Comprehensively-measured authoritarianism *does* predict vote choice: The importance of authoritarianism's facets, ideological sorting, and the particular candidate

Steven G. Ludeke[a],[*],[1], Camilla N. Klitgaard[b],[1], Joseph Vitriol[c]

[a] Department of Psychology, University of Southern Denmark, Denmark
[b] Department of Political Science, University of Southern Denmark, Denmark
[c] Department of Psychology, Lehigh University, Denmark

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ABSTRACT

Commonly used measures of authoritarian predispositions have received mixed support as a predictor of political preferences in American elections. Using new survey data (N = 1,444), we demonstrated how imprecise conceptualization and measurement of authoritarianism can obscure its relationship to candidate preferences. First, authoritarians have largely sorted into the Republican Party and self-identified as conservative, thereby attenuating the predictive power of authoritarianism when such features are used as controls or selection criteria. Second, the authoritarianism measure typically used in election studies covers a limited range of the construct, specifically focusing on the facet of authoritarianism we observed to be *least* associated with support for Republicans candidates in the 2016 American electoral context. We find predictive gains both from more comprehensive measurement of authoritarianism and from analyzing facet-level authoritarianism.

1. Introduction

Despite its theoretical and empirical relevance to the political sphere, the role of authoritarianism in predicting vote choice remains surprisingly murky. Some studies have reported the theoretically expected results in which authoritarianism positively predicts support for right-wing political candidates which, in the U.S. electoral context, includes candidates associated with the Republican party (Hetherington & Weiler, 2009, Table 7.2; Kemmelmeier, 2004). Yet others have not observed this relationship (Dusso, 2016; Pasek et al., 2009). The role of authoritarian predispositions in political psychology was perhaps never more relevant in the U.S. than during the 2016 Presidential election, in which popular accounts of the election (particularly those concerning the Republican primary) frequently invoked authoritarianism as a major force in determining support for Donald Trump's electoral success (e.g. Dean, 2015; Taub, 2016). And yet, even in this case the evidence is mixed: the two published peer-reviewed studies of which we are aware suggest that Trump supporters were particularly authoritarian (Choma & Hanoch, 2017; MacWilliams, 2016), but several other researchers have provided informal reports on internet blogs and academic forums that are inconsistent with the claim (De Jonge, 2016; Enders & Smallpage, 2016; Rahn & Oliver, 2016). This is no small issue:

a crucial component of the validation of authoritarianism measures was to demonstrate that members of authoritarian movements had elevated scores on these measures (McFarland, 2017). If authoritarianism measures cannot identify members of authoritarian movements, something has gone seriously amiss.

We perform analyses below which suggest two factors contribute to the apparent inconsistencies in the observed relationship between authoritarian predispositions and candidate preferences in the 2016 U.S. Presidential election. The first factor is straightforward, deriving from the pronounced association between authoritarianism and conservative ideological self-placement in contemporary American politics. The reports outlined above vary in whether and how this association might have obscured a link between authoritarianism and vote choice. For example, analyzing voters of only a single party might obscure the relevance of authoritarianism to candidate preferences, as variability in authoritarianism among individuals who select into the same political party is truncated and therefore less able to meaningfully explain variability in vote choice (De Jonge, 2016; though see also MacWilliams, 2016). Results on more ideologically diverse samples can also be affected. For instance, previous results indicating that authoritarianism predicted support for Republican over Democratic Presidential candidates did not include ideological self-placement as a

covariate (Choma & Hanoch, 2017; Hetherington & Weiler, 2009, Table 7.2; Kemmelmeier, 2004), in contrast to studies finding weaker effects for authoritarianism (Dusso, 2016; Pasek et al., 2009).

The second and more intriguing contributing factor pertains to the measurement of authoritarianism. The brief measure of authoritarianism favored in election studies likely only captures one component of authoritarianism – specifically, the component that in our data is least linked to support for Republicans in general as well as to Trump support in particular. This may help clarify analyses which claimed Trump voters were not particularly more authoritarian than those favoring other Republican candidates (Enders & Smallpage, 2016; Rahn & Oliver, 2016; though see also MacWilliams, 2016), as well as surprising findings indicating little relevance of authoritarianism to preferences for Republicans over Democrats in a previous election (Pasek et al., 2009). The present research will highlight the benefits of facet-level analyses of authoritarianism for identifying important nuances in the role of authoritarianism in contemporary candidate preferences. To develop intuitions about the nature of such nuances, we first turn to a review of the major concepts and measures as well as of the candidates in the 2016 Presidential election.

1.1. Authoritarianism and its facets

Contemporary theorizing and measurement of authoritarianism derives substantially from Altemeyer (1988, 1996), who narrowed the focus of previous authoritarianism measures down to three facets that highly covaried: authoritarian aggression, authoritarian submission, and conventionalism. Because Altemeyer aimed to increase the unidimensionality of his popular authoritarianism measure by deliberately including content tapping multiple components within individual items, research exploring the distinct implications and correlates of these facets was delayed.

