JOIBS: May 2025. ISSN 2992-9253

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Ideologically Incongruent Authoritarianism: Understanding Liberal Right-Wing Authoritarians and Conservative Left-Wing Authoritarians

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Author's Notes: The views expressed in this article are the views of the authors alone. They do not reflect the official position of the Naval Postgraduate School, the U.S. Navy, the U.S. Marine Corps, the Department of Defense, or any other entity within the U.S. Government; and the authors are not authorized to provide any official position of these entities.

Funding: The authors received no specific funding for this work.

Competing interests: The authors have declared that they have no competing interests.

Citation: Conway, L. G. III, & Houck, S. C. (2025). Ideologically incongruent authoritarianism: Understanding liberal right-wing authoritarians and conservative left-wing authoritarians. *Journal of Open Inquiry in the Behavioral Sciences.* https://doi.org/10.58408/issn.2992-9253.2025.04.03.0001

Supplementary materials: https://osf.io/zd9n5

Abstract

Ideologically incongruent authoritarians – liberal right-wing authoritarians and their counterpart conservative left-wing authoritarians – represent an important yet understudied group. What underlies the incongruence displayed by incongruent authoritarians? We present four conceptual frameworks for understanding this question: Psychological Ambivalence, Rigidity of the Right, Religion-Specific Authoritarianism, and Ecological Threat. We examined each of these frameworks using data from 14 studies and over 9,000 participants. Findings offer modest support for all four frameworks, but no framework on its own comprehensively accounts for incongruent authoritarianism. What is clear, however, is that ideologically incongruent authoritarians in the U.S. comprise a meaningful category with predictable differences from both their fellow non-authoritarian ideologues and their counterpart congruent authoritarians. As such, this work advances our current understanding of authoritarianism, provides unique insight into the psychology of incongruent authoritarians, and contributes to the ongoing asymmetry debate in political ideology.

Keywords: Authoritarianism, Left-Wing Authoritarianism, Right-Wing Authoritarianism, Ideology, Ideologically-Incongruent

What does it mean when an ideological liberal scores high in right-wing authoritarianism? At first glance, it may be tempting to dismiss the convergence of liberalism and right-wing authoritarianism as measurement error. Perhaps people who score as liberal right-wing authoritarians are merely inattentive participants who misread the authoritarianism questions or misunderstood the term "liberal."

We argue, however, that liberal right-wing authoritarians – here, along with their counterpart conservative left-wing authoritarians, referred to as ideologically incongruent authoritarians – are appreciably more than measurement noise. Although the concept on its surface appears paradoxical, seemingly incongruent authoritarianism comprises quite a bit of the historical research on authoritarianism across cultures (e.g., Bilewicz et al., 2017; De Regt et al., 2011; Grigoryev et al., 2022; McFarland et al., 1992, 1993, 1996; Reese, 2012; Todosijević & Enyedi, 2008). Thus, at a minimum, it is important to put assumptions about incongruent authoritarians to the empirical test.

In this paper, we first define our conceptualization of "ideologically incongruent authoritarians" and lay out the reasons why it is important to study this group. We then present four possible frameworks for understanding incongruent authoritarians, data related to each framework consisting of 9,000 participants across 14 samples, and discuss how these data fit into each framework.

Defining Ideologically Incongruent Authoritarianism

Ideology can mean many things, ranging from the most specific (e.g., views on specific political issues or candidates) to the broadest level (e.g., self-identification as liberal or conservative). Indeed, different aspects of ideology often come into conflict within individuals. A person may be liberal on one dimension and conservative on another.

One aspect related to ideological belief is authoritarianism: The degree that persons want authority figures to rule their political opponents with an iron hand. Because authoritarianism involves support for some authority figures and not others, authoritarianism is inevitably bound up with domain-specific ideological content (see Conway et al., 2021, for a discussion). Thus, by ideologically incongruent authoritarianism we mean that aspects of one's stated ideology seem to conflict with aspects of one's stated authoritarianism. Broadly speaking, an ideologically incongruent authoritarian is (a) someone who prefers politically liberal ideology yet also wants politically conservative authority figures to rule with an iron hand, or (b) someone who prefers politically conservative ideology yet also wants politically liberal authority figures to rule with an iron hand.

While ideology can conceptually be analyzed at any level of analysis, we focus on comparing measures of self-identification as "liberal" and "conservative" with standard ideology-leaning authoritarianism questionnaires. This is for three reasons. (1) First, currently little data exist that specifically attempts to understand ideologically incongruent authoritarians. Given that, ideological self-identification measures provide a good starting point for understanding the convergence of seemingly mis-identified authoritarians. (2) Second, the more specific and varied our base measurement of ideology, the more challenging comparisons across samples become. While delving more deeply into those important nuances will certainly prove useful for unpackaging specific theories in the future, we first wanted to capture a big-picture view of

incongruent authoritarians. (3) Third, the primary puzzle presented by incongruent authoritarians is the seeming contradiction in their own beliefs. That backdrop highlights the value of allowing participants to self-identify their own ideological liberal/conservative leaning, rather than researchers imposing those labels on specific issues from the outside (e.g., someone who holds positions labeled "conservative" in the view of the researcher is a "conservative"). Arguably the surest way to get an overall picture of participants' conservative versus liberal identity is to ask them directly. If we use one subset of beliefs to determine conservative leanings, it is possible that subset is not particularly important or representative to participants. It is for this exact reason that single-item questions often show greater predictive validity than additive scales where researchers assume the additive items represent the whole (see, e.g., research on job satisfaction, Nagy, 2002).

Why Study Ideologically Incongruent Authoritarians?

Ideologically incongruent authoritarians are at a crossroads of two important psychological phenomena: Liberalism/conservatism and authoritarianism. As such, studying people who appear to have conflict between their identified ideology and their authoritarianism score is practically and theoretically important in multiple ways.

At a practical level, it is important to study this group to ground the two constructs in empirical reality as opposed to hypothetical assumptions. To the degree that ideology and authoritarianism are presumed to add something independent of each other, it is important to understand what each adds and at what points they overlap. For example, authoritarianism as a construct is supposed to capture something beyond mere ideology as such. Assuming that a liberal high in right-wing authoritarianism is either measurement error or, contrarily, merely a conservative, necessarily assumes that right-wing authoritarianism and conservatism measures are identical. While some have functionally treated them that way (see, e.g., Jost et al., 2003) – a perspective we cover in more detail below – such an approach basically removes all value from authoritarianism as a conceptual or methodological tool separate from typical ideology measures. But it is highly improbable that all ideological positions are the exact representation of their authoritarian counterparts. One can conceptually hold political identity X with or without wanting authority figure Y to dogmatically enforce X from the top down. As such, it is worth exploring more fully what happens when people seem to hold political identity X and yet also hold authoritarian beliefs pointing in the opposite direction of X.

Second, work outside of the U.S. has almost exclusively focused on a group that could be described as incongruent authoritarians: Russians on the political left who score high on rightwing authoritarianism measurements (e.g., Bilewicz et al., 2017; De Regt et al., 2011; Grigoryev et al., 2022; McFarland et al., 1992, 1993, 1996; Reese, 2012; Todosijević & Enyedi, 2008). Early scholarship observed positive correlations between authoritarianism and support for Marxist-Leninist ideology (McFarland et al., 1992, 1993) and pro-communist ideology (McFarland et al., 1996). More recently, six separate studies corroborated these earlier findings in a comprehensive examination of authoritarianism in the modern Russian context using RWA and values of politically neutral, conservative, and liberal Russians (Grigoryev et al., 2022). Conway et al. (2021) detail research in other left-wing contexts (e.g., Germany, Poland, Hungary) that provides similar conclusions. This body of evidence suggests that incongruent authoritarians are already an important sector of society to study if we want to have a deeper understanding of the psychology of authoritarianism from individual, group, and cross-cultural perspectives. This requires

systematic investigation of incongruent authoritarians in the United States and elsewhere, and the present research provides an important starting point for this endeavor.

Finally, we can learn quite a bit about both ideology and authoritarianism by isolating incongruent authoritarians and comparing them to other groups. Different theoretical perspectives on ideology and authoritarianism, outlined below, imply different hypotheses about what we would expect this group to look like, and thus we gain knowledge by more carefully studying them.

Four Possible Frameworks

What underlies the incongruence displayed by incongruent authoritarians? How do they differ from congruent authoritarians or members of their own ideological group that do not show incongruent authoritarianism? We present four frameworks for understanding these questions. Notably, although we test some aspects of these frameworks in our present study, we do not claim to provide a complete or full test of each framework. Rather, here we provide a set of initial tests of each framework in an exploratory manner.

Further, although some of these frameworks provide potentially causal explanations, our data are correlational and cross-sectional and thus cannot be used to make causal inferences directly. However, none of these frameworks need imply a direct causal chain to have explanatory value. We return to this issue more explicitly in the General Discussion.

Ambivalence

The first explanation is based on psychological ambivalence. It is possible that ideologically incongruent authoritarians are simply less committed to their ideological liberal or conservative identity, and as such find it easier to shift towards an authoritarianism that is not their own base identity. If this framework is accurate, we would expect evidences of ambivalence in ideologically incongruent authoritarians (versus ideologically congruent authoritarians) — such as less commitment to party candidates, less reported enthusiasm for their own ideological labels, and increased discrepancy between different measurements of ideology.

Conservatism

A second explanation is based on the long-assumed connection between psychological conservatism and authoritarianism: It is possible that both types of incongruent authoritarians represent ideological conservatism. In this framework, liberal right-wing authoritarians are "conservatives in disguise" – they self-report liberalism for socio-cultural (or other) reasons but are functionally conservatives (see Jost et al., 2003; Saunders & Jost, 2023). Conservative left-wing authoritarians are, in this view, simply another instantiation of how conservatives can be authoritarian across multiple domains.²

¹ This explanation may seem superficially related to the measurement error explanation; but it is nonetheless psychologically very different. Ambivalence explanations assume that, for example, someone reporting as conservative means something actually conservative; but they are less certain of their commitment to conservatism. They are thus not merely measurement noise because of a lack of understanding of the questions; their scores on conservatism and authoritarianism are both meaningful. Unlike the measurement error hypothesis, we would expect that there would still be a predictable effect of authoritarianism in the expected direction for incongruent authoritarians; but it would be more variable and weaker.

² This could also be construed as a form of measurement error, as liberals (who are actually conservative) misplace themselves on the liberal/conservative dimension. However, it isn't merely random noise – it is systematic error. Further, this group can still be a discernable category in this view that is different from those who show no incongruency. Thus, this is either a very specific

In general, this viewpoint is in danger of recategorizing incongruent categories to those in alignment with a rigidity-of-the-right framework, thus functioning as a semantic tautology ("if it is authoritarian, it is conservative"). However, the case of the incongruent authoritarian allows for a testable, non-tautological prediction to emerge from this framework. Specifically, this framework predicts a difference in the relationship of authoritarianism and ideology on incongruent authoritarians' attitudes and behaviors: It expects that liberal right-wing authoritarians will be more aligned with their authoritarianism (that is, the "right-wing" part of their attitude set), while conservative left-wing authoritarians will be more aligned with their ideology (again, the "right-wing" part of their attitude set). In more practical terms, this means that liberals high in RWA should functionally look more like conservatives high in RWA than their fellow low-RWA liberals (suggesting that they are in fact conservatives in disguise). Importantly, this pattern should be asymmetric; conservatives high in LWA should functionally look more like conservatives low in LWA than liberals high in LWA. This prediction follows from the logic of the "conservatives in disguise" theory of authoritarianism. If liberals high in RWA are conservatives in disguise but conservatives high in LWA are not liberals in disguise, then liberals high in RWA should resemble conservatives high in RWA, but not vice versa.

Religiosity: Domain-Specific Ideological Congruence

A third explanation starts with a larger idea: Incongruent authoritarians are *selectively ideologically congruent* with some aspect of their opposing ideology. Thus, their *incongruency* with their own ideology may be best understood as a domain-specific *congruency* with their ideological opponents' ideology. For example, people may self-identify as liberals and yet hold some ideological views that are more conservative; those views that overlap with conservative authoritarianism would increase the probability of incongruent authoritarianism. We return to this larger framework in the General Discussion after we have explored the data in our study.

Here, we note that one of the most likely candidates for this ideological congruence approach is religiosity. Indeed, religiosity may be *central* to understanding the incongruent authoritarian. Conceptually and methodologically, authoritarianism is infused with content specific to the religious domain — RWA with pro-religious content and LWA with anti-religious content (e.g., Saunders & Jost, 2023). As a result, one framework for understanding incongruent authoritarians is that they diverge from others who share their ideology primarily on religious values. In this framework, conservative left-wing authoritarians would be especially non-religious and liberal right-wing authoritarians would be especially religious, as this provides grounds for wanting a religious authoritarian figure to overbear the non-religious (liberal right-wing authoritarians) or a non-religious authoritarian figure to overbear the religious (conservative left-wing authoritarians).

