample 3: Parents	.34**	.23*	.29**	.39**	.35**	.55**	.53**	.57**	.41**	.61**	.47**	.59**
Sample 3: Total	.33**	.27**	.37**	.43**	.37**	.58**	.52**	.59**	.38**	.56**	.47**	.55**

*Note.* Agg = Aggression; Sub = Submission; Con = Conventionalism. For ease of interpretation, Duckitt's ACT scale factors are labeled with the more traditional terms of Aggression, Submission, and Conservatism. *N* (Sample 3 Students) = 137 to 163; *N* (Sample 3 Parents) = 80 to 98; *N* (Sample 3 Total) = 219 to 259.

<sup>†</sup>*p* < .10. \**p* < .05. \*\**p* < .01.

The ASC subscales added significant predictive variance for all target variables. This change in  $R^2$  was greater when using the CRV scale ( $R^2_{Change} = .15$  to  $.23$ ) than when using the SCA scale ( $R^2_{Change} = .07$  to  $.20$ ). Examination of the beta weights showed that this significant increase in variance was due mostly to the ASC Aggression subscale, which added significant variance when predicting ethnocentrism, political intolerance, and anti-democratic attitudes. When predicting political intolerance, the ASC Submission subscale also added unique variance to both unidimensional scales. All three ASC subscales added unique variance to the unidimensional scales when predicting support for a summative measure of anti-democratic attitudes.

It is important to note that both the SCA and CRV still contributed unique variance in predicting ethnocentrism and anti-democratic attitudes when the ASC subscales were added (see Model 2 in Table 10). When predicting political intolerance, however, adding the ASC subscales resulted in the SCA scale, but not the CRV scale, having a non-significant unique contribution.

Table 10

Beta Weights and  $R^2$  Using Hierarchical Regression With Unidimensional Scales (SCA or CRV) Entered in Model 1 and ASC Subscales Entered in Model 2 for Predicting Ethnocentrism, Political Intolerance, and Anti-Democratic Attitudes in Sample 3

	Students/Parents				Total			
	SCA		CRV		SCA		CRV	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
<b>Ethnocentrism</b>								
SCA or CRV	.69**/.57**	.55**/.37**	.53**/.30**	.35**/.08**	.67**	.49**	.45**	.25**
Aggression		.27**/.35**		.40**/.48**		.30**		.43**
Submission		-.02/.00		.02/.01		-.00		.03
Conventionalism		-.01/.10		.10/.15		.03		.15*
$R^2$	.47**/.32**	.53**/.44**	.28**/.09**	.46**/.44**	.45**	.52**	.20**	.43**
$R^2$ change		.05**/.11**		.18**/.27**		.07**		.23**
<b>Political Intolerance</b>								
SCA or CRV	.59**/.52**	.40**/.48**	.51**/.38**	.33**/.23*	.56**	.44**	.47**	.31**
Aggression		.29**/.16		.36**/.21 <sup>†</sup>		.25**		.31**
Submission		.20**/.23*		.22**/.17 <sup>†</sup>		.21**		.19**
Conventionalism		.08/.13		.02/.14		-.15*		.00
$R^2$	.34**/.27**	.44**/.35**	.26**/.14**	.44**/.26**	.31**	.40**	.22**	.36**
$R^2$ change		.10**/.07 <sup>†</sup>		.18**/.12**		.09**		.15**
<b>Anti-Democratic Attitudes</b>								
SCA or CRV	.43**/.44**	.06/.08	.42**/.42**	.19*/.18 <sup>†</sup>	.44**	.06	.41**	.17**
Aggression		.45**/.36**		.43**/.32**		.42**		.39**
Submission		.17*/.25**		.13 <sup>††</sup> /.22*		.19**		.15**
Conventionalism		.11/.21 <sup>†</sup>		.08/.18 <sup>†</sup>		.14*		.12*
$R^2$	.19**/.19**	.38**/.42**	.17**/.18**	.37**/.36**	.19**	.39**	.17**	.39**
$R^2$ change		.19**/.23**		.22**/.21**		.20**		.22**

Note. SCA = Social Conformity vs. Autonomy; CRV = Child Rearing Values.  $N$  (Sample 3 Students) = 132 to 146;  $N$  (Sample 3 Parents) = 77 to 89;  $N$  (Sample 3 Total) = 210 to 236.