More recently, the development of authoritarianism measures that allow for separate measurement of these facets has clarified the relationship between the construct and noteworthy outcomes: for example, authoritarian aggression uniquely predicted support for expelling illegal immigrants and negative feelings towards "dangerous" groups; conventionalism uniquely predicted high religiosity and opposition to gay rights; and authoritarian submission predicted respect for authorities and opposition to rebellion (Duckitt & Bizumic, 2013; Duckitt, Bizumic, Krauss, & Heled, 2010).

The last of these findings points to a potential divergence in the prediction of contemporary American party preference between studies using unidimensional authoritarianism measures and measures that differentiate between authoritarianism's facets. Although political conservatives typically score highly on unidimensional authoritarianism measures (Altemeyer, 1988; Ludeke, Johnson, & Bouchard, 2013), these relationships are sensitive to context (e.g. McFarland, Ageyev, & Abalakina-Paap, 1992). In the contemporary American context in which this study takes place, Republican primary voters appeared disinclined to submission: Republican primary candidates with typical claims to political authority, such as those with experience serving in high political office or support from others with such experience, were soundly rejected, and the candidates themselves recognized and attempted to adapt to the mood – e.g. Jeb Bush campaigned as an "outsider" despite an early lead in endorsements from party elites, a brother and father who served as President, and two-terms as Governor of an electorally important swing-state (Bycoffe, 2016; Sullivan, 2015). Democrats, who selected a candidate with an occupational history more typical of Presidential candidates, did not appear to share this sentiment. Consistent with this Republican electoral undercurrent, the largest anti-establishment political protest movement in recent years was the Tea Party, a right-wing faction with a revolutionary ethos (Parker & Barreto, 2014). Thus, although many political positions taken by contemporary American right-wing candidates provide a good match to authoritarian aggression (e.g. strong

opposition to immigration) and conventionalism (e.g. opposition to marriage equality), less authoritarian scores on the submission facet might be expected for Republicans given this recent history.

This is noteworthy because it is the submission facet that is conceptually and empirically most closely related to the "child-rearing values" measure of authoritarianism used in most surveys concerning Trump support. This measure typically presents four pairs of items and asks respondents to indicate which value in each pairing is more important to instill in children (Feldman & Stenner, 1997; Stenner, 2005). Two pairings (obedience vs. self-reliance; independence vs. respect for elders) connect well with authoritarian submission, as indicated by items such as "Obedience and respect for authority are the most important virtues children should learn" (Duckitt et al., 2010),[2] while the other two pairings are somewhat distinct from Altemeyer's measure of authoritarianism (curiosity vs. good manners; being considerate vs. well behaved). Thus, these previous surveys on Trump support may be limited by their reliance on a measure which reflects only one facet of the broader authoritarian construct and, more importantly, the facet with the most atypical relationship with current American voting behavior.

1.2. Candidates in the 2016 presidential election

Five candidates remained in the race for the two major party nominations at the time of our data collection (mid-April 2016): Hillary Clinton and Bernie Sanders for the Democratic nomination, and Donald Trump, Ted Cruz, and John Kasich for the Republican nomination. Unweighted aggregated polling data reported by RealClearPolitics.com for April 12th to May 1st, a window during which we fielded our survey, indicates that Trump enjoyed a plurality of support (46.5%) among Republican voters, followed by Cruz (27.0%) and Kasich (18.0%; (Real Clear Politics, 2016b). For Democratic supporters, during the same time period, Clinton led Sanders by approximately a 7.7% margin (Real Clear Politics, 2016a). Polling data of supporters of different candidates also addressed a wide range of specific issues with relevance to authoritarianism, helping to guide expectations for authoritarianism differences between supporters of difference candidates. Supporters of Republican candidates generally endorsed positions linked with high authoritarianism scores such as negative attitudes towards immigrants and religious minorities and restrictions on reproductive rights, with supporters of Democratic candidates taking opposing views (Pew Research Center, 2016). However, anger towards the government (which might be construed as low authoritarian submission), was higher among supporters of Republican candidates than Democratic candidates (Pew Research Center, 2016). Of equal interest is that supporters of different Democratic candidates exhibited similar issue-positions (except for Clinton supporters being less likely than Sanders supporters to indicate anger at the government), while supporters of different Republican candidates often exhibited pronounced differences not merely from Democrats but also from each other (Pew Research Center, 2016). Surveys indicated stark differences between supporters of different Republican candidates not only along the lines of general ethnocentrism but also regarding relevant issue positions such as closing mosques, preventing Muslims from entering the U.S., and deportation of immigrants living in the country without legal permission, with Trump supporters indicating the greatest hostility to these various out-groups, Kasich supporters indicating the least, and Cruz supporters intermediate between the two (De Jonge, 2016; Kalkan, 2016; Pollard & Mendelsohn, 2016; Public Policy Polling, 2016).

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[2] No published work seems to have characterized the child-rearing values measure in terms of the authoritarian facets, but unpublished data collected by Barbara Shaffer support this characterization: in data on 152 American college students a multiple regression of the child-rearing values on authoritarianism facets (Duckitt et al., 2010) yielded only one significant predictor: authoritarian submission (beta = 0.33, $p < 0.001$; John Duckitt, personal communication, August 2, 2016).