Ecological Threat: Separating Ideological Congruence from Domain-General Threats

A fourth explanation is based in ecological threat. Research shows that perceived threats are one of the most pervasive predictors of authoritarianism (see, e.g., Altemeyer, 1998; Conway et al., 2021, 2023; Crawford, 2017; Duckitt et al., 2010; Feldman, 2003; Jost et al., 2003; Peterson et al., 2005). Thus, an ecological threat model expects that one of the reasons incongruent authoritarians exist is for the same reason that any authoritarian exists: the experience of

form of measurement error or something different entirely. Either way, it is different from people who merely provide random noise on one or both questionnaires.

psychological threat increases the probability of any kind of authoritarianism.

However, this threat could take on two very different conceptual forms that lead to different hypotheses with respect to their relationships with incongruent authoritarians. On the one hand, some threats occur on politically-charged domains that differ in their import for liberals and conservatives. Climate change, for example, is a threat that is perceived differently by liberals and conservatives (Conway et al., 2023). As such, climate change threat is politically very domain-specific: It is viewed as threatening by liberals far more than it is by conservatives.

Such domain-specific threats would essentially fall under the rubric of a larger ideological congruence model in much the same way as religiosity. In this framework, persons who are conservative but feel afraid of liberal-leaning threats (e.g., climate change) would be more likely to be incongruent authoritarians. Similarly, persons who are liberal but feel afraid of conservative-leaning threats (e.g., immigration) would be more likely to be incongruent authoritarians. Consider as a practical example perceived COVID threat. COVID threat was highly politicized, with conservatives viewing the threat less seriously than liberals (Conway et al., 2021). But if a person who is otherwise conservative felt very threatened by COVID (as many conservatives did), they may have been more likely to endorse left-wing authoritarianism because they perceived that LWA will help alleviate that specific fear.

Importantly, however, that ideological congruence approach only holds for threats that are perceived to have a political divide of some kind. Many threats have little to no such import. For example, considering the probability that one's place of residence will have earthquakes is not particularly liberal or conservative. But it *is* related to authoritarianism more broadly, because that kind of ecological threat tends to be associated with increased authoritarianism (see Conway et al., 2023). As such, for this kind of "geographical ecological threat," ecological threat models would expect that incongruent authoritarians would appear similar to their congruent counterparts as threat probabilistically increases the likelihood of authoritarianism across the ideological spectrum.

Taken together, these aspects of an ecological threat perspective suggest a clear moderating variable of the relationship of threat to incongruent ideology. To the degree that threats are perceived to overlap with ideology like climate change and immigration, they may function as ideological congruence tests, and thus we should see evidence of ideological divergence that is specific do those domains. However, to the degree that threats are *ideologically neutral*, we should see instead evidence of a general increase in authoritarianism that parallels threats to any other kind of authoritarianism. As a result, the clearest prediction from this framework is that general, largely non-politicized threats should predict incongruent authoritarianism in much the same way as congruent authoritarianism. However, the more politicized a threat is, the more variable exploratory analyses on ecological threats become, because in the case of highly politicized threats, the threat would only increase incongruent authoritarianism if there were a specific ideological match for a given individual. In the present study, we use ecological threats that prior work empirical suggests are less (generalized geographical stress) or more (COVID threat, belief in a dangerous world) politicized (Conway et al., 2021; Conway et al., 2023).

Overview of Methodological Strategy

Conceptually, our goal in the present study is to compare ideologically incongruent authoritarians

to congruent authoritarians, non-authoritarians in their own ideological group, and non-authoritarians in their opponent ideological group. Using this conceptual four-group design across a set of 14 samples,³ we compare ideologically incongruent authoritarians to these three other groups on (a) variables relevant to the four proposed frameworks and (b) other variables conceptually related to authoritarianism: Ambivalence, Religiosity, Threat, Voting Behavior, Outgroup Negativity, and Self-Identification as Authoritarian. Our goal was to cast a wide net of relevant attitudes and behaviors to better understand the incongruent authoritarian at a broad level. Thus, our work is exploratory and should not be considered as comprehensive prospective tests. Further, in each sample half of the participants completed a measure of right-wing authoritarianism (RWA), while the other half completed a parallel measure of left-wing authoritarianism (LWA; for validity evidence for both questionnaires, see Conway et al., 2023). This allows us to directly test the degree that liberal incongruent authoritarians differ from conservative incongruent authoritarians.⁴

Although one of our two ideology scales and both authoritarianism scales are continuous, we opted to dichotomize both variables using prior researchers' standards for scientifically-valid cutoff points (Conway et al., 2012, 2018; Van Hiel et al., 2006). Dichotomizing continuous variables loses variability and yet is useful when (1) one of the focal groups at the intersection of the dichotomy is small and (2) good conceptual reasons exist for dichotomizing (for discussion and recent exemplars of dichotomization of continuous scales, see Brint et al., 2022; Stefana et al., 2023; Vivion et al., 2023; Wang et al., 2022). In our case, the primary group we are measuring – incongruent authoritarians – does indeed comprise a comparatively small group. Conceptually, ideological incongruency is not directly represented by any main effect or interaction between the continuous variables. Further, a failure to use a conceptually-defensible cut-off point could lead to a "sleight-of-hand" problem (see Conway et al., 2018) whereby it is hard to know if relationships are genuinely due to the persons scoring on the upper part of the scale, or are simply relative relationships that do not truly capture the ideologically incongruent authoritarian. As a result of these considerations, we opted to dichotomize the scales used to measure ideologically incongruent authoritarians.

To isolate ideologically incongruent authoritarians, we created a category for participants who either "leaned right" or "leaned left" (following Conway et al., 2012, 2018) and who scored greater than the 50th percentile on the ideologically incongruent authoritarian measurement (following Van Hiel et al., 2006). This means that participants who (1) scored above the midpoint for conservatism and in the top half of the LWA measurement or (2) scored above the midpoint for liberalism and in the top half of the RWA measurement were considered ideologically incongruent authoritarians.⁵

³ All data in this study comes from projects published elsewhere or are in various stages of production (see Table 1). However, none of those projects evaluated incongruent authoritarianism, and thus all results reported in this paper are completely novel.

⁴ It is worth noting that we do not consider a liberal who scores low on LWA or a conservative who scores low on RWA to be "ideologically incongruent." That is because we view it possible for someone to be in favor of liberal or conservative principles and yet not hold to authoritarian means of advancing those principles. Thus, it is methodologically biased to lump those participants into an "ideologically incongruent" cell, because doing so predetermines the conclusion without allowing a clean look at their data.

⁵ Van Hiel et al. (2006) presented two cutoffs: a normal and more extreme standard. We here use the normal standard. Originally, we had started with their more extreme standard and a similarly extreme standard for liberals/conservatives, where we used those in the 80th percentile or higher as "very high authoritarians" and those in the 75% on the liberal/conservatism scale. However, we instead settled on Van Hiel et al.'s and Conway et al.'s (2012, 2018) less rigid standard (top 50%) for two reasons. (1) Conceptually, a person who scores in the upper 50% on both the LWA scale and conservatism – or both the RWA

Against this backdrop, the first part of our analytic strategy was a series of straightforward planned comparisons. We compared incongruent authoritarians with congruent authoritarians, non-authoritarians in their own ideological group, and non-authoritarians in their opponent ideological group. Although we present data for all three comparisons, we focus our attention on the two most relevant comparison groups for ideologically incongruent authoritarians: Those who shared their ideology but were lower in authoritarianism, and those who were similarly high in authoritarianism but differed in ideology.⁶

These two comparisons allow us to estimate the contributions of authoritarianism and ideology to a given DV. To the degree that ideologically incongruent authoritarians show (1) a large difference on a given DV from those who are lower in authoritarianism but share their ideology (e.g., conservative high-LWA with conservative low-LWA), this suggests their score on that DV is likely accounted for more by their authoritarianism. On the other hand, to the degree that ideologically incongruent authoritarians show (2) a large difference on a given DV from those who differ in ideology but are equally high in authoritarianism (e.g., conservative high-LWA with liberal high-LWA), this suggests their score on that DV is likely accounted for more by ideology. As a result of this, large differences from ideology similar/authoritarianism different categories similar represent the added explanatory variance of *authoritarianism*, while large differences from ideology different/authoritarianism similar categories represent the added explanatory variance of *ideology*. We use this conceptual framework to compare the relationships of ideology and authoritarianism for the incongruent authoritarian.⁷

Methods

Participants

The original pool of participants was drawn from 9,994 participants across 14 studies (see Table 1 for details). From this pool, participants who did not complete either a political ideology measurement or an authoritarianism measurement, did not complete any of the primary DVs, or who scored directly at the midpoint of the 1-9 political conservatism scale were dropped from analyses. This resulted in a total sample of 9,127 for main analyses.

scale and liberalism – is a meaningful categorical anomaly. (2) Empirically, by discarding a great deal of data unnecessarily, considering only the top 20%/25% held too little power and occasionally led to hard-to-interpret results due to extremely small cell sizes. As a result, the decision was made to analyze data in the manner reported in the text. This fits with our conceptual goals, maximizes power, and is in line with prior research for both variables (Conway et al., 2012, 2017; Van Hiel et al., 2006). However, analysis using the more extreme standard, while differing in a few cases due to smaller n in key cells, generally yielded a similar pattern to that reported in the text with the full sample. Thus, the main storylines in the present manuscript are largely unaltered by this alternative strategy.

⁶ This project was not pre-registered. However, we transparently report all relevant analytic decisions in this manuscript. Method codebook and data are available at https://osf.io/efjdw/.

⁷ We also initially computed separate 2-way interactions on authoritarianism (high or low) X ideology (leans left or leans right) for LWA and RWA separately. Although not a direct test of the effect of incongruence, this initial step allowed us to make inferences about the forces behind incongruence in ways that account for the comparisons across cells. A main effect of authoritarianism and a main effect of ideology, with no interaction, suggests that incongruent authoritarians were likely equally influenced by their authoritarian leaning and their ideological leaning – and thus found themselves "in between" on the relevant variable. An effect of authoritarianism with no main effect of ideology and no interaction suggests a leaning towards their authoritarian score, while a main effect of ideology with no other effects suggest a leaning towards their ideology score. An interaction effect, however, suggests that incongruent authoritarians are potentially a unique category. However, although meaningful, these results essentially mirror those presented in the main text and thus provided redundant information. For brevity's sake, we have put them in the Supplement for the interested reader.

Authoritarianism

Participants in each study completed either an RWA or an LWA measurement, but not both. We used the entire set of 14 studies to produce a cutoff point for those "high" versus "low" in authoritarianism. Participants above the median were assigned to a high authoritarian category; participants below the median were assigned a low category.

Ideology

We used two different measurements of ideology. First, consistent with other research (e.g., Conway et al., 2012; Conway et al., 2018), we used a continuous measurement of self-reported ideology to categorize participants as either "leaning right" or "leaning left." This continuous ideology measure combined two 1-9 scale items anchored by liberal anchors on one end (liberal/democrat) and conservative anchors on the other end (conservative/republican) and with a clear conceptual midpoint (5). These scores are highly correlated (generally r > .88) and thus combined into a single measure. Higher scores on this ideology measure thus indicate more conservatism, such that scores above 5 represent a conservative leaning and scores below 5 represent a liberal leaning. Unlike authoritarianism, our ideology scale has a clear conceptual mid-point on a 1-9 scale, where scores greater than 5 leaned conservative and scores less than 5 leaned liberal. Thus, to capture participants who self-identified as liberals or conservatives, we followed previous norms and considered those who scored below 5 as leaning left/liberal, and those who scored above 5 as leaning right/conservative.

For our second measurement, a subset of participants completed a forced-choice measurement of political ideology that allowed participants to assign themselves to liberal, conservative, or other options. 6,087 participants assigned themselves to either liberal (n = 3899) or conservative (n = 2188) categories using this measurement.

Results using these two different methods of constructing a dichotomous ideology score produced largely similar results. For brevity, we here focus on the first ideology measurement because doing so increased our participant number by almost 3,000 participants.

Demographic Measures: Age and Biological Sex Assigned at Birth

Participants completed measurements of self-reported age and self-reported biological sex assigned at birth.