<sup>†</sup> $p < .10$ . \* $p < .05$ . \*\* $p < .01$ .

## Discussion

Our goal was to develop a new measure of authoritarianism that would provide a different test of Altemeyer’s Big Three and allow for theoretical development focused on the three individual factors. Understanding the dimensionality of authoritarianism is key to defining the construct and guiding future research.

### Reliability

All ASC totals yielded good reliabilities (Cronbach’s  $\alpha = .80$  to  $.86$ ). The ASC Aggression scale had consistently good alphas ( $.77$  to  $.88$ ) whereas the reliabilities for the Conventionalism and Submission scales were lower but generally still acceptable (ranging from  $.66$  to  $.79$  and  $.69$  to  $.75$  respectively). Although the Conventionalism and Submission reliabilities were still within the acceptable range, they represent a place for potential improvement in the ASC scale.

## Construct Validity

We hypothesized and found that, in general, the three factor CFAs fit the data significantly better than the single factor CFAs (Table 1). The better fit of three factor models is expected only if theoretically similar items load on their respective factors. The deficient fit of the one factor models, relative to the three factor models, can be seen in their higher RMSEA and lower  $p$  values.

## Discriminant and Convergent Validity

Our new measure was moderately to strongly correlated with all measures of authoritarianism used in this study. Despite not using any of Altemeyer's original items, the ASC correlated strongly with the RWA<sup>3</sup>D (Funke, 2005) and the ACT (Duckitt et al., 2010) scales, which both used modified versions of Altemeyer's original items. These correlations indicate that despite different starting points for scale creation, the ASC scale is tapping something similar to the original construct.

From both Tables 3 and 4, it is clear that submission was not measured the same way among the three scales. While the ASC Submission scale correlated most strongly with the Submission scales of the ACT and RWA<sup>3</sup>D scales, the Submission scales of ACT and RWA<sup>3</sup>D correlated roughly equally with all three ASC scales indicating that the elements of the ACT and RWA<sup>3</sup>D Submission scales are represented in all three ASC scales. This pattern is consistent with the higher correlations among the RWA<sup>3</sup>D and ACT subscales. Although the ASC Conventionalism scale correlated most strongly with the RWA<sup>3</sup>D Conventionalism scale, it correlated almost equally with all ACT scales. It is possible that the cause of both of these patterns is the deliberately narrow construction of the ASC scales as well as differences in foci. For example, both the ACT and RWA<sup>3</sup>D Submission scales emphasize obedience to authority whereas the ASC Submission scale emphasizes trust in authority. However, in Sample 2, political trust was correlated most strongly with the ASC and RWA<sup>3</sup>D Submission scales indicating that both are related to trust in authority (see Table 5). Altemeyer (1981) stressed both trust in, and obedience to, leaders in his discussion of authoritarian submission.

The deliberately narrow construction of the ASC subscales resulted in better discriminant validity compared to the RWA<sup>3</sup>D and ACT scales. The improved discriminant validity among the subscales of the ASC should help address some of the theoretical difficulties raised by Feldman (2003). With better discriminant validity and the resulting lower collinearity in regression analyses, it should be easier to develop and test hypotheses based in only one or two of Altemeyer's Big Three. Compared to the RWA<sup>3</sup>D and the ACT, we believe this to be the major advantage of the ASC. Altemeyer explicitly defined RWA as the covariation of these three traits and used this rationale as his justification of double (and even triple) barreled items. We have taken a more theoretically testable approach and believe that it is preferable to define the constructs separately, while testing their covariation and predictive validity empirically.