However, Trump supporters were not simply extreme Republicans or conservatives: Cruz, who drew the greatest support among evangelicals, was perceived as the most conservative candidate and drew his greatest support from that group, whereas Trump underperformed among those who self-identify as very conservative (Pew Research Center, 2016; Pollard & Mendelsohn, 2016; Public Policy Polling, 2016).

Together, this pattern of public opinion across supporters of different candidates suggest that GOP voters endorse positions largely consistent with high levels authoritarianism, but also that differences between supporters of different GOP candidates may indicate notable differences at the facet level of these measures. Trump-supporters favor positions consistent with elevated authoritarian aggression, whereas the religiosity and general conservatism of Cruz-supporters points to likely support among those indicating high conventionalism. Any consideration of authoritarian submission is, however, considerably more speculative. We note that supporters of Democratic candidates reported relatively low anger towards the government, whereas American conservatives have grown increasingly skeptical of the legitimacy of existing political institutions and actors, and, consequently, may be in more of a revolutionary mood. Additionally, Republican insiders had not offered consensus support for any of the three remaining candidates, where Clinton attracted both early consensus support from Democratic leaders and had the occupational history perhaps most typical of an established authority. It thus might be that authoritarian submission would lead one to support Democrats in general and Clinton in particular.

2. Materials and methods

2.1. Participants

Participants were recruited using Amazon's Mechanical Turk service (MTurk) between April 7th and 17th, 2016. Participants were eligible if they were in the United States and had completed at least 100 MTurk assignments with an approval rate of 95% or higher, and upon completion were provided with modest financial compensation. Five completed responses were discarded on the basis of having provided duplicate MTurk IDs. Seven respondents indicated "other gender identification" and were discarded due to challenges in classifying and analyzing such a small group. 1444 participants remained (M_{age} = 37.71; SD_{age} = 12.58; see Table A1 for other demographic information). Sample size for the present study was determined exclusively on the basis of its suitability for an unrelated project (a two-time point study involving the manipulation of attitudes), but it was nevertheless highly comparable to other national electoral surveys.

2.2. Measures

2.2.1. Authoritarianism

Participants completed the 18-item "short-form" of Duckitt and colleague's right-wing authoritarianism (RWA) measure (α = 0.93;

Duckitt et al., 2010). The measure is composed of three subscales (6 items each), which in the familiar taxonomy of Altemeyer (1996) are authoritarian aggression (α = 0.82), conventionalism (α = 0.87), and authoritarian submission (α = 0.86). Representative items indicating these subscales are, respectively, "the way things are going in this country, it's going to take a lot of 'strong medicine' to straighten out the troublemakers, criminals, and perverts;" "the 'old-fashioned ways' and 'old-fashioned values' still show the best way to live;" and, "what our country needs most is discipline, with everyone following our leaders in unity."

2.2.2. Social Dominance Orientation (SDO)

Although our paper's focus is on authoritarianism, psychologists often pair this construct with SDO, as these constructs are semi-independent and comparably important influences on right-wing ideology, and thus potentially on candidate preferences (Wilson & Sibley, 2013). Participants completed the 8-item SDO-7(S) scale (α = 0.87), which is the short-form version of the most current SDO measure (Ho et al., 2015). The SDO-7(S) uses two balanced, four-item subscales: Dominance (SDO-D; α = 0.81), assessed with items such as "an ideal society requires some groups to be on top and others to be on the bottom," and Anti-egalitarianism (SDO-E; α = 0.77), assessed with items such as "group equality should not be our primary goal". Responses for both this measure and authoritarianism were provided on a five-point scale.

2.2.3. Candidate preference (vote choice)

Participants were asked: "Which of the following candidates would you most like to see elected as President in November?" Participants provided responses for each of the major party candidates seeking nomination for the presidency at the time: Donald Trump (indicated by 18% of the sample), John Kasich (10%), Ted Cruz (10%), Bernie Sanders (41%), Hillary Clinton (20%). Compared to the unweighted national polling results discussed above, our Democratic supporters were thus considerably more supportive of Sanders than would be expected from a representative sample at the time, and our Republican respondents were comparatively more supportive of Kasich.

2.2.4. Candidate support ("Feeling thermometer")

Participants were presented with a 100-point "feeling thermometer" following the design used in the American National Election Study. Response options included the same candidate list as above, with no other options, but in opposition to all other survey questions, responses were not required. (Ns presented in Table A1).

2.2.5. Control variables

Our models also included a number of potentially important socio-demographic variables: gender, age, education, income, religiosity, ethnicity and ideological self-placement. See appendix for question wording and frequencies.

All variables, except age, are rescaled to range from 0 to 1.

Table 1
Means and SDs for key measures.

	Candidate preference (vote choice)					Full sample
	Trump	Cruz	Kasich	Sanders	Clinton	
	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)
RWA	0.54 (0.17)	0.58 (0.15)	0.51 (0.16)	0.35 (0.17)	0.45 (0.18)	0.45 (0.19)
RWA - Aggression	0.61 (0.19)	0.59 (0.17)	0.55 (0.17)	0.41 (0.20)	0.50 (0.19)	0.50 (0.20)
RWA - Conventionalism	0.50 (0.22)	0.61 (0.21)	0.49 (0.22)	0.29 (0.21)	0.39 (0.22)	0.40 (0.24)
RWA - Submission	0.52 (0.22)	0.53 (0.17)	0.50 (0.19)	0.36 (0.20)	0.45 (0.19)	0.44 (0.21)
Ideological self-placement	0.66 (0.23)	0.71 (0.21)	0.61 (0.17)	0.28 (0.21)	0.32 (0.23)	0.44 (0.28)

Note: N = 1444.