Dependent Measures

Ideological Ambivalence. 7,960 participants completed scores for both measurements of ideology. To create an ambivalence score based on consistency in self-reported ideology, we first converted the forced-choice measurement into a scale where 0 = liberal, 1 = moderate/other/independent, and 2 = conservative. We then converted both this score and the continuous measure of political ideology to z-scores, and subsequently computed the absolute value of the difference between the scores. High scores on this *political ambivalence* measure mean that participants showed a discrepancy between their reported ideological leanings on the two measurements; low scores mean that they reported similar scores on the two measures.

Religion. 6,681 participants completed one of two different religion items (or both). Both items were anchored on a 1-9 scale. The first item was "I believe in God" (n = 5996); the second item

was "My attitude towards organized religion is:" (n = 2612). For participants who completed both items (n = 2157), the two items were highly correlated (r = .72). We thus created a cumulative "religion" score which was either the mean of the two items (for participants who completed both) or the score for the item completed by participants (for participants who only completed one item). Each item was further analyzed separately, and results are essentially identical to that presented for the cumulative religion score.

Voting Behavior: 2016 Election Support for Trump/Clinton. 3,558 participants were asked from 2016-2020 who they voted for in the 2016 election between Trump and Clinton, with four options (Clinton, Trump, Other, None/Cannot Say). We converted these to two binary measures: Support for Trump (1 or 0) and Support for Clinton (1 or 0).

Threat: Geographical Ecological Stress. 4,115 participants completed items relevant to their perceived level of ecological stress in their local geographical environment. These threats were drawn from prior work on the relationship of ecological stress on the emergence of cultural beliefs related to authoritarianism and freedom (e.g., Beall et al., 2016; Conway et al., 2014; Conway et al., 2017; Conway et al., 2019; Conway et al., 2021; Fincher & Thornhill, 2012; Kitayama et al., 2006, 2010; Murray & Schaller, 2010; Oishi et al., 2017; Van de Vliert, 2013; Van de Vliert & Conway, 2019). These included a question each for natural disaster prevalence, harsh climate prevalence, mountain (i.e., frontier topography) prevalence, pathogen prevalence, and general ecological stress. For example, participants were asked "I feel the primary area where I live has a lot of disease." Here we use the summary Geographical Ecological Stress score used in prior work (Conway et al., 2022). While showing a slight conservative leaning, this overall measurement is generally conceptually and empirically less ideological than the other threat measurements used in the present study (see Conway et al., 2022).

Threat: Perceived COVID Threat. 1,465 participants completed six items concerning how threatened or worried they were about COVID-19, for example: "Thinking about the coronavirus (COVID-19) makes me feel threatened" (see Conway et al., 2023). This threat leans consistently empirically liberal (Conway et al., 2021).

Threat: Belief in a Dangerous World. 421 participants completed one of two versions of the Belief in a Dangerous World scale that represented ideologically laden conservative and liberal threat scales. Half of the participants received the original scale directed at conservative focused threats (e.g., such as the destruction of the world by God or the preponderance of crime), here referred to as the BDWC. Half of the participants completed a modified version of the BDW scale, here referred to as the BDWL, designed to focus on threats in domains more harmonious with the ideological focus of liberals: Environmental concerns, lack of medical care, and fighting wars. See Conway et al. (2023) for details.

Outgroup Negativity. 1,086 participants completed one of two measurement types related to outgroup negativity: (a) Modern Racism (randomly assigned to a scale focused on ethnic minorities or religious minorities; see Conway et al., 2018) or Negative Perceptions of Religious African Americans and Jews who support Israel (combined standardized outgroup negativity measurement; see Conway et al., 2023). Scores were standardized within-study.

Self-Identification as Authoritarian. 4,282 participants completed one item pertaining to self-

⁸ These measurements were taken pre-COVID 19, and as such the disease item is not as politically-charged as the COVID threat measurements.

identification as an authoritarian anchored on a 1-7 scale ("Generally speaking, I believe I am strongly authoritarian"; see Conway et al., 2021). Scores were standardized within-study.

Table 1: Sample Details

iable 1: Sample Details				
		(Characteristic	
	N	Sample	Dependent Measures	Source
Study 1 (Jan 2020)	441	MTurk	Religion (Both), Voting	Conway et al. (2023)
Study 2 (Jan 2020)	417	MTurk	Religion (Both), Voting	Conway et al. (2023)
Study 3 (May 2018)	4855	MTurk	General Ecological Stress, Religion (Believe in God), Authoritarian Self- Identification	Conway et al. (2021)
Study 4 (Mar 2020)	1084	MTurk	Perceived COVID Stress, Voting	Conway et al. (2023)
Study 5 (Apr 2018)	421	MTurk	Belief in a Dangerous World, Religion (Both), Voting	Conway et al. (2023)
Study 6 (Dec 2019)	533	MTurk	Religion (Both), Voting	Conway et al. (2023)
Study 7 (Jan 2020) Study 8 (Feb 2020)	350 271	MTurk MTurk	Voting Outgroup Negativity (African- Americans and Jews), Voting	Ideology, Age, Sex Conway et al. (2023)
Study 9 (Feb 2020)	169	MTurk	Outgroup Negativity (African- Americans and Jews), Voting	Conway et al. (2023)
Study 10a (Jun 2017)	178	College Student	Outgroup Negativity (Modern Racism)	Conway et al. (2018)
Study 10b (Sep 2010)	147	MTurk	Outgroup Negativity (Modern Racism)	Conway et al. (2018)
Study 11 (Feb 2018)	294	MTurk	Religion (Both), Voting	Conway & McFarland (2019)
Study 12 (Feb 2018)	202	MTurk	Authoritarian Self- Identification, Religion (Both), Voting	Conway et al. (2021)
Study 13 (May 2020)	632	MTurk	Perceived COVID Threat	Zubrod & Conway (in progress)

Note: n's are from original samples prior to exclusions (see main text).

Results

Preliminary Analyses: Age and Biological Sex Assigned at Birth

Descriptive results for age and biological sex assigned at birth are presented in Table 2. A clear pattern for incongruent authoritarians emerged for age: For both LWA and RWA, incongruent authoritarians were the youngest category, especially for liberal high-RWA persons. In both cases,

high authoritarian categories were younger than low authoritarian categories, but this drop was larger for incongruent authoritarians.

Table 2: Age and Biological					
	<u>Low LWA/Lib</u>	Low LWA/Cons	<u>High LWA/Lib</u>	High LWA/Cons	
Age	38.2 (507, 13.7, 37.0, 39.4)	40.1 (699, 13.8, 3.9, 42.0)	37.0 (979, 12.5, 36.2, 37.7)	36.0 (212, 11.3, 34.4, 37.5)	
Male Percentage	0.42 (926, 0.49, 0.39, 0.45)	0.48 (1247, 0.50, 0.45, 0.51)	0.45 (1881, 0.50, 0.43, 0.48)	0.59 (403, 0.49, 0.54, 0.63)	
	Low RWA/Lib	Low RWA/Cons	High RWA/Lib	High RWA/Cons	
Age	37.8 (1122, 13.5, 37.0, 38.5)	38.9 (140, 14.4, 36.5, 42.3)	33.8 (436, 11.5, 32.7, 34.9)	39.3 (819, 14.0, 38.3, 40.3)	
Male Percentage	0.40 (2115, 0.49, 0.38, 0.42)	0.63 (242, 0.51, 0.57, 0.70)	0.49 (774, 0.50, 0.45, 0.53)	0.51 (1428, 0.50, 0.49, 0.54)	
Note: Ideologically Incongri	uent Cells in Bold. Parentheses = N, SD,	LCI, and UCI.			

Results for biological sex assigned at birth revealed a somewhat more complicated pattern. For LWA, by far the highest percentage of males was in the incongruent category. This was not the case for RWA. However, this was partially because liberals were more likely to be female than conservatives, as both LWA and RWA showed an interaction in the same direction: regardless of authoritarianism type, incongruent authoritarians showed an increase in the percentage of males compared to congruent authoritarians.

These results suggest that on average, incongruent authoritarians tend to be younger than other categories, and more likely to be male after accounting for the fact that a higher percentage of liberals are female.

Ideological Ambivalence and Religiosity

We first present analyses for two of our primary frameworks: Ideological Ambivalence and Religiosity. We then present analyses for our remaining DVS and compare the relationships of ideology and authoritarianism across all measured DVs.

Ideological Ambivalence. As can be seen in Table 3, for LWA, consistent with an ambivalence framework, incongruent conservatives were higher than the other three groups in ideological ambivalence; while for RWA, there was a similar (but more nuanced) pattern.

Specifically, planned comparisons revealed that, for LWA, incongruent conservative left-wing authoritarians were significantly more ambivalent than liberals also high in LWA (t[2025] = 11.01, p < .001; Cohen's d = 0.64, LCI = .52; UCI = .76), conservatives low in LWA (t[1452] = 8.13, p < .001; Cohen's d = .50, LCI = .38, UCI = .62), and liberals low in LWA (t[1168] = 7.65, p < .001; Cohen's d = .49, LCI = .36; UCI = .61).

For RWA, incongruent liberal right-wing authoritarians were statistically significantly greater on ideological ambivalence than their liberal low-RWA counterparts (t[2554] = 10.17, p < .001; Cohen's d = .45, LCI = .36, UCI = .54). However, they did not differ significantly from either conservative persons high in RWA (t[1952] = 1.17, p = .240; Cohen's d = .06, LCI = -.04, UCI = .15) or conservatives low in RWA (t[907] = .34, p = .732; Cohen's d = .03, LCI = -.13, UCI = .18).

⁹ To better understand this ideological ambivalence, we also computed parallel analyses using the categorical measurement of ideology as the DV. For both LWA and RWA, consistent with ambivalence results, incongruent authoritarians showed more of a rise in their opposing ideology (compared to low-authoritarian persons) than congruent authoritarians. However, this simpler story belies an important descriptive truth: Both liberal and conservative incongruent authoritarians showed low overall identification with the opposing ideology, and indeed generally showed congruence with their ideology score and not with their authoritarianism score. Liberal right-wing authoritarians largely reported themselves as categorically liberal (91%; low RWA)

On balance, these results suggest that ideologically incongruent authoritarians do show some signs of probabilistically higher ideological ambivalence, in each case showing a significant likelihood of being more identified with the opposing ideology than their low-authoritarian counterparts who share their ideology. This provides partial support for the ambivalence hypothesis. However, this support is not especially overwhelming; further results reveal that this ambivalence relationship pales in comparison to the relationship of their ideology (absolute ideology effect size d's > 2.8, absolute authoritarianism effect size d's < .63). Indeed, these results reveal that incongruent authoritarians, while showing signs of ambivalence, are by and large consistent in their reports of ideological leanings.

Religiosity. As can be seen in Table 3, planned comparisons for LWA revealed incongruent conservative left-wing authoritarians were significantly more religious than liberals also high in LWA (t[1668] = 12.60, p < .001; Cohen's d = .82, LCI = .69, UCI = .95). However – and importantly – they were also significantly less religious than conservatives low in LWA (t[1190] = -8.40, p < .001; Cohen's d = -.57, LCI = -.70, UCI = -.43). Interestingly, conservative left-wing authoritarians showed a religiosity mean very similar to liberals low in LWA (t[1007] = 0.86, p = .390; Cohen's d = .06, LCI = -.08, UCI = .20).

For RWA, incongruent liberal right-wing authoritarians were statistically significantly greater than their liberal low-RWA counterparts (t[2174] = 21.31, p < .001; Cohen's d = 1.04, LCI = .94, UCI = 1.15). Interestingly, they were also significantly more religious than conservative persons low in RWA (t[749] = 8.11, p < .001; Cohen's d = .68, LCI = .51, UCI = .85), and although descriptively close in religiosity to high RWA-conservatives, this difference was still statistically significant (t[1577] = -5.46, p < .001; Cohen's d = -.29, LCI = -.39, UCI = -.18).

These religiosity results RWA results suggest that liberals who are high in RWA are especially religious, and thus their right-wing authoritarianism is in part a function of that variable. They may be political liberals for reasons other than religiosity – potentially falling in a category of religious liberals (see, e.g., Hirsh et al., 2013). This supports the religiosity framework for understanding incongruent authoritarians.

The LWA scale reveals a similar story, but with less of a comparative change for the incongruent group. Conservatives high in LWA are, like high-LWA liberals, less likely to be religious than their low-LWA conservative counterparts. Yet they are still appreciably more religious than their high-LWA liberal counterparts. Although the RWA and LWA patterns diverge somewhat, the LWA pattern too suggests that part of the variance in conservatives high in LWA is accounted for by the fact that they are less religious, and therefore feel less concerned about an authority figure challenging their religion. In this case, however, the mean score for this incongruent group is still quite high (M = 5.8, above the midpoint for religiosity), which suggests very narrow (and not overwhelming) support for the religion-domain authoritarian hypothesis.

liberals = 99%), while conservative left-wing authoritarians largely reported themselves as categorically conservative (85%; low-LWA conservatives = 98%).