The pattern of correlations between the ASC scale and other variables was largely consistent with theoretical predictions (see Table 5). As predicted, SDO was most strongly correlated with ASC Aggression in all samples. This was not true of the RWA<sup>3</sup>D and ACT, which showed a more equal correlation pattern. Again, the greater discriminant validity of the ASC likely accounts for this difference. Nevertheless, all three factors of all three scales correlated with SDO.

Across all three scales, self-reported religiosity correlated most strongly with the conventionalism subscales. Although Duckitt et al. (2010) originally excluded religious items, they argued that the data ultimately supported the

inclusion of such items. Similarly, [Hetherington and Weiler \(2009\)](#) argued that the close relationship between religion and authoritarianism is one factor that has aided in the development of authoritarianism as a partisan divide in the U.S. in recent years. Certain aspects of political intolerance, such as views about gay marriage, are obviously tied to contemporary religious beliefs. It is not yet clear if religiosity should be conceptualized as a necessary part of authoritarianism as recently done by [Duckitt et al. \(2010\)](#), or as a separate construct. Religion is arguably less important than nationalism in fascist ideology. For example, religion was not a central tenant of Nazism, although nationalism was. We argue that although religion is often a component of right-wing extremism, it is not a *necessary* component of right-wing authoritarianism. Of the three scales, our ASC scale showed the lowest correlation with religiosity. We believe this to be another potential advantage of the ASC scale as it might have more cross-cultural validity, given that religiosity and authoritarianism are not universally correlated ([Ekehammar & Sidanius, 1982](#); [Nilsson & Ekehammar, 1991](#)). Since the ASC scale includes a Conventionalism subscale, we would expect correlations between the ASC scale and religiosity to depend somewhat on the predominant social norms within the society. Specifically, the ASC scale should correlate more with religiosity in countries where religious beliefs are more normative than secular beliefs and less with religiosity in countries where secular beliefs are more normative than religious beliefs. Cross-cultural research using the ASC scale is needed to test this hypothesis.

Contrary to predictions, self-reported conservatism was most strongly correlated with the ASC Aggression rather than Conventionalism subscale. Across all three scales and the majority of samples, aggression, submission, and conventionalism were correlated with self-reported conservatism (see [Table 5](#)). It should be acknowledged that we used a single self-report item for liberal-conservative identification. Such unidimensional, self-report measures of political ideology are overly simplistic ([Conover & Feldman, 1981](#); [Feldman & Johnston, 2009](#)). Since conservatism can be decomposed into at least two components, social conservatism and economic conservatism, our unidimensional ideology measure is vague. [Altemeyer \(1998\)](#) has argued that his RWA scale is related to social conservatism and [Feldman and Johnston \(2009\)](#) argue that SDO is more closely linked with economic conservatism. This division is also consistent with [Duckitt's \(2001\)](#) Dual Process Model (see also [Duckitt & Sibley, 2010](#); [Thomsen et al., 2008](#)). Despite our attempt to create a more politically neutral scale, it may be that Altemeyer's Big Three are intrinsically linked to conservatism because they serve similar psychological needs ([Jost, Glaser, Kruglanski, & Sulloway, 2003](#)).

### Predictive Validity

[Tables 6 and 7](#) show that, in general, the ACT scale had a predictive advantage over the ASC scale. It is possible that the narrower focus of the ASC subscales is the reason for this. However, it is also possible that the ACT scale captures more of the emotion contained in Altemeyer's RWA items. It is also true that the ACT scale includes items that could be viewed as tautologically related to the constructs being predicted and that the deliberate creation of ASC items to avoid this tautology and narrowly focus on each construct reduced the predictive ability of the scale. If the ASC scale taps Altemeyer's Big Three while avoiding tautological ties with the variables that authoritarianism is meant to predict while maximizing discriminant validity, then the reduction in predictive validity is an acceptable cost. However, future research might focus on the addition of items that illicit a more emotional reaction and this may further improve the predictive validity of the ASC scale.