3. Results

See Table 1 for means and standard deviations for core measures. Descriptive statistics and correlations among all variables are presented in Table A1.

Predictions of candidate support as indicated by feeling thermometer scores were analyzed using ordinary least square regression models. Regressions predicting vote choice (Table 4, A4, A5) had binary response categories as dependent variables, and thus used probit generalized linear regression models.[3]

We started by comparing the predictive effects of the unidimensional structures of RWA and SDO on candidate support with the predictive effects of the multidimensional structures. Table 2 shows the determinants of candidate support for each of the five electoral candidates controlling for the effects of relevant variables. In Panel A of Table 2 candidate support is predicted by the unidimensional structures of RWA and SDO. In Panel B candidate support is predicted by the multidimensional structures of RWA and SDO. (Full model results for both panels provided in Table A2 and A3 in online appendix.)

The full-scale RWA measure, displayed in Panel A, had a significant negative effect on support for Sanders ($p < 0.001$), a marginally significant positive effect on support for Kasich ($p = 0.09$), and a significant positive effect on support for Cruz (p < 0.001) and Clinton (p < 0.001). This last result must be understood with an eye towards results from Table 1: Clinton voters indicated a fairly left-wing ideological self-placement, but had authoritarianism scores at the mean of this (left-leaning) sample. Given the pronounced links between authoritarianism and ideological self-placement in this sample ($r = 0.58$, p < 0.001), the Table 2 multiple regression shows authoritarianism to be a positive predictor of Clinton support: her supporters were not more authoritarian than the sample average, but they were relatively authoritarian given that they identified as ideologically left-wing.

3.1. Analyses of authoritarianism's facets

The effect of authoritarianism on candidate preferences can be more fully understood with the facet-level analyses presented in Panel B of Table 2. As expected, Trump support was indicated by authoritarian aggression (p < 0.001), as was Cruz support ($p = 0.002$). Authoritarian aggression had a marginally significant negative effect on Sanders support ($p = 0.07$). Also confirming expectations was the positive link between conventionalism and Cruz support ($p = 0.03$). The negative link between conventionalism and Sanders support (p < 0.001) was neither hypothesized nor necessarily surprising, as was the positive effect of authoritarian submission on Kasich support ($p = 0.02$). The positive effect of submission on Clinton support (p < 0.001) was consistent with the most speculative consideration offered above – namely, that with Republicans running anti-establishment campaigns and Clinton instead focusing on how her long experience in government made her a qualified authority deserving of the Presidency, the

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[3] Tables A4 and A5 predict vote choice separately for each candidate. Although vote choice might be considered the more intriguing dependent variable, we focus on "support" indicated by the feeling thermometers for two reasons. First, this data was collected during the primary; to the extent that general election voting is the most interesting outcome, feeling thermometers may be the best proxy in this dataset, as a majority of our participants indicated greatest preference for those candidates not selected by their parties for the general election. Second, regressions predicting vote choice when there are five candidates drawing unequal levels of support are problematic. Table 1 shows those selecting Cruz were the highest scorers on authoritarianism measures; however, Trump was chosen by nearly twice as many respondents, and they were nearly as authoritarian. The net effect of this is that when dichotomizing the sample in two ways (choosing Trump [1] or not [0], and choosing Cruz [1] or not[0]), the greatest discrepancy in authoritarianism is actually present in the case of those choosing (1) rather than not choosing (0) Trump, as he captures a greater share of authoritarians than does Cruz. Results from Tables A4 and A5 reflect this fact, and for this reason are perhaps less accurate representations of how authoritarianism affects vote choice than are results from Tables 1 and 2 (which are not affected by this problem).

Table 2
Determinants of candidate support.