***0.57 (653, 1.01, 0.49, 0.65)

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Table 3: DVs by Authoritaria	nism Type, Authoritarianism Sc	ore, and Ideology		
	<u>Low LWA/Lib</u>	Low LWA/Cons	<u>High LWA/Lib</u>	High LWA/Cons
Religion	5.62 (722, 2.97, 5.41, 5.84)	***7.20 (905, 2.37, 7.04, 7.36)	***3.50 (1383, 2.82, 3.35, 3.65)	5.80 (287, 2.76, 5.48, 6.12)
Ideological Ambivalence	***0.43 (814, 0.37, 0.41, 0.46)	***0.45 (1098, 0.32, 0.42, 0.46)	***0.40 (1671, 0.33, 0.38, 0.41)	0.64 (356, 0.53, 0.58, 0.69)
Voting:				
Vote Trump	***0.07 (358, 0.25, 0.04, 0.09)	***0.75 (521, 0.43, 0.72, 0.79)	***0.04 (739, 0.20, 0.03, 0.05)	0.59 (165, 0.49, 0.51, 0.66)
Vote Clinton	***0.63 (767, 0.48, 0.58, 0.68)	***0.04 (97, 0.18, 0.02, 0.05)	***0.69 (310, 0.46, 0.66, 0.73)	0.17 (601, 0.38, 0.11, 0.23)
Threat				
Geographical Ecological Stress	***-0.14 (420, 0.63, -0.20, -0.08)	***-0.09 (550, 0.70, -0.15, -0.03)	***0.02 (905, 0.63, -0.02, 0.07)	0.47 (194, 0.89, 0.35, 0.60)
Covid Threat	4.98 (118, 1.37, 4.73, 5.23)	*4.32 (212,1.72, 4.09, 4.56)	***5.19 (334, 1.23, 5.06, 5.32)	4.78 (76, 1.29, 4.48, 5.08)
Dangerous World (Cons)	0.09 (19, 1.07, -0.43, 0.61)	0.42 (28, 0.85, 0.09, 0.75)	***-0.32 (13, 0.85, -0.59, -0.05)	0.37 (46, 0.62, -0.00, 0.75)
Dangerous World (Lib)	-0.39 (19, 0.97, -0.85, 0.08)	-0.14 (29, 0.91, -0.48, 0.20)	0.3 (26, 0.88, -0.06, 0.65)	-0.02 (3, 0.62, -1.56, 1.52)
Negative Outgroup Perceptions	-0.09 (129, 0.74, -0.22, 0.04)	***-0.69 (139, 0.85, -0.84, -0.55)	***0.68 (182, 0.86, 0.55, 0.80)	-0.04 (35, 0.73, -0.30, 0.21)
Authoritarian Self-Identification	***-0.09 (434, 0.95, -0.18, 0.00)	***0.27 (575, 1.01, 0.18, 0.35)	***-0.35 (933, 0.84, -0.41, -0.30)	0.87 (206, 1.07, 0.72, 1.01)
	Low RWA/Lib	Low RWA/Cons	<u>High RWA/Lib</u>	High RWA/Cons
Religion	***3.57 (1615, 2.78, 3.43, 3.70)	***4.60 (190, 2.84, 4.19, 5.01)	6.43 (561,2.63, 6.21, 6.65)	***7.14 (1018, 2.36, 6.99, 7.28)
Ideological Ambivalence	***0.36 (1857, 0.30, 0.35, 0.38)	0.50 (210., 0.29, 0.47, 0.54)	0.52 (699, 0.43, 0.48, 0.55)	0.49 (1255, 0.42, 0.47, 0.52)
Voting:				
Vote Trump	***0.01 (0.11, 0.00, 0.02)	***0.73 (0.45, 0.64, 0.82)	0.13 (0.34, 0.09, 0.17)	***0.73 (0.44, 0.69, 0.76)
Vote Clinton	***0.74 (0.44, 0.71, 0.77)	***0.09 (0.29, 0.03, 0.15)	0.58 (0.49, 0.53, 0.64)	***0.06 (0.24, 0.04, 0.08)
Threat				
Geographical Ecological Stress	***-0.10 (994, 0.57, -0.14, -0.07)	***-0.23 (102, 0.58, -0.34, -0.11)	0.12 (339, 0.73, 0.04, 0.20)	0.10 (611, 0.77, 0.04, 0.16)
Covid Threat	***5.46 (297, 1.25, 5.31, 5.60)	**4.19 (26, 1.62, 3.55, 4.85)	5.01 (130, 1.33, 4.78, 5.24)	***4.41 (272, 1.52, 4.23, 4.59)
Dangerous World (Cons)	**-0.59 (46, 1.09, -0.91, -0.26)	***-0.74 (5, 0.51, -1.38, -0.09)	0.31 (15, 0.52, 0.02, 0.59)	**0.90 (21, 0.77, 0.54, 1.25)
Dangerous World (Lib)	^0.12 (53, 1.20, -0.21, 0.45)	***-1.56 (4, 1.27, -3.59, 0.47)	-0.32 (19, 0.60, -0.61, -0.03)	***0.20 (26, 0.84, -0.14, 0.54)
Negative Outgroup Perceptions	***-0.29 (286, 0.89, -0.40, -0.19)	0.17 (45, 1.06, -0.14, 0.49)	0.06 (104, 0.76, -0.08, 0.21)	0.24 (166, 1.08, 0.06, 0.40)

***-0.22 (107, 0.83, -0.38, -0.07)

0.30 (354, 0.97, 0.19, 0.40)

Note: Ideologically Incongruent Cells in **Bold**. Sign. tests are planned comparisons from bold cells.

***-0.49 (1020, 0.73, -0.54, -0.45)

Authoritarian Self-Identification

[^]p<.07; *p<.05; **p<.01; ***p<.001. Parentheses = N, SD, LCI, and UCI.

Summary Transition

On balance, data relevant to two of our opening frameworks suggest that both domain-specific religiosity and ideological ambivalence account for part of the variance in incongruent authoritarianism. Ambivalence and religiosity are both roughly equally important for conservatives high in LWA; religiosity takes on greater importance for liberals high in RWA. However, with the exception of religiosity for liberals high in RWA, the authoritarianism relationships are generally moderate in size, revealing that a lot of variance remains unexplained.

Threat

Geographical Ecological Stress. As seen in Table 3, for LWA, incongruent conservative left-wing authoritarians reported significantly more ecological stress than conservative low-LWA persons (t[742] = 8.97, p < .001; Cohen's d = .75, LCI = .58, UCI = .92). They were also reported significantly more ecological stress than liberal low-LWA persons (t[612] = 9.84, p < .001; Cohen's d = .85, LCI = .68, UCI = 1.03) and their high-LWA liberal counterparts (t[1097] = 8.22, p < .001; Cohen's d = .65, LCI = .49, UCI = .81).

For RWA, incongruent liberal right-wing authoritarians reported statistically significantly more ecological stress than liberal low-RWA persons (t[1075] = 5.77, p < .001; Cohen's d = .36, LCI = .24, UCI = .49). They also reported significantly more ecological stress than conservative persons low in RWA (t[439] = 4.40, p < .001; Cohen's d = .50, LCI = .27, UCI = .72). However, unlike incongruent left-wing authoritarians, incongruent liberal right-wing authoritarians did not differ in ecological stress from their conservative right-wing authoritarian counterparts (t[948] = 0.40, p = .349; Cohen's d = .03, LCI = -.10, UCI = .16).

Despite differences across LWA and RWA, in the main, these results reveal that incongruent authoritarians looked more like their ideologically-opposed authoritarian counterparts than they did ideologically-similar non-authoritarians. This is consistent with one of the clearest predictions from the ecological stress framework: generic, apolitical ecological stress is associated with incongruent authoritarians in much the same way as it is associated with congruent authoritarians.

Perceived Covid Threat. As seen in Table 3, for LWA, incongruent conservative left-wing authoritarians reported statistically significantly more Covid Threat than conservative low-LWA persons (t[286] = 2.10, p = .018; Cohen's d = .28, LCI = .02, UCI = .54). They did not significantly differ in COVID threat from liberal low-LWA persons (t[192] = -1.00, p = .320; Cohen's d = -.15, LCI = -.44, UCI = .14) and showed less COVID Threat their high-LWA liberal counterparts (t[408] = 8.22, t[408] = 8.22, t[40

For RWA, incongruent liberal right-wing authoritarians reported statistically significantly less COVID Threat than liberal low-RWA persons (t[425] = -3.29, p < .001; Cohen's d = -.35, LCI = -.55, UCI = -.14). They also reported significantly more COVID Threat than conservative persons low in RWA (t[154] = 2.74, p = .003; Cohen's d = .59, LCI = .16, UCI = 1.02). Incongruent liberal right-wing authoritarians showed more COVID Threat than their conservative right-wing authoritarian counterparts (t[400] = 3.89, p < .001; Cohen's d = .42, LCI = .20, UCI = .63).

Taken together with the ecological stress results, COVID Threat results reveal a clear pattern. For

ecological stress – a largely apolitical measure of ecological threat – incongruent authoritarians tended to look more like their ideologically-opposite authoritarians than their ideologically-similar non-authoritarians. However, for the politically-charged COVID Threat measure, incongruent authoritarians tended to show signs of both their authoritarian leaning and their political ideological leaning – and thus appeared roughly in between those two. In line with their authoritarian leaning, incongruent authoritarians scored significantly higher (for incongruent conservatives high in LWA) or lower (for incongruent liberals high in RWA) than their ideological counterparts; but, in line with their ideological leaning, they also scored significantly lower (for incongruent conservatives high in LWA) or higher (for incongruent liberals high in RWA) than their opposing ideology authoritarian counterparts. This lands them roughly in the middle, showing evidence of both competing psychological sets.

Belief in a Dangerous World. As seen in Table 3, for LWA, incongruent conservative left-wing authoritarians reported statistically significantly more BDW-Conservative only than their high-LWA liberal counterparts (t[51] = 2.71, p = .005; Cohen's d = .87, LCI = .21, UCI = 1.51). Incongruent conservative left-wing authoritarians did not significantly differ from any of the other cells on BDWC (for conservative low-LWA persons, Cohen's d = .06, LCI = .21, UCI = .60; for low-LWA liberals, Cohen's d = .31, LCI = .41, UCI = 1.01). Incongruent conservative left-wing authoritarians did not statistically significantly differ in BDW-Liberal from their high-LWA liberal counterparts (t[27] = .60, p = .535; Cohen's d = .36, LCI = -1.56, UCI = .84), from low-LWA liberals (t[20] = .63, p = .556; Cohen's d = .39, LCI = .84, UCI = 1.61), or low-LWA conservatives (t[30] = .23, p = .822; Cohen's d = .14, LCI = -1.05, UCI = 1.33).

For RWA, incongruent liberal right-wing authoritarians reported statistically significantly more BDWC than liberal low-RWA persons (t[59] = 3.07, p = .002; Cohen's d = .91, LCI = .30, UCI = 1.51) and conservative persons low in RWA (t[18] = 3.92, p < .001; Cohen's d = 2.03, LCI = .80, UCI = 3.21), but significantly less BDWC than their conservative right-wing authoritarian counterparts (t[34] = -2.56, p = .008; Cohen's d = -.87, LCI = -1.55, UCI = -.16). Incongruent liberal right-wing authoritarians reported statistically marginally significantly less BDWL than liberal low-RWA persons (t[70] = -1.51, p = .066; Cohen's d = -.41, LCI = -.93, UCI = .12) and significantly more BDWL than conservative persons low in RWA (t[21] = 3.07, p = .003; Cohen's d = 1.69, LCI = .48, UCI = 2.86), but significantly less BDWL than their conservative right-wing authoritarian counterparts (t[43] = -2.32, p = .013; Cohen's d = -.70, LCI = -1.31, UCI = -.09).

Although anomalies exist in these analyses and results have lower power than the others in this manuscript, in the main they tell a clear story. Incongruent conservatives high in LWA tended to show BDW results either closer to their low-LWA conservative counterparts (BDWC) or in between their conservative counterparts and their high-LWA liberal counterparts (BDWL). This pattern was similar for incongruent liberals high in RWA, although this was more in evidence for authoritarianism (similarity to high-RWA conservatives) than ideology. This suggests that part of the variance of conservatives being high in LWA involves their concern about threats typically more in evidence for liberals, while the reverse is true for liberals high in RWA. But this variance accounted for is stronger for incongruent liberals than for incongruent conservatives.