When predicting prejudice, there were different patterns of results depending on the criterion chosen. When using measures of anti-Black racism (see [Table 6](#)), the ASC scale showed unique contributions of both Aggression and Submission but not Conventionalism. In contrast, the ACT scale showed unique contributions of Submission and

Conventionalism, but not Aggression. For both the ASC and ACT scales, submission was the main factor predicting sexism. When predicting ethnocentrism, all three measures showed a consistent pattern of aggression as the strongest unique predictor.

When predicting political intolerance scores, we found general agreement between all three scales with aggression and submission, but not conventionalism, predicting significant unique variance. It is important to note that our scale measures political intolerance as an abstract construct. So although conventionalism may not predict abstract notions of political intolerance, it may predict intolerance directed at specific groups. For example, [Table 7](#) (Sample 2) showed that both authoritarian aggression and conventionalism were significant predictors of opposition to gay marriage as a civil right. Since political tolerance by definition is extending the full slate of civil liberties to groups with whom you disagree, this opposition to gay marriage as a civil right is a clear example of political intolerance. This finding is consistent with prior research showing that although people may support political tolerance in the abstract, they do not always do so concretely in practice ([Marcus, Neuman, & MacKuen, 2000](#)).

When predicting the total scores in anti-democratic attitudes in Sample 3, Aggression and Submission were significant in all three scales (with the exception of Sample 2 for the ASC). Conventionalism was consistently a significant predictor only when using the ASC scale. An examination of the specific policies ([Table 8](#)) showed that the ASC Conventionalism subscale was a significant predictor only when predicting support for warrantless wiretapping. The vast majority of the coefficients for conventionalism were nonsignificant for the ASC, RWA<sup>3</sup>D, and ACT scales. It is possible that the greater collinearity observed in the RWA<sup>3</sup>D and ACT scales accounts for this difference, as the unique contribution will be more difficult to observe. Considering that the observed correlations between Authoritarian Submission and Conventionalism subscales were .65 for the ACT scale and .73 for the RWA<sup>3</sup>D scale, our observed contribution when using the ASC scale to predict anti-democratic tendencies may be genuine, but unobservable when using the ACT or RWA<sup>3</sup>D scales.

### Altemeyer's Big Three

Consistent with prior research by [Duckitt et al. \(2010\)](#), authoritarian aggression consistently emerged as contributing unique variance across all authoritarianism measures and samples when predicting support for a wide variety of anti-democratic policies (see [Tables 7 and 8](#)). Likewise, authoritarian aggression added the most unique variance beyond unidimensional measures of authoritarianism predicting ethnocentrism, political intolerance, and anti-democratic attitudes (see [Table 10](#)).

Authoritarian submission was a consistent unique predictor of generic political intolerance and general anti-democratic attitudes, across all samples and measures (see [Table 6](#)). This was also true when predicting general ethnocentrism for the RWA<sup>3</sup>D and ACT scales, but not for the ASC scale. It is unclear if this difference in significant contribution by the submission measures is due to the lower collinearity of the ASC or to differences in what the scales measure. The ASC Submission scale also uniquely predicted support for specific anti-democratic policies such as public surveillance, limits on criticizing the president, media censorship, and support for required national ID cards (see [Table 8](#)). Authoritarian Submission also added unique variance above unidimensional measures of authoritarianism when predicting political intolerance and anti-democratic attitudes (see [Table 10](#)).

Conventionalism emerged as a relatively consistent unique predictor for ethnocentrism and support for specific anti-democratic policies (see [Tables 6 and 7](#)). These policies included the opposition to gay marriage as a civil right and support for detaining terrorists indefinitely without trial (suspension of habeas corpus). Conventionalism

also added unique variance above the CRV scale, but not the SCA scale, when predicting general ethnocentrism, and to both the SCA and CRV scales when predicting anti-democratic attitudes (see [Table 10](#)).