	Trump	Cruz	Kasich	Sanders	Clinton
A. Full-scale RWA and SDO					
Gender (males = 1)	0.05*** (0.02, 0.08)	−0.001 (−0.03, 0.02)	0.01 (−0.02, 0.04)	−0.01 (−0.04, 0.01)	−0.05*** (−0.08, −0.02)
Age	0.002** (0.0004, 0.003)	−0.001* (−0.002, 0.0002)	0.001* (0.0000, 0.002)	−0.001* (−0.002, 0.0001)	0.002*** (0.001, 0.003)
Education	−0.10** (−0.17, −0.04)	0.01 (−0.05, 0.07)	0.09** (0.03, 0.15)	−0.04 (−0.10, 0.02)	0.13*** (0.06, 0.19)
Household income	−0.04 (−0.09, 0.01)	−0.004 (−0.05, 0.04)	0.10*** (0.06, 0.15)	−0.02 (−0.06, 0.03)	0.06* (0.01, 0.11)
Religiosity	0.02 (−0.02, 0.07)	0.09*** (0.05, 0.13)	0.07** (0.03, 0.11)	−0.03 (−0.07, 0.01)	−0.02 (−0.06, 0.03)
White	0.07* (0.01, 0.13)	−0.02 (−0.08, 0.03)	0.02 (−0.03, 0.08)	0.01 (−0.05, 0.06)	−0.06* (−0.12, 0.001)
Asian	0.04 (−0.03, 0.11)	−0.01 (−0.07, 0.05)	0.02 (−0.04, 0.09)	0.04 (−0.03, 0.10)	0.04 (−0.03, 0.11)
Black	−0.03 (−0.10, 0.04)	−0.06* (−0.12, −0.005)	0.01 (−0.06, 0.08)	0.06* (0.003, 0.12)	0.03 (−0.04, 0.10)
Latino	0.02 (−0.04, 0.09)	−0.03 (−0.09, 0.03)	−0.05 (−0.11, 0.01)	0.03 (−0.03, 0.09)	0.04 (−0.03, 0.11)
Ideological self-placement	0.40*** (0.34, 0.47)	0.31*** (0.25, 0.36)	0.20*** (0.14, 0.26)	−0.52*** (−0.58, −0.47)	−0.53*** (−0.59, −0.46)
SDO	0.29*** (0.21, 0.37)	0.09* (0.01, 0.16)	−0.04 (−0.11, 0.04)	−0.26*** (−0.33, −0.19)	−0.15*** (−0.23, −0.07)
RWA	0.08 (−0.02, 0.18)	0.29*** (0.20, 0.38)	0.09* (−0.01, 0.18)	−0.24*** (−0.33, −0.15)	0.17*** (0.07, 0.27)
B. Facets of RWA and SDO					
SDO-D	0.23*** (0.13, 0.32)	−0.01 (−0.09, 0.07)	−0.06 (−0.14, 0.03)	−0.08* (−0.17, −0.002)	0.07 (−0.02, 0.16)
SDO-E	0.05 (−0.05, 0.14)	0.10* (0.02, 0.18)	0.03 (−0.07, 0.12)	−0.18*** (−0.26, −0.09)	−0.23*** (−0.32, −0.13)
RWA-A	0.18*** (0.09, 0.28)	0.14** (0.06, 0.23)	0.01 (−0.08, 0.10)	−0.08* (−0.17, 0.004)	−0.04 (−0.13, 0.06)
RWA-C	−0.08 (−0.18, 0.03)	0.10* (0.01, 0.19)	−0.06 (−0.16, 0.03)	−0.21*** (−0.31, −0.12)	−0.06 (−0.16, 0.05)
RWA-S	−0.05 (−0.15, 0.05)	0.06 (−0.03, 0.15)	0.12* (0.03, 0.22)	0.01 (−0.08, 0.11)	0.20*** (0.10, 0.30)
N	1444	1436	1358	1439	1444

Note: Entries are unstandardized OLS regression coefficients. RWA = right-wing authoritarianism, RWA-A = authoritarian aggression, RWA-C = authoritarian conventionalism, RWA-S = authoritarian submission, SDO = social dominance orientation. 95% CIs are in parentheses.

* $p < 0.1$.
* $p < 0.05$.
** $p < 0.01$.
*** $p < 0.001$.

tendency to submit to established authorities would be associated with Clinton support. However, a finding inconsistent with this speculation is that submission did not negatively predict support for the Tea Party favorite, Cruz.

3.2. Analyses of Republican participants

Some previous research reviewed above analyzed only Republican

participants. To facilitate comparisons against such studies, we explored whether limiting our own analyses to such participants affects the general trends observed thus far. Although we unfortunately lacked any information about the party with which participants most closely identified, we might approximate such a variable by using the candidate preference variable collected: here, we analyze only the subset of participants who indicated that of the five candidates assessed, the candidate they preferred to win the general election was one of the three Republican candidates. Tables A6 and A7 present the same analyses as in Table 2, using only those who indicated a preference for any Republican candidate. These results closely parallel those from the full sample, with a few deviations of interest. Trump support is now negatively indicated by conventionalism (perhaps unsurprising given the candidate's highly-publicized divorces and largely nonreligious background), and Clinton support was not indicated by authoritarian submission in this subsample. Perhaps in a sample made up exclusively of Republican voters, a Democratic candidate is unlikely to be seen as a legitimate authority.

3.3. Trump support

Because authoritarianism has been invoked as particularly relevant to understanding support for Trump, we conducted additional analyses to explore when authoritarianism scores would and would not successfully predict Trump support. Table 3 presents three results of interest.

First, consistent with the elevated levels of authoritarianism indicated among Trump voters in Table 1, authoritarianism predicts support for Trump in models which do not include ideological self-placement (Model 1). Second, although the inclusion of ideology renders full scale authoritarianism a non-significant predictor of Trump support (Model 2), authoritarian aggression remains relevant (Models 3 and 6). Third, in the model most comparable to studies using the child-rearing measure of authoritarianism (Model 5, using only authoritarian submission), there is no link between authoritarianism and Trump support. Table A8 presents the same analyses as Table 3, but limits the analyses to those who indicated a preference for any Republican candidate. The results are parallel, with no authoritarianism scales significant in a model for the Republican subsample but not the full sample, with one critical exception. Whereas the effect of the high levels conventionalism facet was marginally predictive of less support for Trump on the full sample, this effect obtained significance in the Republican subsample.