Support for Trump/Clinton in 2016 Election

As seen in Table 3, planned comparisons for LWA revealed that ideologically incongruent

conservative left-wing authoritarians were significantly less likely to vote for Trump (and more likely to vote for Clinton) than conservatives low in LWA (t's[684]= -4.12 and 6.21, p's < .001; Trump Cohen's d = -.37, LCI = -.54, UCI = -.19; Clinton Cohen's d = .55, LCI = .38, UCI = .73). They were also significantly more likely to vote for Trump (and less likely to vote for Clinton) than liberals high in LWA (t's[902]= 23.02 and -13.58, p's < .001; Trump Cohen's d = 1.98, LCI = 1.79, UCI = 2.17; Clinton Cohen's d = -1.17, LCI = -1.35, UCI = -.99) and liberals low in LWA (t's[521]= 16.00 and -10.85, p's < .001; Trump Cohen's d = 1.51, LCI = 1.30, UCI = 1.71; Clinton Cohen's d = -1.02, LCI = -1.22, UCI = -.82).

For RWA, incongruent liberal right-wing authoritarians were statistically significantly more likely to vote for Trump and less likely to vote for Clinton than their liberal low-RWA counterparts (t's[1075] = 8.62 and -5.27, p's < .001; Trump Cohen's d = .58, LCI = .44, UCI = .71; Clinton Cohen's d = -.35, LCI = -.49, UCI = -.22). They were also significantly less likely to vote for Trump and more likely to vote for Clinton than conservative persons low in RWA (t's[405] = -14.04 and 9.23, p's < .001; Trump Cohen's d = -1.63, LCI = -1.89, UCI = -1.38; Clinton Cohen's d = 1.07, LCI = .83, UCI = 1.31) and significantly less likely to vote for Trump and more likely to vote for Clinton than conservatives high in RWA (t's[909] = -20.70 and 21.47, p's < .001 Trump Cohen's d = -1.45, LCI = -1.60, UCI = -1.30; Clinton Cohen's d = 1.50, LCI = 1.35, UCI = 1.66).

Taken together, these results reveal that ideologically incongruent authoritarians voted for their own party's candidate far more frequently than their opposing ideological categories did. Conservative left-wing authoritarians still voted for Trump in greater numbers than liberals did, and ideologically incongruent liberal right-wing authoritarians also voted for their own party's candidate in strong numbers. However, both incongruent authoritarian groups voted for their own party's candidate significantly less than their low-authoritarian ideological counterparts. This suggests some variance accounted for by both their authoritarianism score and their ideology score, but more so of ideology.

Outgroup Negativity

As seen in Table 3, for LWA, incongruent conservative left-wing authoritarians reported statistically significantly more outgroup negativity than conservative low-LWA persons (t[172] = 4.13, p < .001; Cohen's d = .78, LCI = .40, UCI = 1.16) and significantly less outgroup negativity than liberal high-LWA persons (t[215] = -4.63, p < .001; Cohen's d = -.85, LCI = -1.22, UCI = -.48). They did not significantly differ from liberal low-LWA persons (p = .742; Cohen's d = .06, LCI = -.31, UCI = .44).

For RWA, incongruent liberal right-wing authoritarians reported statistically significantly more outgroup negativity than liberal low-RWA persons (t[388] = 3.64, p < .001; Cohen's d = .42, LCI = .19, UCI = .64). They did not significantly differ in outgroup negativity from either conservative persons low in RWA or conservative persons high in RWA (p's > .159; conservative low RWA Cohen's d = -.13, LCI = -.48, UCI = .22; conservative high RWA Cohen's d = -.18, LCI = -.42, UCI = .07).

In summary, outgroup negativity results show that, for both incongruent liberals and incongruent conservatives, they tended to show results reflecting both their ideology and their authoritarianism. However, for incongruent conservatives high in LWA, they were roughly equally affected by their authoritarian leaning and their ideological leaning; while for incongruent liberals

high in RWA, they were much closer to their authoritarian counterpart than their ideological counterpart.

Self-Identification as "Authoritarian"

As seen in Table 3, for LWA, incongruent conservative left-wing authoritarians reported statistically significantly more self-reported authoritarianism than conservative low-LWA persons (t[779] = 7.16, p < .001; Cohen's d = .58, LCI = .41, UCI = .74), and liberal low-LWA persons (t[638] = 11.42, p < .001; Cohen's d = .97, LCI = .79, UCI = 1.14), and liberal high-LWA persons (t[1137] = 17.86, p < .001; Cohen's d = 1.38, LCI = 1.21, UCI = 1.54).

For RWA, incongruent liberal right-wing authoritarians reported statistically significantly more self-reported authoritarian identification than liberal low-RWA persons (t[1372] = 15.98, p < .001; Cohen's d = .99, LCI = .86, UCI = 1.11) and conservative low-LWA persons (t[459] = 5.02, p < .001; Cohen's d = .55, LCI = .33, UCI = .77). However, they reported significantly less authoritarian identification than conservatives high in LWA (t[1005] = -4.18, p < .001; Cohen's d = -.28, LCI = .41, UCI = -.15).

In summary, incongruent conservatives high in LWA showed the expected identification as authoritarians, even though their high-LWA liberal counterparts did not. Conservatives high in both kinds of authoritarianism showed an increased recognition that they were authoritarian. Incongruent liberals high in RWA, unlike their congruent liberal high LWA counterparts, showed increased recognition compared to low-RWA liberals. This suggests that they can identify authoritarianism in themselves when it is right-wing authoritarianism. However, they also showed significantly less self-identification as authoritarian than their high-RWA conservative counterparts, suggesting that there was nonetheless still a pull of their ideology towards lesser identification.

Summary Comparison of Authoritarianism and Ideology Variance

To get a bigger picture understanding of our data, we further compared the expected amount of variance accounted for by authoritarianism and ideology against the reality of ideologically incongruent authoritarians for liberal and conservative incongruent authoritarians separately. Following the logic outlined earlier, we focused on comparing ideologically incongruent authoritarians to (1) those who shared their ideology but were lower in authoritarianism (authoritarianism effect), and (2) those who were similarly high in authoritarianism but differed in ideology (ideology effect).

For ease of comparison, we reverse-scored relationships when the expected direction was negative (e.g., liberals voting for Trump). To do this, we laid out the direction of the expected relationship for both ideology and each kind of authoritarianism (LWA and RWA) separately (see Table 4).¹⁰ Here, it is worth noting that the specific direction assigned to the prediction does not change the strength of the relationship – only their expected direction. Had we simply used the absolute value of the effect sizes, the results would have been nearly identical. In fact, in all but two cases this method would have yielded identical signs; as can be seen in Table 5, all but two of the signs for expected effects is positive, and one of the negative effects is nearly zero. Thus,

¹⁰ We elaborate on these decisions in more detail in the Supplement.

while we believe our approach better captures the data, altering some of the predictions would not appreciably change the emergent story.

Table 4: Expected Effects for Author	oritarianism and Ideo	ology			
	Conservatives High	in LWA	Liberals High in RWA		
	Authoritarianism		Authoritarianism		
	Effect	Ideology Effect	Effect	Ideology Effect	
Religion	High LWA Lower	Conservatives Higher	High RWA Higher	Liberals Lower	
Ideologial Ambivalence	No Expectation	No Expectation	No Expectation	No Expectation	
Voting:					
Vote Trump	High LWA Lower	Conservatives Higher	High RWA Higher	Liberals Lower	
Vote Clinton	High LWA Higher	Conservatives Lower	High RWA Lower	Liberals Higher	
Ecological Stress					
Geographical Ecological Stress	High LWA Higher	No Expectation	High RWA Higher	Liberals Lower	
Covid Threat	High LWA Higher	Conservatives Lower	High RWA Lower	Liberals Higher	
Dangerous World (Conservative	High LWA Lower	Conservatives Higher	High RWA Higher	Liberals Lower	
Dangerous World (Liberal)	High LWA Higher	Conservatives Lower	High RWA Lower	Liberals Higher	
Negative Outgroup Perceptions	High LWA Higher	No Expectation	High RWA Higher	No Expectation	
Authoritarian Self-Identification	High LWA Higher	Conservatives Higher	High RWA Higher	Liberals Lower	

In Table 5, we report the effect sizes for authoritarianism and ideology relationships. We further computed difference scores for each DV within type of authoritarianism measure (authoritarianism effect – ideology effect). Scores at zero represent equal variance accounted for by both authoritarianism and ideology to the incongruent authoritarians' score on that DV. Scores above zero represent more variance accounted for by authoritarianism; scores below zero represent more variance accounted for by ideology.

Table 5: Comparison of Authorit	arianism and Ideology Effe	ects for Incongruent	Authoritaria	ans By Type		
	Conservatives High in LWA			Liberals High in RWA		
			Author			Author
	Author. Effect	Ideology Effect	Ideology	Author. Effect	Ideology Effect	Ideology
Religion	***0.57 (1191)	***0.82 (1668)	-0.25	***1.04 (2174)	***0.29 (1577)	0.75
Ideologial Ambivalence	***0.50 (1425)	***0.64 (2025)	-0.14	***0.45 (2554)	0.06 (1952)	0.39
Voting:						
Vote Trump	***0.37 (684)	***1.98 (902)	-1.61	***0.58 (1075)	***1.45 (909)	-0.87
Vote Clinton	***0.55 (684)	***1.17 (902)	-0.62	***0.35 (1075)	***1.50 (909)	-1.15
Ecological Stress						
Geographical Eco. Stress	***0.75 (742)	***0.65 (1097)	0.10	***0.36 (1075)	-0.03 (948)	0.39
Covid Threat	*0.28 (286)	***0.33 (408)	-0.05	***0.35 (425)	***0.42 (400)	-0.07
Dangerous World (Cons)	0.06 (27)	**0.87 (51)	-0.81	**0.91 (59)	**0.87 (34)	0.04
Dangerous World (Lib)	0.23 (30)	0.36 (27)	-0.13	0.41 (70)	*-0.70 (43)	1.11
Negative Outgroup	***0.78 (172)	***0.85 (215)	-0.07	***0.42 (388)	0.18 (215)	0.24
Authoritarian Self-ID	***0.58 (779)	***1.38 (1137)	-0.80	***0.99 (1372)	***0.28 (1005)	0.71
TOTAL	0.47	0.91	-0.44	0.59	0.43	0.16

This comparative strategy yielded some striking similarities across dependent variables. The only topic for which both ideologically incongruent liberals and ideologically incongruent conservatives showed a greater effect of authoritarianism than ideology was the one for which an ecological stress framework would predict a greater pull of authoritarianism: Geographical Ecological Stress. Further, the variables where one might expect a greater pull of ideology – voting intention variables, which are strongly linked to ideology - consistently showed a strong

ideological leaning for both types of incongruent authoritarians.

Table 5 also reveals a clear overall difference between the two types of incongruent authoritarians in a manner consistent with the conservatism framework outlined in the introduction. Incongruent liberals high in RWA tended to have more variance accounted for by their right-wing authoritarianism (that is, the "conservative part"), whereas incongruent conservatives high in LWA tended to have more variance accounted for by their ideology (also the "conservative part"). Thus, this provides some evidence for the "conservatives in disguise" theory of left-wing authoritarianism.

Two caveats are worth noting. First, for both ideology and authoritarianism, relationships tended to be significantly positive for both kinds of relationships for both groups. The asymmetry here is relative: Both incongruent liberals and incongruent conservatives tend to show significant effects of both their authoritarianism and their ideology. Second, this relative difference is less a function of differences in authoritarianism (average d for incongruent conservatives = .46, for incongruent liberals d = .59), and more a function of differences in ideology (average d for incongruent conservatives = .96, for incongruent liberals d = .43). Both incongruent liberals and incongruent conservatives showed moderate relationships for authoritarianism – showing that in essence, in many ways they function much like their "opposing" authoritarianism score would predict. But conservative incongruent authoritarians showed more variance accounted for by their self-identified conservatism than liberal incongruent authoritarians showed variance accounted for by their self-identified liberalism.^{11,12}

General Discussion

The present data show that, in the U.S., ideologically incongruent authoritarians comprise a meaningful category with predictable differences from both their fellow non-authoritarian ideologues and their counterpart congruent authoritarians. They also provide some clues as to what those individuals are like, help advance theory about them, and contribute to the ongoing asymmetry debate in political ideology.

Which Theoretical Framework is Right?