The finding that all components of Altemeyer's Big Three were significant predictors of traditional target variables is theoretically important but nuanced. Given that one major criticism of authoritarianism has been its relationship with right-wing political beliefs (see [Eysenck, 1954](#); [Feldman, 2003](#); [Stenner, 2005](#); [Van Hiel, Duriez, & Kossowska, 2006](#)) and conventionalism appears most similar to political conservatism, it is tempting to argue that conventionalism is not a necessary part of authoritarianism. [Van Hiel et al. \(2006\)](#) excluded conventionalism in their creation of a left-wing authoritarianism scale as they felt that conventionalism was, by definition, right-wing oriented. Our data showed that the ASC Conventionalism subscale was necessary for predicting ethnocentrism, specific types of political intolerance (e.g., opposition to gay marriage as a civil right), and support for specific anti-democratic policies. Given that these variables represent a main predictive focus of [Adorno et al.'s \(1950\)](#) original work, our findings lend significant credibility to the construct validity of Altemeyer's Big Three. However, our findings also show that the contributions of aggression, submission, and conventionalism depend upon the criterion chosen, with aggression being the most consistent and powerful predictor across a wide range of criteria.

Given that [Van Hiel et al. \(2006\)](#) conceptualized left-wing authoritarianism as authoritarian aggression and submission, it is possible that our ASC scale could also be used to identify left-wing authoritarians. These individuals would be high on the ASC Aggression and Submission subscales, but low on the Conventionalism subscale. [Van Hiel et al. \(2006\)](#) make it clear that identifying left-wing authoritarians requires special attention to the sample as they are less common than right-wing authoritarians.

With the development of shorter and theoretically more parsimonious unidimensional scales (e.g., the SCA and CRV scales), we also sought to test whether the ASC scale contributed unique variance above these unidimensional measures when predicting ethnocentrism, political intolerance, and anti-democratic attitudes. Regardless of whether we used the SCA or the CRV scale, the ASC subscales added significant variance (up to as much as 23%) in hierarchical regressions. The ASC Aggression subscale added unique variance in every regression indicating that this factor is not sufficiently captured by these unidimensional measures. Submission also added unique variance when predicting political intolerance while both Submission and Conventionalism added unique variance when predicting anti-democratic attitudes. However, the SCA and CRV scales generally still contributed unique variance (see Model 2 in [Table 10](#)) after the ASC subscales were added.

While there is clear utility in shorter unidimensional scales, our analyses lead us to the conclusion that Altemeyer's three factor theory is not captured by unidimensional measures. Both [Feldman \(2003\)](#) and [Stenner \(2005\)](#) argue that authoritarian aggression is the *product* of those who value social conformity and obedience detecting a threat to the social norms. However, [Altemeyer \(1981\)](#) argues that authoritarianism isn't just a preference for submission and conventionalism, but also a belief that submission and conventionalism should be achieved through force (i.e., authoritarian aggression). In Altemeyer's theory, those that peacefully desire obedience and conformity to authority and social norms are not viewed as problematic while those that believe in the use of violence to achieve these ends represent a threat to democracy. Our analyses show that authoritarian aggression is the largest factor not measured by the SCA and CRV scales.

## Limitations

The biggest limitation of the current study is the exclusive use of U.S. participants. While Sample 3 was more heterogeneous than Samples 1 and 2, use of the ASC in other cultures is needed. It is our hope that the deliberate effort to reduce the degree of political bias and explicit religiosity will make the ASC scale more applicable in a wider variety of cultural circumstances. Because of the relative newness of three factor authoritarianism scales, little is known about whether the effects of authoritarian aggression, submission, and conventionalism are additive or interactive. Although the reliabilities of the submission and conventionalism scales are acceptable, there is room for improvement.

Conceptually, there are some important differences between our ASC measure and the ACT and RWA<sup>3</sup>D measures. While all three include items about trust in authority, the ACT and RWA<sup>3</sup>D measures also emphasize obedience to authority. This is likely an important component of authoritarianism not adequately captured in current ASC item content. Similarly, the recent rise in popularity of Donald Trump in the U.S. has shed light on other aspects of authoritarianism that we believe may be absent from our measure (see [Ehrenfreund, 2016](#), for an article on Donald Trump and authoritarianism). For example, in attempting to make our measure less politically biased, we emphasized the intellectual content of the constructs (and items) over the more emotional appeal of a strong, decisive leader who will crush those tearing apart the fabric of our society. In light of Donald Trump's popularity, we believe that this distinction has theoretical relevance for defining the authoritarian construct. When we refer to trust of, and obedience to, authority, do we mean any authority or rather those that stress strength and action over reason and diplomacy? The latter more accurately captures the appeal of a fascist leader, the original focus of *The Authoritarian Personality*, and Altemeyer's RWA item content. Revisions of the ASC (or other measures) should be explicit about this difference and examine the contribution of these more emotional components of authoritarianism.