Table A9 presents the same analyses as Models 2 to 6 from Table 3, but without ideological self-placement as a covariate. Consistent with Model 1 from Table 3 (which estimates the effects of RWA without ideology in the model), in models not controlling for ideology, the full-scale measure of authoritarianism, as well as its facets, successfully predict Trump support. However, importantly, in the model including all three facets of authoritarianism, the results parallel those presented in Table 3 (Model 6). That is, with or without ideology in the model, when the effects of each facet are estimated together, only aggression

Table 3
Authoritarianism and its facets predicting feeling thermometer ratings for Trump.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Gender (males = 1)	0.07***	0.05***	0.06***	0.05**	0.05***	0.05***
	(0.04, 0.10)	(0.02, 0.08)	(0.03, 0.08)	(0.02, 0.08)	(0.02, 0.08)	(0.03, 0.08)
Age	0.002**	0.002**	0.001**	0.002**	0.002**	0.002**
	(0.001, 0.003)	(0.0004, 0.003)	(0.0004, 0.003)	(0.001, 0.003)	(0.0005, 0.003)	(0.0004, 0.003)
Education	− 0.14***	− 0.10**	− 0.10**	− 0.10**	− 0.10**	− 0.10**
	(− 0.21, − 0.07)	(− 0.17, − 0.04)	(− 0.16, − 0.03)	(− 0.17, − 0.04)	(− 0.17, − 0.04)	(− 0.16, − 0.03)
Household income	− 0.02	− 0.04	− 0.04	− 0.04	− 0.04	− 0.04*
	(− 0.07, 0.03)	(− 0.09, 0.01)	(− 0.09, 0.01)	(− 0.09, 0.01)	(− 0.09, 0.01)	(− 0.09, 0.01)
Religiosity	0.08***	0.02	0.02	0.05*	0.03	0.05*
	(0.03, 0.12)	(− 0.02, 0.07)	(− 0.02, 0.06)	(− 0.001, 0.10)	(− 0.01, 0.08)	(0.0004, 0.10)
White	0.11***	0.07*	0.07*	0.07*	0.07*	0.07*
	(0.05, 0.18)	(0.01, 0.13)	(0.01, 0.13)	(0.01, 0.13)	(0.01, 0.13)	(0.01, 0.13)
Asian	0.04	0.04	0.04	0.04	0.04	0.04
	(− 0.03, 0.12)	(− 0.03, 0.11)	(− 0.03, 0.11)	(− 0.03, 0.11)	(− 0.03, 0.11)	(− 0.03, 0.11)
Black	− 0.04	− 0.03	− 0.03	− 0.03	− 0.03	− 0.03
	(− 0.11, 0.03)	(− 0.10, 0.04)	(− 0.10, 0.04)	(− 0.10, 0.04)	(− 0.10, 0.04)	(− 0.10, 0.04)
Latino	0.03	0.02	0.02	0.02	0.02	0.02
	(− 0.04, 0.10)	(− 0.04, 0.09)	(− 0.04, 0.09)	(− 0.04, 0.09)	(− 0.04, 0.09)	(− 0.04, 0.09)
Ideological self-placement		0.40***	0.39***	0.43***	0.41***	0.41***
		(0.34, 0.47)	(0.33, 0.45)	(0.36, 0.49)	(0.35, 0.48)	(0.35, 0.48)
SDO	0.43***	0.29***	0.27***	0.31***	0.30***	0.28***
	(0.35, 0.51)	(0.21, 0.37)	(0.19, 0.35)	(0.23, 0.39)	(0.22, 0.38)	(0.20, 0.36)
RWA	0.30***	0.08				
	(0.20, 0.40)	(− 0.02, 0.18)				
RWA-A			0.15***			0.20***
			(0.07, 0.23)			(0.10, 0.29)
RWA-C				− 0.03		− 0.09*
				(− 0.12, 0.05)		(− 0.19, 0.02)
RWA-S					0.03	− 0.04
					(− 0.05, 0.10)	(− 0.14, 0.06)
Constant	− 0.16***	− 0.12**	− 0.15***	− 0.10*	− 0.11*	− 0.14**
	(− 0.25, − 0.06)	(− 0.21, − 0.03)	(− 0.24, − 0.06)	(− 0.18, − 0.02)	(− 0.20, − 0.02)	(− 0.23, − 0.06)
N	1444	1444	1444	1444	1444	1444
R^2	0.24	0.31	0.32	0.31	0.31	0.32
Adjusted R^2	0.23	0.30	0.31	0.30	0.30	0.31

Note: Entries are unstandardized OLS regression coefficients. RWA = right-wing authoritarianism, RWA-A = authoritarian aggression, RWA-C = authoritarian conventionalism, RWA-S = authoritarian submission, SDO = social dominance orientation. 95% CIs are in parentheses.

* $p < 0.1$.
* $p < 0.05$.
** $p < 0.01$.
*** $p < 0.001$.