We proposed four possible explanatory frameworks in the introduction. While our methods were not set up to directly compare these explanations against each other, it is worth asking which

¹¹ We also explored whether liberals or conservatives tend to show more ideologically incongruent authoritarianism. To evaluate, we computed 2 (Participant Ideology: Liberal versus Conservative) X 2 (Type of Authoritarianism: LWA versus RWA) ANOVAs for authoritarianism as both a continuous and a categorical variable. Both types of analyses revealed similar interactions between participant ideology and type of authoritarianism (interaction F's > 2850.7, p's < .001). Descriptive means of the interactions reveal that, although the gaps are large in both cases, there is an even larger gap for between conservatives' and liberals' authoritarianism scores for RWA than for LWA. This is consistent with the previously noted finding that LWA-ideology effect sizes, although large on their own, are generally smaller than RWA-ideology effect sizes (see, e.g., Conway et al., 2018). However, as revealed in the Supplemental Table 1 (see Supplement), both continuous and categorical measurements show this difference due more to a larger gap between liberals and conservatives in congruent authoritarianism (liberals high in LWA, conservatives high in RWA) than a difference in incongruent authoritarianism.

¹² In line with the theoretical expectations of the constructs, we further performed mediation analyses that evaluated the amount of variance accounted for by religiosity and ambivalence on the relationships for the other variables. These results generally showed that religiosity and ambivalence did not account for much of the variance for the other relationships reported here – in fact, most of those relationships remained statistically significant when accounting for religiosity and ambivalence. This rules out any theory that expects religiosity or ambivalence to be the primary driver of incongruent authoritarianism. See the Supplement for more details.

framework garnered the most evidence.

The answer was clear: All four frameworks received modest support, but no framework on its own can offer a sweeping explanation for incongruent authoritarianism. Consistent with an ambivalence framework, incongruent authoritarians generally showed more evidence of inconsistency in their ideological self-identification. Consistent with a religiosity framework, incongruent authoritarians generally showed evidence that part of their incongruence results from disagreeing with their ideological counterparts on religion. Yet for both ambivalence and religiosity, the effect sizes were not overwhelming.

The ecological stress model likewise received modest support. The expectation that geographical stress – a general variable that is less political and thus should overlap with authoritarianism in incongruent and congruent authoritarians alike – would show the greatest relative variance accounted for by authoritarianism was generally supported. On the other hand, the relative difference was not overly large (see Table 5), so this support is nonetheless modest. Similarly, the conservative-in-disguise model received qualified support: Both liberal and conservative incongruent authoritarians showed the expected conservative leaning (as evidenced in Table 5), and yet these facts clearly did not explain a great deal of the variance.¹³

Integrative Framework: Moderation Versus Domain-Specific Congruence

The present study provides evidence concerning four possible frameworks to explain incongruent authoritarianism. But, given that all frameworks received modest support, what can we say about the bigger picture? Is there a way to integrate these data into a larger framework?

While our data cannot provide a definitive integrative model, they do provide some clues. A first potential method of integrating across the four frameworks tested here is to consider the possibility that incongruent authoritarians will show moderate results on each variable that essentially reflects their conflict. This moderation view suggests that it is not so much a matter of domain-specificity as it is a general conflict across domains. As a result, this view would expect that generally, incongruent authoritarians would be "in between" their authoritarian and ideological counterpart comparison groups. And our data suggest that is partially the case. A quick glance at Tables 3 and 5 shows that, often, ideologically incongruent authoritarians show fairly equal pull of both authoritarianism and ideology and thus land in the middle of their two comparison groups.

However, this view is also clearly incomplete. There is much theoretically-predicted variability across different domains in whether authoritarianism or ideology shows stronger effects, and incongruent authoritarians generally are not just the simple average of main effect influences of authoritarianism and ideology. Rather, these data suggest a more nuanced view of what comprises incongruent authoritarians that focuses on *ideological domain-specific congruence*. Although our data were not designed to test such a framework directly, it is worth considering —

¹³ In a separate study, we also tested a different framework: Namely, that incongruent authoritarians would be particularly likely to be authoritarian to any authority figure. The primary implication of this framework is that incongruent authoritarians ought to be more likely than other kinds of people to show a tendency towards all kinds of authoritarianism. Given how domain-specific authoritarianism is, this framework had a very low a priori probability of being correct – and in fact, incongruent authoritarians were nor more or less likely than other categories to hold to both left-wing and right-wing authoritarianism simultaneously.

in a speculative fashion – how it might overlap with our present data.

Domain-specific congruence means that individuals may agree with particular party ideology along one domain (e.g., religion) but disagree on another domain (e.g., the economy). Most Democrats in the US, for example, support progressive positions on climate change, but do not support progressive opinions on transgender persons in sports.

Research has suggested that domain-specific ideological congruence matters. One empirically-derived congruence model, the Perceived Anxiety-Ideology Relationship (PAIR) Model, argues that one of the precursors to authoritarianism, perceived threat, is a function of the congruence between (1) the imagined outcome of the threat and (2) what political outcomes are desired (Conway et al., 2021b; Conway et al., 2022). For example, consistent with the PAIR model, during COVID liberals tended to believe the disease was more threatening in part because they believed the idea of a threatening COVID matched their preferred political outcome of more government control, and conservatives tended to believe the disease was less threatening in part because they believed the idea of a threatening COVID matched *their* preferred political outcome of less governmental control (Conway et al., 2021b). Thus, ultimate beliefs about the threat's reality were shaped by the congruence of that outcome with very domain-specific desired outcomes related to government intervention.

Of course, while liberals and conservatives often differ in their average beliefs, there is much within group variability. Some of that variability may increase the likelihood of congruence with political attitudes that part ways with their traditional political identity. In the present case, domain-specific congruence could be an organizing integrative variable that helps explain a lot of the results in our study. This framework predicts that the likelihood that incongruent authoritarians will show predictive power of their authoritarianism (versus ideology) score is dependent on how their ideology and authoritarianism match each proposed dependent variable. Because this match is domain- and context-dependent, the ideological congruence approach predicts a range of outcomes.

Most pertinent to our present case, the ideological match theory would predict very consistent outcomes for very general, largely apolitical drivers of authoritarianism, but more variable outcomes for domains that have direct ideological implications. Indeed, anything predictive of authoritarianism - but less related to ideology - ought to operate similarly on ideologically incongruent authoritarians as any other kind of authoritarian. Because largely apolitical drivers like general ecological threat are not perceived to uniquely match one political position, their effects on RWA and LWA should be fairly unilateral. However, for ideological issues that tend to coalesce more on one side than the other, it is possible for within-person variability in the likelihood of incongruence with their overall political identity to affect authoritarianism. For example, the desire to crush irreligious enemies is only something likely to occur among the religious, and this belief is central to RWA. Thus, political liberals who show more congruence with religious ideology (in opposition to the liberal zeitgeist) are probabilistically more likely to be high in RWA. Similarly, the relative effects of authoritarianism (versus ideology) on incongruent authoritarians may be larger for outgroup bias than for voting behavior because incongruent authoritarians show more associations with group-based biases than party-line voting – they may simply wish for authoritarians to quash other group members in ways that cut across ideological lines, but still want to vote for their own party. That would occur to the degree the measured outgroups in question matched their incongruence.

There is a danger of tautologically declaring all results as a good fit in with an ideological match perspective *after the fact*, and this variable was not directly measured in the present data. Thus, here we can mostly only speculate. This perspective fits our data and provides a larger explanatory framework, but at best serves as a catalyst for future research. Future work should more directly test and measure the importance of specific ideological congruence in helping to understand incongruent authoritarianism.

The Asymmetry Debate

There is an ongoing debate in the literature about the degree that conservatives asymmetrically possess traits (such as dogmatism and rigidity) generally regarded as normatively "bad," versus the degree those traits are equally distributed across the political spectrum (Clark & Winegard, 2020; Nilsson & Jost, 2022; Saunders & Jost, 2023). In particular, "symmetry" perspectives argue that because conservatives and liberals are subject to the same psychological processes that lead to group biases, they should be equally likely to show rigid, dogmatic, and authoritarian traits (Clark & Winegard, 2020; Conway et al., 2018). These perspectives suggest in place of across-theboard differences between groups the idea that conservatives and liberals will differ on the domains that the traits are expressed on. For example, conservatives are more dogmatic about religion, but liberals are more dogmatic about environmental issues (Conway et al., 2018), but their overall tendency towards some kind of dogmatism is equal. However, "asymmetry" perspectives argue that conservatism itself normatively supports rigid thinking and therefore should produce an asymmetrical pattern, such that conservatives are across the board more likely to show rigidity, dogmatism, and authoritarianism (e.g., Jost et al., 2003). This perspective acknowledges potential domain differences, but believes these differences merely hide a larger main effect of conservatism's influence on authoritarian rigidity.

Authoritarianism has played a central role in these ongoing "asymmetry" debates (Clark & Winegard, 2020; Nilsson & Jost, 2022; Saunders & Jost, 2023). Some researchers have argued that authoritarianism is equally spread across the political spectrum (Conway et al., 2018), while other researchers have argued that authoritarianism is asymmetrically distributed on the conservative side (Saunders & Jost, 2023). Yet comparative tests are often hard to produce because it is methodologically hard to separate the ideological component of RWA and LWA scales from the authoritarianism component and the field is replete with instances of measurement conflation of ideology with some presumed outcome (see, e.g., Conway et al., 2023; Frisby et al., 2023; Redding, 2021).

In that context, the present data provides a unique addition to this debate by parsing the likelihood that incongruent authoritarians may be "conservatives in disguise." This novel method of testing for asymmetry helps bypass many of the problems in prior methods by using the traditional overlap of LWA and RWA scales with ideology, not as a negative problem to be solved, but as a constructive means of evaluating people who do not fit the presumed congruence. This method evaluates which group of people this set of incongruent authoritarians most resembles: Their low-authoritarian ideological fellows or their ideologically-incongruent-but-authoritarian counterparts. To the degree that both liberal and conservative authoritarian incongruent authoritarians show similar (symmetrical) patterns, this is evidence for the symmetry hypothesis. To the degree that incongruent liberal authoritarians look more like their conservative authoritarian counterparts and incongruent conservative authoritarians look more like their fellow (but low-authoritarian) conservatives, this suggests evidence for the asymmetry theory.

We find, quite at odds with the view that authoritarianism is symmetrical (Conway et al., 2018), that incongruent authoritarianism does indeed lean conservative: Conservative ideology accounts for a greater amount of variance for Ideologically incongruent conservatives high in LWA, whereas conservative authoritarianism accounts for a greater amount of variance for ideologically incongruent liberals high in RWA. Although we cannot draw direct causal inference, this is consistent with the idea that conservatives are on the whole more prone to authoritarianism than liberals.¹⁴

However, while this evidence does suggest asymmetries, like recent meta-analyses (Houck & Conway, 2019; Costello et al., 2023), it also suggests that the asymmetries are not overly large. Indeed, these data clearly support the idea that both sides have meaningful incongruent authoritarians that are legitimately liberal or conservative; but this tendency is greater among conservatives.

Limitations

Like all research, this work has limitations. We discuss some of those here and address interpretational issues that arise as a result.

Causality Inferences. First and most obviously, our work is entirely cross-sectional and correlational. As a result, we must be extra cautious in inferring causality. In our work, we evaluate the implications of different models of incongruent authoritarianism. Some of those implications imply causal relationships, such as "if a left-wing person became more religious, they would be more prone to right-wing authoritarianism." But we make no hard claims about the specific causal nature of this relationship, and our data are equally consistent with the reverse causal claim that "if a left-wing person became higher in right-wing authoritarianism, they would be more prone to becoming religious." As a result, the primary implications of these theories are merely correlational, such as "left-wing persons who are more religious will be more likely to be higher in right-wing authoritarianism." We can only offer evidence related to this latter kind of statement.

This evidence is, however, useful in evaluating larger theories — even theories that have causal implications in either direction. In work on socioecological effects on authoritarianism, for example, theories generally expect a causal influence of socioecological factors (such as resource scarcity) on authoritarianism (see, e.g., Conway et al., 2017). However, much of the work involves correlational and cross-sectional data. These data are open to the potential for reverse causality (e.g., maybe authoritarianism causes resource scarcity) and thus directional causal inferences must be limited. Yet it is still true that one of the predictions of a causal theory is that the two things will be related, and thus evidence showing that is the case is meaningful.