## Conclusion

This paper makes two main contributions to the authoritarianism literature. First, it offers a new scale, the ASC scale, based on Altemeyer's Big Three. By divorcing Altemeyer's three factor construct of authoritarianism from the original items, we were able to provide a new test of Altemeyer's three factor theory. Although we are sympathetic to past criticisms about Altemeyer's RWA scale being tautological, we believe that our ASC scale avoids this problem while also providing superior discriminant validity to other three factor scales. The ASC scale demonstrated acceptable reliabilities with all items yielding a Cronbach's alpha of .85 in our largest and most heterogeneous sample. The CFA showed acceptable fit with the three factor model fitting significantly better than a one factor model. Predictive validity of the ASC was lower than the ACT but the improved discriminant validity among the subscales and reduced tautology make this reduction in predictive validity an acceptable tradeoff. The low collinearity of the ASC scale, as well as the more politically and religiously neutral items, make it particularly well suited for authoritarianism theory development and testing.

The second main contribution of this paper is that it ultimately supports Altemeyer's Big Three in predicting prejudice, intolerance, and antidemocratic attitudes. Authoritarian aggression emerged as the strongest, consistent, unique factor in predicting all target variables. Submission emerged as a consistent predictor of generic political intolerance and general support for anti-democratic policies. When predicting support for specific anti-democratic attitudes, aggression was a consistent unique predictor while submission and conventionalism varied based on the criteria

selected. These results indicate that all three factors are necessary but that their contribution to anti-democratic attitudes is contextual and nuanced.

Due partially to the inclusion of Feldman and Stenner's (1997) CRV scale in the American National Election Studies, political psychology research on authoritarianism is on the rise. The inclusion of the CRV items provide an excellent opportunity for questions about authoritarianism to be answered with large, nationally representative samples. However, our findings suggest that this unidimensional authoritarianism scale fails to capture the nuances of Altemeyer's Big Three. Given the differential contributions of aggression, submission, and conventionalism to specific criteria, measuring them independently will help advance authoritarianism theory.

## Notes

i) Throughout the manuscript we use the phrase "predictive validity" loosely. True predictive validity would require the measurement of authoritarianism at one time and the predicted variables at a later time. We did not take this more time consuming approach as the predictor and criterion variables were collected at the same time for each sample.

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The authors have declared that no competing interests exist.

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## Appendix

### Aggression-Submission-Conventionalism Scale

#### *Authoritarian Submission*

1. We should believe what our leaders tell us.
2. Our leaders know what is best for us.
3. People should be critical of statements made by those in positions of authority.\*
4. People in positions of authority generally tell the truth.
5. People should be skeptical of all statements made by those in positions of authority.\*
6. Questioning the motives of those in power is healthy for society.\*

#### *Conventionalism*

1. People emphasize tradition too much.\*
2. Traditions are the foundation of a healthy society and should be respected.
3. It would be better for society if more people followed social norms.
4. Traditions interfere with progress.\*
5. People should challenge social traditions in order to advance society.\*
6. People should respect social norms.

#### *Authoritarian Aggression*

1. Strong force is necessary against threatening groups.
2. It is necessary to use force against people who are a threat to authority.
3. Police should avoid using violence against suspects.\*
4. People should avoid using violence against others even when ordered to do so by the proper authorities.\*
5. Using force against people is wrong even if done so by those in authority.\*
6. Strong punishments are necessary in order to send a message.