Table 4
Predictors of Republican (versus Democrat) vote choice.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Gender (males = 1)	0.33***	0.22*	0.23*	0.21*	0.19*	0.23*
	(0.17, 0.49)	(0.04, 0.39)	(0.05, 0.40)	(0.03, 0.38)	(0.01, 0.36)	(0.05, 0.41)
Age	0.01**	0.01**	0.01**	0.01**	0.01**	0.01*
	(0.004, 0.02)	(0.003, 0.02)	(0.002, 0.02)	(0.002, 0.02)	(0.003, 0.02)	(0.002, 0.02)
Education	−0.28	0.02	0.02	−0.01	0.004	−0.02
	(−0.64, 0.08)	(−0.39, 0.42)	(−0.39, 0.42)	(−0.41, 0.39)	(−0.40, 0.41)	(−0.43, 0.39)
Household income	0.20	0.06	0.05	0.08	0.05	0.08
	(−0.09, 0.48)	(−0.26, 0.38)	(−0.27, 0.37)	(−0.24, 0.39)	(−0.26, 0.37)	(−0.24, 0.40)
Religiosity	0.56***	0.19	0.26*	0.14	0.30*	0.13
	(0.32, 0.80)	(−0.08, 0.46)	(0.003, 0.51)	(−0.16, 0.44)	(0.05, 0.56)	(−0.18, 0.43)
White	0.54***	0.21	0.18	0.22	0.19	0.18
	(0.20, 0.89)	(−0.18, 0.60)	(−0.21, 0.57)	(−0.17, 0.60)	(−0.19, 0.58)	(−0.21, 0.57)
Asian	−0.31	−0.35	−0.39	−0.35	−0.33	−0.43˙
	(−0.74, 0.12)	(−0.82, 0.11)	(−0.86, 0.08)	(−0.82, 0.12)	(−0.80, 0.14)	(−0.91, 0.04)
Black	−0.32	−0.29	−0.30	−0.30	−0.28	−0.32
	(−0.72, 0.08)	(−0.74, 0.15)	(−0.74, 0.14)	(−0.75, 0.14)	(−0.73, 0.16)	(−0.77, 0.12)
Latino	−0.02	−0.21	−0.22	−0.21	−0.21	−0.23
	(−0.41, 0.37)	(−0.65, 0.23)	(−0.67, 0.22)	(−0.65, 0.24)	(−0.66, 0.23)	(−0.67, 0.22)
Ideological self-placement		3.37***	3.40***	3.36***	3.47***	3.33***
		(2.94, 3.80)	(2.97, 3.82)	(2.93, 3.79)	(3.05, 3.89)	(2.89, 3.76)
SDO	2.31***	1.59***	1.57***	1.62***	1.68***	1.55***
	(1.86, 2.76)	(1.08, 2.09)	(1.07, 2.08)	(1.12, 2.12)	(1.17, 2.18)	(1.04, 2.06)
RWA	2.17***	0.76*				
	(1.64, 2.71)	(0.15, 1.38)				
RWA-A			0.77**			0.91**
			(0.27, 1.28)			(0.31, 1.51)
RWA-C				0.61*		0.65*
				(0.08, 1.13)		(0.02, 1.27)
RWA-S					0.16	−0.60˙
					(−0.31, 0.63)	(−1.24, 0.03)
Constant	−3.14***	−3.43***	−3.48***	−3.31***	−3.27***	−3.41***
	(−3.67, −2.60)	(−4.03, −2.83)	(−4.08, −2.88)	(−3.88, −2.73)	(−3.86, −2.67)	(−4.02, −2.81)
N	1444	1444	1444	1444	1444	1444
Log likelihood	−709.90	−562.09	−560.45	−562.47	−564.83	−557.75
Akaike inf. crit.	1443.81	1150.18	1146.90	1150.94	1155.66	1145.50

Note: Entries are unstandardized probit regression coefficients. RWA = right-wing authoritarianism, RWA-A = authoritarian aggression, RWA-C = authoritarian conventionalism, RWA-S = authoritarian submission, SDO = social dominance orientation. 95% CIs are in parentheses.
˙ p < 0.1.
* p < 0.05.
** p < 0.01.
*** p < 0.001.

and conventionalism were positive predictors of support for Trump.

3.4. Democrats and Republicans

Table 4 presents a final set of analyses to explore the determinants of Republican vs. Democratic vote choice, using the candidate preference variable to create a measure of vote choice between the two parties. Those indicating their preferred candidate was Trump, Cruz, or Kasich were thus scored as Republican (1), whereas those who preferred Clinton or Sanders were scored as Democrat (0). We then regressed this on the socio-demographic and attitudinal predictors. Models 1 and 2 allow us to see the dramatic reductions in authoritarianism's relevance when ideological self-placement is included, though even in the fuller model authoritarianism remains relevant. However, this is not the case when considering the scale which approximates the child-rearing values measure: when authoritarian submission is the only authoritarianism indicator included (Model 5), it is not a significant predictor (p > 0.25), as was also the case when predicting Trump support. In fact, when all three authoritarianism facets are simultaneously employed (Model 6), authoritarian submission is instead a marginally significant predictor of support for *Democrats* (p = 0.06) rather than Republicans. Republican support among authoritarianism instead derives primarily from authoritarian aggression and conventionalism (Models 3, 4, 6).