In the present case, we do not need to assume that (for example) either changes in religion or changes in right-wing authoritarianism came first in order to test these theories. In fact, the

¹⁴ As Tables 2 and 3 reveal, overall, there were more liberals who were high in RWA (overall percentage of sample = 8.5%) than conservatives high in LWA (overall percentage of the sample = 4.7%). Interpreting this with respect to asymmetry is far more ambiguous than interpreting the results presented in the text, however. The difference in sheer numbers could be representative of the fact that (a) conservatives are more likely to show congruent authoritarianism (also true in our data) and (b) self-reported liberals are more likely to be conservatives in disguise than vice versa. If so, this would illustrate the processes described above. On the other hand, it could be that liberals are more likely to show incongruent authoritarianism because liberals are more prone to authoritarianism. As such, this test is less precise than the test reported in the text.

specific causality issue is ripe for future study. Rather, the models we tested by and large are not about the chicken-or-egg question, but rather about why the incongruent authoritarian is, at any point in time, incongruent. The why need not be directly causal – in fact, it is instead like asking which subfactor of the need for structure scale is more related to complex thinking (e.g., Neuberg & Newsom, 1993).

Importantly, however, the causal nature of the question is of interest and should be tested in future studies, both by manipulating the key variables and by using longitudinal designs.

Limited Nature of the Sample. We did not use representative samples of the United States population. All samples are biased no matter their source, and there is no a priori reason to believe that these effects will not hold on other samples. Further, online forums such as MTurk that comprise the bulk of our sample have proven to be reliable sources of participants. For example, MTurk has been validated for use as a representative sample for research related to politics and political ideology (see, e.g., Clifford et al., 2015; Kennedy et al., 2018) and generally shows similar results as other samples (e.g., Houck et al., 2014). Further, MTurk has been validated for use on authoritarianism specifically (Choma & Hodson, 2017; Ludeke et al., 2018). As a result, MTurk is an excellent choice for work on U.S. authoritarianism. Nonetheless, our work should be limited in its scope to those online populations (or in the case of the study that did so, to the specific college population under scrutiny).

A more important limitation is that our sample entirely consisted of American participants. Work in other countries reveals that although authoritarianism often has similar properties across nations (e.g., Perry et al., 2013), it nonetheless can show cultural variability as well (Conway et al., 2023). Thus, we should be cautious in inferring that these patterns would hold in other nations, where the overlap between particular domains and authoritarianism on the right and left surely differs on a case-by-case basis.

Shifting Nature of US Politics. American politics is currently in a state of flux, and the specific ideological positions held by persons who claim to be "liberal" and "conservative" likewise is not constant across time and space (Conway et al., 2019; Conway, 2024). In fact, the historical assignments of the terms "left-wing" and "right-wing" are often arbitrary and not based in a coherent ideological stream that remains temporally consistent (Lewis & Lewis, 2022). For example, many of Trump's foreign policy positions would have placed him squarely in the "liberal" camp not that long ago (see Lewis & Lewis, 2022), and opposition to vaccines was, prior to COVID, probably more likely to be a "liberal" position (Berezow, 2014).

This variability poses obstacles for the interpretation of any results attempting to study ideology-based authoritarianism. In American politics recently, there has been a realignment such that conservatives are more likely than in times past to support anti-war foreign policy, unions, tax policies that favor the middle class, and attacks on big pharmaceutical companies. What do these facts mean for our understanding of results based on the relationship of self-reported ideology and content-laden authoritarianism scales that do not deal directly with any of those things? Further, authoritarianism itself is a constantly moving target both within- and across-cultures. Authoritarian movements can spring from both the left or the right side of the political spectrum – as evidenced by world-wide data on governmental freedoms (Freedom House, 2025) and psychological measurements (Conway et al., 2023). This is partially because authoritarianism is often reactionary, and authoritarian movements on one side of the political spectrum can spur

reactionary authoritarian movements on the other side (Conway, 2024). What do these shifting standards mean for our understanding of authoritarianism?

On the ideological measurement side, this problem highlights the value of the self-reported ideology approach we used in the present study. Shifting standards are hard to keep up with. If researchers try to measure ideology by asking a laundry list of current beliefs that experimenters themselves decide are associated with either liberalism or conservatism, they run the risk of missing the mark in an ever-changing political landscape. Allowing participants to self-identify as liberal or conservative in part helps alleviate this problem. With the self-identification approach, each individual can, based on their own knowledge of all the shifting standards, identify where they think they fit into that landscape. Researchers likely lose precision by forcing their own scheme on participants from the top-down, and that is even more the case when the measured content issues lack temporal stability.

On the authoritarianism side, it is worth noting that this problem is essentially inherent in the study of ideology and authoritarianism. When Altemeyer designed the Right-Wing Authoritarianism scale, he chose to focus on only a small number of right-wing issues that seemed likely stable candidates for the construct (Altemeyer, 1998). He did not include much about foreign policy, unions, pharmaceutical companies, or middle-class tax cuts. Similarly, when we designed our LWA scale (Conway et al., 2018), we chose to focus on a small number of content issues that seemed likely stable candidates — issues that paralleled his right-wing content. Empirically speaking, to date the content items chosen for both RWA and LWA have worked for their assigned goal, as both scales continue to be appropriately correlated with self-reported ideology (e.g., Conway et al., 2023).

This does not mean, of course, that other ideological content issues cannot be subject to authoritarianism. Indeed, for those studying ideologically incongruent authoritarianism, the shifting nature of political ideologies might help provide a mechanism by which incongruencies arise. Consider a hypothetical example. If liberals at time period A hold positions 1, 2, and 3, but shift at time period B to reject position 3, it may be that a liberal who does not change position 3 (but maintains positions 1 and 2) is ripe for becoming an ideologically incongruent authoritarian based on position 3. Thus, it is possible that ideologically incongruent authoritarianism is more likely during times — such as seemingly defines present American politics — when political realignment is occurring. This makes studying ideological incongruencies in future research even more important. It also makes it important that we broaden the scope of issues we cover in authoritarianism research or else we might not discover these incongruencies.

In our present work, our interpretation should of course be limited to the particular content domains covered in the questionnaires, for this particular cultural context, and for the time frames covered in the study set. Indeed, part of the problem in our view is that authoritarianism should not be limited to a left-right continuum in the first place. Conceptually, someone can be authoritarian about anything (Conway, 2024). We believe it would greatly benefit the field for work on authoritarianism to move beyond traditional left-right distinctions and focus on authoritarianism for other domains both specific and broad. Researchers could conceivably write parallel authoritarianism scales for libertarianism, preference for one's generational cohort, belief in the Constitution, comparative liking of old versus new Star Wars movies, or atheism. While all of those things could have left-right political implications, it would do researchers quite a lot of good to approach the issues from an apolitical lens and work outward from the topics themselves.

Further, this should be explored through a multi-cultural lens that tracks the movement of authoritarianism across time and across different national contexts.

Exploratory Nature of the Work. Our work is exploratory. We used available data to test *ad hoc* theories and questions. Those questions were shaped in part by the data we had to test them, and as with all exploratory analyses, decisions were made that partially reflected the reality of those data. Further, this work was not preregistered. As such, this inherently limits the scope of the inferences we can draw from the work. It further highlights the need for additional research that tests some of the same ideas in a more forward-thinking manner.

Of course, exploratory work has both pros and cons. On the negative side, it is impossible to fully document the dynamic give-and-take process that occurs when trying to understand a large set of data. Taking a set of ideas and questions and testing them with available data increases the possibility that our conclusions may be biased. Further, future scientists do not have an exact record of our prior beliefs and hypotheses against which to compare the results. We tried to mitigate some of these downsides of exploratory work by transparently illustrating any shifting standards we used when such explication was helpful to interpretation (e.g., footnote 6) and by more generally attempting to not overstate our claims. Nonetheless, exploratory work such as this should be taken with a grain of salt. It is a useful initial foray into an understudied area and not a comprehensive theory-validation exercise.

On the flip side, our decision to use an exploratory approach was strategic. That is because exploratory work has costs, but it also has benefits – and in this case, we viewed the benefits as outweighing the costs. For example, exploratory approaches promote a better understanding of one's dataset by not forcing conclusions that do not fit that dataset. This has benefits for hypothesis generation and is especially effective at early stages of understanding a question (see, e.g., McDermott, 2022). As Pham and Oh (2021, p. 168) commented about the field of consumer psychology:

We should remember that exploration plays a critical role in scientific progress across all disciplines. Within our field, some of the most significant contributions to our understanding of consumer behavior emerged from studies that could be regarded as mostly exploratory, including lyengar and Lepper's (2000) studies of the choice-overload phenomenon, Aaker's (1995) studies of brand personality, and Goldstein, Cialdini, and Griskevicius (2008) field studies of the effectiveness of various recycling appeals. These papers have been very influential not because of their conclusive nature, but because they each advanced important theoretical hypotheses that prompted considerable subsequent investigations of a more confirmatory nature.

Our aim in the present work was to take advantage of this exploratory spirit. Secondly, as noted by multiple researchers, preregistration – despite its best intentions – often reduces the value of exploratory work by removing incentives for a creative and full understanding of the data (McDermott, 2022; Pham & Oh, 2021) and has other potential negative side effects as well (e.g., Klonsky, 2024; Szollosi et al., 2020).

Thus, in the present work, we believe our exploratory focus was justified. However, we do also believe this heightens the need for future research. It is bad inductive reasoning to claim that, just because some other exploratory work yielded a subsequent history of replicable findings, our

work will inevitably produce the same outcome. We make no such claim here. Rather, we hope our work will inspire subsequent researchers to take these findings and rigorously test them in a forward-thinking manner. This is in a sense a low-hanging fruit for other researchers: The paradigm, questions, and hypotheses are already in place. All that is required is a will to run preregistered replication studies that both validate and extend this work.

Concluding Thoughts

Incongruent authoritarians are not mere measurement error. While not definitively arguing for one specific theoretical framework, the modest support for all four theories does clearly argue for incongruent authoritarians as a meaningful category worthy of future study. The present work provides a starting point for what this group at the crossroads of two vital constructs in the field looks like. However, it is as much a call for future work on the topic as it is a definitive answer to the question.

References

- Altemeyer, B. (1998). The other "authoritarian" personality. *Advances in Experimental Social Psychology, 30*, 47-91. https://doi.org/10.1016/S0065-2601(08)60382-2
- Beall, A. T., Hofer, M. K., & Schaller, M. (2016). Infections and elections: Did an Ebola outbreak influence the 2014 U.S. Federal Elections (and if so, how?). *Psychological Science*, *27*(5), 595-605. https://doi.org/10.1177/0956797616628861
- Berezow, A. B. (2014). Are Liberals or Conservatives more anti-vaccine? *RealClearScience*. https://www.realclearscience.com/journal_club/2014/10/20/are_liberals_or_conservatives_more_anti-vaccine_108905.html
- Bilewicz, M., Soral, W., Marchlewska, M., & Winiewski, M. (2017). When authoritarians confront prejudice: Differential effects of SDO and RWA on support for hate-speech prohibition. *Political Psychology*, *38*, 87-99.
- Brint, S., Curran, M., & Mahutga, M. C. (2022). Are US professionals and managers more left than blue-collar workers? An analysis of the General Social Survey, 1974 to 2018. *Socius*, *8*, 23780231211068654.
- Choma, B. L., & Hodson, G. (2017). Right-wing ideology: Positive (and negative) relations to threat. *Social Cognition*, *35*(4), 415-432.
- Clark, C. J., & Winegard, B. M. (2020). Tribalism in war and peace: The nature and evolution of ideological epistemology and its significance for modern social science. *Psychological Inquiry*, *31*(1), 1-22. https://doi.org/10.1080%2F1047840x.2020.1721233
- Clifford, S., Jewell, R. M., & Waggoner, P. D. (2015). Are samples drawn from Mechanical Turk valid for research on political ideology? *Research and Politics*, 2(4), 1-9. https://doi.org/10.1177/2053168015622072
- Conway, L. G. III. (2024). *Liberal bullies: What psychology teaches us about the left's authoritarian problem—and how to fix it.* Pitchstone Publishing.
- Conway, L. G., III, Bongard, K., Plaut, V. C., Gornick, L. J., Dodds, D., Giresi, T., Tweed, R. G., Repke, M. A., & Houck, S. C. (2017). Ecological origins of freedom: Pathogens, heat stress, and frontier topography predict more vertical but less horizontal governmental restriction. *Personality and Social Psychology Bulletin*, *43*(10), 1378-1398. https://doi.org/10.1177/0146167217713192
- Conway, L. G., III, Chan, L., & Woodard, S. R. (2019). Socio-ecological influences on political ideology. *Current Opinion in Psychology, 32*, 76-80.
- Conway, L. G., III, Chan, L., Woodard, S. R., & Joshanloo, M. (2021). Proximal versus distal ecological stress: Socio-ecological influences on political freedom, well-being, and societal confidence in 159 Nations. *Journal of Social and Political Psychology*, *9*, 306-320.
- Conway, L. G., III, Gornick, L. J., Burfiend, C., Mandella, P., Kuenzli, A., Houck, S. C., & Fullerton,