### Political Intolerance Scale

1. People who disagree with me politically deserve the same rights as I do.\*
2. Freedom of speech should not be granted to those who threaten government stability.
3. Government should treat all people equally regardless of their beliefs.\*
4. Radical beliefs should be suppressed by our government.
5. People who are intolerant of others, do not deserve freedom of speech.
6. People with beliefs that are outside of the norm have a right to express their views.\*

\*Items are reverse coded.

### Anti-Democratic Policies Used in Sample 2 (Items Adapted From Altemeyer, 1981, and Duckitt et al., 2010).

The U.S. government has been accused of illegally tapping the phone lines of U.S. citizens. U.S. law requires the U.S. government to have warrants before tapping the phone lines of U.S. citizens. However, some in the government have argued that such warrants are not required because the U.S. is at war with terrorism and special war powers supersede the requirement for a warrant. Please indicate your preference on this policy below:

A	B	C	D	E
Wiretaps always need warrants		Neutral		Wiretaps do not need warrants when done for terrorism

The U.S. government has been accused of torturing terrorism suspects. The U.S. government denies the torture allegations and claims that the use of "enhanced interrogation" techniques are required to fight the war on terror. Enhanced interrogation includes things like water boarding, the use of dogs, and other techniques that some consider to be torture and a violation of international anti-torture laws. Please indicate your preference on this policy below:

A	B	C	D	E
Enhanced interrogation is never justified		Neutral		Enhanced interrogation is justified against terrorism suspects

The U.S. government has been holding a number of enemy combatants in prison for as many as five years without trial. The U.S. government has argued that they have the right to detain terrorists without a trial if such a trial would require the disclosure of national security secrets. Do you support or oppose this policy?

A	B	C	D	E
Strongly Oppose		Neutral		Strongly Support

Current U.S. law requires that police have a warrant before searching an individual's car or home for illegal drugs. This requirement has made it difficult to place drug dealers in prison because many of the cases are dismissed due to the way in which the evidence was collected. There is a movement in congress to allow the use of evidence in drug cases even if it was obtained without a warrant. Do you support or oppose this policy?

A	B	C	D	E
Strongly Oppose		Neutral		Strongly Support

Gay marriage has become acceptable in many U.S. states while other states have banned the practice. Congress is considering legislation that would categorize gay marriage as a civil right and require states to allow gay marriage. Do you support or oppose this policy? \*

A	B	C	D	E
Strongly Oppose		Neutral		Strongly Support

### Anti-Democratic Policies Used in Sample 3 (Items Adapted From Hetherington and Suhay, 2011)

As you may know, federal government agencies have recently been given more power to use electronic surveillance to monitor phone calls and emails within the United States without first getting a court warrant to do so. Do you consider this an acceptable or unacceptable way for the federal government to investigate terrorism?\*

- Always acceptable
- Acceptable under specific circumstances
- Generally unacceptable
- Always unacceptable

Some people think installing video cameras in public places is a good idea because they may help to reduce the threat of terrorism. Other people think this is a bad idea because surveillance cameras may infringe on people's privacy rights. What do you think? Would you say that it is a good idea or a bad idea to install surveillance cameras in public places? \*

- Very good idea
- Good idea
- Bad idea
- Very bad idea

These days, if someone disagrees with the president on issues relating to terrorism, do you think it is okay to criticize him publicly, or should people not criticize the president on issues relating to terrorism?

- Always okay to criticize
- Sometimes okay to criticize
- Sometimes not okay to criticize
- Always not okay to criticize

Do you think the news media should – or should not – report information it obtains about the secret methods the government is using to fight terrorism?

- Yes, the media should
- It depends on the circumstances
- No, the media should not

With which of these opinions do you agree more: \*

- "In order to protect us, when the CIA catches terrorists redhanded, it should be allowed to use torture to get information."
- "When the CIA catches terrorists redhanded, torture may be justified in specific circumstances."
- "Even when the CIA catches terrorists redhanded, it should not be allowed to use torture to get information."

To curb terrorism, how strongly would you agree or disagree to requiring that all citizens carry a national identity card at all times to show a police officer on request?

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Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
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\*Items are reverse coded.