4. Discussion

4.1. Benefits of facet-level authoritarianism measurement

Our results highlight the benefits of facet-level analyses of authoritarianism. Consistent with Trump's representation of the world as a dangerous place requiring harsh treatment of deviant minorities, Trump supporters were high on authoritarian aggression. Authoritarian aggression also predicted a favorable orientation towards Cruz, which was not predicted but is perhaps unsurprising given his stated desire to find out whether "sand can glow in the dark" (specifically, as a consequence of his stated desire to "carpet bomb" ISIS; Glueck, 2015). Cruz's links to the Tea Party were consistent with the positive relationship between support for him and conventionalism, though it was apparently not sufficient to lead authoritarianism submission to become a negative predictor.

However, support for the most "establishment" candidate in the race (Clinton) was positively predicted by authoritarian submission, *even though Clinton is a Democrat*. These results largely generalized to overall preferences for Republican vs Democratic candidates: Republican supporters were high in full-scale authoritarianism, authoritarian aggression, and conventionalism, whereas authoritarian submission was a marginally significant predictor of support for Democratic candidates. Whether this reflects the unique circumstances of the present election or perhaps longer-term trends associated with the Tea Party unfortunately cannot be determined by these data.

Our results make some headway for helping to understand discrepancies among previous studies. Controlling for ideology dramatically shrunk the role of authoritarianism in predicting candidate support, and in the case of the equivalent of the child-rearing measure (authoritarian submission) controlling for ideology completely erased authoritarianism's value as a predictor. Similarly, those studies reporting no effect of authoritarianism on candidate choice had also controlled for political ideology in their analyses (Dusso, 2016; Pasek et al., 2009), whereas some of those reporting an association between authoritarianism and candidate choice did not (e.g. Hetherington & Weiler, 2009; Kemmelmeier, 2004). The report by MacWilliams (2016), which observed a role for authoritarianism in predicting Trump support despite restricting the analysis to Republicans, controlling for ideology, and using the child-rearing measure – all factors which in our survey served to substantially diminish the association – is difficult to reconcile with the present results, but hopefully future published reports building off of short analyses currently presented only in academic blogs will help clarify the issue (De Jonge, 2016; Enders & Smallpage, 2016; Rahn & Oliver, 2016). By contrast, the results of Choma and Hanoch (2017) are highly consistent with the results reported here: because they used an authoritarianism measure which assesses the full range of the construct (specifically, an abbreviated form of Altemeyer's measure) in a study of both Democrats and Republicans and did not control for ideology in their analyses, their finding of a positive link between authoritarianism and Trump support is highly expected.

4.2. Social Dominance Orientation

Although the present study was primarily concerned with authoritarianism, our results suggested Social Dominance Orientation was also highly relevant for understanding the 2016 American Presidential Election in general and support for Donald Trump in particular. This result replicates previous findings (e.g. Choma & Hanoch, 2017). In one way, this relationship could be viewed as unexpected: SDO is commonly linked with economic conservatism (Jost, Federico, & Napier, 2009), and at several points Trump's campaign deviated from typical economically conservative ideology (Taub, 2016). Future research might explore if Trump managed to retain the support of high SDO individuals by the nature of how he framed his economic message. Perhaps structuring one's economic message in ruthless and hyper-competitive terms, with a focus on assessing which groups are "winners" and "losers," is appealing to high SDO individuals regardless of the particular economic policy proposals.

4.3. Study limitations and future research

The large size and significant attitudinal and demographic diversity of the present sample are strengths of our study, though it had no aim to be nationally representative and several groups (e.g. women, liberals, Sanders supporters) were overrepresented. Furthermore, we do not have information on whether our respondents intend to vote, are registered to vote, or are knowledgeable or involved in the political process. Because those less informed about or involved in the political process tend to exhibit weaker associations between personal and political characteristics (e.g. Federico, Fisher, & Deason, 2011), our inability to exclude non-voters from the present sample plausibly attenuated the psychological differences among supporters of different candidates and parties. However, the size and demographic and attitudinal diversity of the present sample allows some confidence that the present findings would largely replicate in independent representative samples. However, it is possible that the characteristics of this sample, by over-sampling members of lower status or marginalized social groups, as well as supporters of a candidate perceived to be low in both SDO and RWA, attenuate the strength of the relationship between authoritarian facets and preferences for the two major party candidates. Future research using a sample more representative of U.S. voters is

needed to replicate these findings.

The motivation for future representative studies using facet-level measurement of authoritarianism is enhanced by our results, which might be viewed as a much-needed validation study. Authoritarianism measures should be able to identify those willing to join authoritarian political movements. To the best of our knowledge, this has previously been provided for classic authoritarianism measures most directly following in the vein of the original F scale (Adorno, Frenkel-Brunswik, Levinson, & Sanford, 1950), but has yet to be observed in a study using the child-rearing values measure of authoritarianism (McFarland, 2017). Scholars who see Trump's campaign as such a movement might see Duckitt et al.' (2010) authoritarianism measure (and particularly the authoritarian aggression facet) as having passed a validation test on which the child-rearing values measure has not fared particularly well.

Acknowledgements

Appendix A Supplementary results

Supplementary data to this article can be found online at https://doi.org/10.1016/j.paid.2017.11.019.

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