- D. T. (2012). Does simple rhetoric win elections? An integrative complexity analysis of U.S. presidential campaigns. *Political Psychology*, *33*(5), 599-618. https://doi.org/10.1111/j.1467-9221.2012.00910.x
- Conway, L. G., III, Houck, S. C., & Gornick, L. J. (2014). Regional differences in individualism and why they matter. In P. J. Rentfrow (Ed.), *Geographical psychology: Exploring the interaction of environment and behavior* (pp. 31-50). Washington, DC: American Psychological Association.
- Conway, L. G., III, Houck, S. C., Gornick, L. J., & Repke, M. R. (2018). Finding the Loch Ness Monster: Left-Wing Authoritarianism in the United States. *Political Psychology, 39*(5), 1049-1067. https://doi.org/10.1111/pops.12470
- Conway, L. G., III, & McFarland, J. D. (2019). Do right-wing and left-wing authoritarianism predict election outcomes? Support for Obama and Trump across two United States Presidential elections. *Personality and Individual Differences, 138,* 84-87. https://doi.org/10.1016/j.paid.2018.09.033
- Conway, L. G., III, McFarland, J. D., Costello, T. H., & Lilienfeld, S. O. (2021). The curious case of left-wing authoritarianism: When authoritarian persons meet anti-authoritarian norms. *Journal of Theoretical Social Psychology*, 5, 423-442. https://doi.org/10.1002/jts5.108
- Conway, L. G., III, Woodard, S. R., Zubrod, A., & Chan, L. (2021). Why are conservatives less concerned about the Coronavirus (COVID-19) than liberals? Comparing political, experiential, and partisan messaging explanations. *Personality and Individual Differences*, 183. https://doi.org/10.1016/j.paid.2021.111124.
- Conway, L. G., III, Woodard, S. R., Zubrod, A., Tiburcio, M., Martínez-Vélez, N., Sorgente, A., Lanz, M., Serido, J., Vosylis, R., Fonseca, G., Lep, Z., Li, L., Zupančič, M., Crespo, C., Relvas, A. P., Papageorgiou, K., Gianniou, F-M., Truhan, T. E., Mojtahedi, D., ... Balmores-Paulino, R. (2022). How culturally unique are pandemic effects? Evaluating cultural similarities and differences in effects of age, biological sex, and political beliefs on COVID impacts. *Frontiers in Psychology, 13.* https://doi.org/10.3389/fpsyg.2022.937211
- Conway, L. G., III, Zubrod, A., Chan, L., McFarland, J. D., & Van de Vliert, E. (2023). Is the myth of left-wing authoritarianism itself a myth? *Frontiers in Psychology*. https://doi.org/10.3389/fpsyg.2022.1041391
- Costello, T. H., Bowes, S. M., Baldwin, M. W., Malka, A., & Tasimi, A. (2023). Revisiting the rigidity-of-the-right hypothesis: A meta-analytic review. *Journal of Personality and Social Psychology*, 124(5), 1025-1052. https://doi.org/10.1037/pspp0000446
- Crawford, J. T. (2017). Are conservatives more sensitive to threat than liberals? It depends on how we define threat and conservatism. *Social Cognition*, *35*(4), 354-373. https://doi.org/10.1521/soco.2017.35.4.354
- De Regt, S., Mortelmans, D., & Smits, T. (2011). Left-wing authoritarianism is not a myth, but

- worrisome reality: Evidence from 13 Eastern European countries. *Communist and Post-Communist Studies*, 44, 299-308.
- Duckitt, J., Bizumic, B., Krauss, S. W., & Heled, E. (2010). A tripartite approach to right-wing authoritarianism: The authoritarianism-conservatism-traditionalism model. *Political Psychology*, *31*(5), 685-715. https://doi.org/10.1111/j.1467-9221.2010.00781.x
- Feldman, S. (2003). Enforcing social conformity: A theory of authoritarianism. *Political Psychology, 24*(1), 41-74. https://doi.org/10.1111/0162-895X.00316
- Fincher, C. L., & Thornhill, R. (2012). Parasite-stress promotes in-group assortative sociality: The cases of strong family ties and heightened religiosity. *Behavioral and Brain Sciences*, 35(2), 61-79. https://doi.org/10.1017%2Fs0140525x11000021
- Freedom House. (2025). *Freedom in the world: The uphill battle to safeguard rights.*https://freedomhouse.org/report/freedom-world/2025/uphill-battle-to-safeguard-rights
- Frisby, C. L., Redding, R. E., O'Donohue, W. T., & Lilienfeld, S. O. (2023). *Ideological and political bias in psychology.* Springer International Publishing AG.
- Grigoryev, D., Batkhina, A., Conway III, L. G., & Zubrod, A. (2022). Authoritarian attitudes in Russia: Right-wing authoritarianism and social dominance orientation in the modern Russian context. *Asian Journal of Social Psychology*, 25(4), 623-645.
- Hirsh, J. B., Walberg, M. D., & Peterson, J. B. (2013). Spiritual liberals and religious conservatives. *Social Psychological and Personality Science*, *4*(1), 14-20. https://doi.org/10.1177/1948550612444138
- Houck, S. C., & Conway, L. G. III. (2019). Strategic communication and the integrative complexity-ideology relationship: Meta-analytic findings reveal differences between public politicians and private citizens in their use of simple rhetoric. *Political Psychology*, 40(5), 1119-1141. https://doi.org/10.1111/pops.12583
- Houck, S. C., Conway, L. G., III, & Repke, M. (2014). Personal closeness and perceived torture efficacy: If torture will save someone I'm close to, then it must work. *Peace and Conflict: Journal of Peace Psychology, 20*(4), 590-592. https://doi.org/10.1037/pac0000058
- Jost, T., Glaser, J., Kruglanski, A. W., & Sulloway, F. J. (2003). Political conservatism as motivated social cognition. *Psychological Bulletin 129*(3), 339-375. https://doi.org/10.4324/9781315175867-5
- Lewis, V., & Lewis, H. (2022). *The myth of left and right: How the political spectrum misleads and harms America*. Oxford University Press.
- Kennedy, R., Clifford, S., Burleigh, T., Jewell, R., & Waggoner, P. (2018). The shape of and solutions to the MTurk quality crisis. *Political Science Research and Methods, 8*(4), 614-629. https://doi.org/10.2139/ssrn.3272468
- Klonsky, E. D. (2024). Campbell's law explains the replication crisis: Pre-registration badges are

- history repeating. Assessment, 10731911241253430.
- Kitayama, S., Conway, L. G., III, Pietromonaco, P.R., Park, H., & Plaut, V. C. (2010). Ethos of independence across regions in the United States: The production-adoption model of cultural change. *American Psychologist*, 65(6), 559-574. https://doi.org/10.1037/a0020277
- Kitayama, S., Ishii, K., Imada, T., Takemura, K., & Ramaswamy, J. (2006). Voluntary settlement and the spirit of independence: Evidence from Japan's "northern frontier". *Journal of Personality and Social Psychology, 91*(3), 369-384. https://doi.org/10.1037/0022-3514.91.3.369
- Ludeke, S. G., Klitgaard, C. N., & Vitriol, J. (2018). Comprehensively-measured authoritarianism does predict vote choice: The importance of authoritarianism's facets, ideological sorting, and the particular candidate. *Personality and Individual Differences, 123*, 209-216. https://doi.org/10.1016/j.paid.2017.11.019
- McDermott, R. (2022). Breaking free: How preregistration hurts scholars and science. *Politics* and the Life Sciences, 41(1), 55-59.
- McFarland, S.G., Ageyev, V.S., & Abalakina-Paap, M.A. (1992). Authoritarianism in the former Soviet Union. *Journal of Personality and Social Psychology, 63*, 1004-1010.
- McFarland, S.G., Ageyev, V.S., & Abalakina-Paap, M.A. (1993). The authoritarian personality in the United States and the former Soviet Union: comparative studies. In W.F. Stone, G. Lederer, & R. Christie. (Eds.), *Strength and weakness: The authoritarian personality today.* Springler Verlag.
- McFarland, S. G., Ageyev, V. S., & Djintcharadze, N. (1996). Russian authoritarianism two years after communism. *Personality and Social Psychology Bulletin*, 22, 210-217.
- Murray, D. R., & Schaller, M. (2010). Historical prevalence of infectious diseases within 230 geopolitical regions: A tool for investigating origins of culture. *Journal of Cross-Cultural Psychology*, 41(1), 99-108. https://doi.org/10.1177/0022022109349510
- Nagy, M. S. (2002). Using a single-item approach to measure facet job satisfaction. *Journal of Occupational and Organizational Psychology*, 75(1), 77-86.
- Nilsson, A., & Jost, J. T. (2022). The authoritarian-conservatism nexus. *Current Opinion in Behavioral Sciences*, *34*, 148-154. https://doi.org/10.1016/j.cobeha.2020.03.003
- Neuberg, S. L., & Newsom, J. T. (1993). Personal need for structure: Individual differences in the desire for simpler structure. *Journal of Personality and Social Psychology*, 65(1), 113.
- Oishi, S., Yagi, A., Komiya, A., Kohlbacher, F., Kusumi, T., & Ishii, K. (2017). Does a major earthquake change job preferences and human values? *European Journal of Personality,* 31(3), 258-265. https://doi.org/10.1002%2Fper.2102
- Perry, R., Sibley, C. G., & Duckitt, J. (2013). Dangerous and competitive worldviews: A meta-

- analysis of their associations with social dominance orientation and right-wing authoritarianism. Journal of Research in Personality, 47(1), 116-127.
- Peterson, B. E., & Gerstein, E. D. (2005). Fighting and flying: Archival analysis of threat, authoritarianism, and the North American comic book. Political Psychology, 26(6), 887-904. https://doi.org/10.1111%2Fj.1467-9221.2005.00449.x
- Pham, M. T., & Oh, T. T. (2021). Preregistration is neither sufficient nor necessary for good science. Journal of Consumer Psychology, 31(1), 163-176.
- Redding, R. E. (2001). Sociopolitical diversity in psychology: The case for pluralism. American Psychologist, 56, 205-215.
- Reese, G. (2012). When authoritarians protect the earth-authoritarian submission and proenvironmental beliefs: A pilot study in Germany. Ecopsychology, 4(3), 232-236. https://doi.org/10.1089/eca.2012.0035
- Saunders, B. A., & Jost, J. T. (2023). Persistent problems with the conceptualization, measurement, and study of "Left-Wing Authoritarianism." In V. Ottati & C. Stern (Eds.), Divided: Open-mindedness and dogmatism in a polarized world. Oxford University Press.
- Stefana, A., Langfus, J. A., Vieta, E., Fusar-Poli, P., & Youngstrom, E. A. (2023). Development and initial validation of the in-Session Patient Affective Reactions Questionnaire (SPARQ) and the Rift In-Session Questionnaire (RISQ). Journal of Clinical Medicine, 12(15), 5156.
- Szollosi, A., Kellen, D., Navarro, D. J., Shiffrin, R., van Rooij, I., Van Zandt, T., & Donkin, C. (2020). Is preregistration worthwhile? *Trends in Cognitive Sciences*, 24(2), 94-95.
- Todosijević, B., & Enyedi, Z. (2008). Authoritarianism without dominant ideology: Political manifestations of authoritarian attitudes in Hungary. Political Psychology, 29(5), 767-787.
- Van de Vliert, E. (2013). Climato-economic habitats support patterns of human needs, stresses, and freedoms. Behavioral and Brain Sciences, 36(5), 465-480. https://doi.org/10.1017%2Fs0140525x12002828
- Van de Vliert, E., & Conway, L. G. III. (2019). Northerners and Southerners differ in conflict culture. Negotiation and Conflict Management Research, 12(3), 256-277. https://doi.org/10.1111/ncmr.12138.
- Van Hiel, A., Duriez, B., & Kossowska, M. (2006). The presence of left-wing authoritarianism in Western Europe and its relationship with conservative ideology. Political Psychology, 27(5), 769-793. https://doi.org/10.1111/j.1467-9221.2006.00532.x
- Vivion, M., Anassour Laouan Sidi, E., Betsch, C., Dionne, M., Dubé, E., Driedger, S. M., ... & Canadian Immunization Research Network (CIRN). (2022). Prebunking messaging to inoculate against COVID-19 vaccine misinformation: An effective strategy for public health. Journal of Communication in Healthcare, 15(3), 232-242.

Wang, L., Morelen, D., & Alamian, A. (2022). A prospective cohort study of the association between key family and individual factors and obesity status among youth. Scientific Reports, 12(1), 15666.