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Reorienting the Study of Conspiratorial Thinking in Psychology: From Contaminated Mindware to Belief in Hidden Causal Forces

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ABSTRACT

In this study, we combined the perspectives of psychology and political science to study partisan conspiracy beliefs and to examine the predictors of belief in both true and false nonpartisan conspiracies. From political science, we explored the recently investigated variable of antiestablishment attitudes as well as two political attitudes unexplored in research on conspiratorial thinking: utopianism and government credulity. From psychology, we examined variables that have been consistent predictors in previous research on conspiracy belief: actively open-minded thinking, paranormal beliefs, and the Dark Triad. Actively open-minded thinking was a potent predictor of adaptive epistemic outcomes. We also included a scale derived and adapted from previous work on conspiratorial mentality that was designed to measure the broad-based conspiratorial thinking trait that we posit underlies most specific conspiracy beliefs: the Hidden Causal Forces scale. We found that the path model that best explained the observed correlations depends strongly on whether the conspiracy is partisan or nonpartisan and, in the case of nonpartisan conspiracies, whether the model seeks to explain implausible false conspiracy beliefs, true conspiracy beliefs, or the ability to discriminate between true and false conspiracies.

1 | Introduction

Psychologists have uncovered numerous linkages between the tendency to believe in conspiracies and many undesirable psychological traits such as paranoia, psychoticism, disinhibition, schizotypy, Machiavellianism, narcissism, and antagonism (Bowes et al. 2021, 2023; Hart and Graether 2018; Stasielowicz 2022). In contrast, work in political science is less likely to view conspiratorial thinking as disordered cognition. Political scientists have tended to see conspiratorial thinking as reflecting a legitimate political stance that may be functional in some contexts (Uscinski and Parent 2014). In an influential paper, Imhoff and Bruder (2014) proposed treating conspiratorial thinking as a generalized political attitude. Much work on

conspiracy beliefs by political scientists in the mid-2010s echoed this theme. For example, Oliver and Wood (2014) conceive of conspiracy belief as “a particular form of public opinion and, as such, subject to the same defining influences of conventional mass belief” (953).

We attempt to amalgamate the approaches of these two disciplines in the present work, following in the tradition of other researchers such as Miller (2020) and Miller et al. (2016) who have attempted to conjoin the insights of work on conspiracy belief from within psychology and political science (for other examples of studies using mixed perspectives, see Smallpage et al. 2023; Srol 2022). We also examine a broader range of conspiratorial thinking than is typical.¹ First, we examined,

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as in earlier work, belief in “mature” false conspiracies (see Keeley 1999)—conspiracies that have been posited and investigated over a considerable period of time. The length of time such conspiracies have been investigated without positive confirmation of their actual existence is evidence that such beliefs are ill-founded (Dentith 2022; Keeley 1999). However, we also examine the predictors of belief in conspiracies that are known to have happened (see Bensley et al. 2020). Including such conspiracy beliefs creates a more balanced approach that does not preclude views of conspiratorial thinking that emphasize its functionality (Coady 2007; Shermer 2022; Stojanov and Halberstadt 2019).

The inclusion of conspiracies that have actually occurred as stimuli allows us to conduct a signal detection analysis of discrimination skill—the ability to differentiate true conspiracy beliefs (TCFs) from false ones, an ability rarely examined in the conspiracy belief literature. Discrimination ability is critical in modern society because it is not only necessary to filter out misinformation, but citizens must simultaneously be able to discern and use factual information. Likewise, when utilizing news media, people must learn to discriminate factual reporting from opinion. In short, optimal processing of information requires not just the ability to spot the false, the bogus, and the unreliable; it also requires the ability to discern reliable information and to have confidence in this information that is well calibrated to its degree of reliability.

In this study, we also examined several partisan/ideological conspiracy beliefs. Work in political science has suggested that partisan conspiracy beliefs are qualitatively different from more conventional conspiracy beliefs (Enders and Uscinski 2021; Smallpage et al. 2017). Indeed, some have argued that many partisan conspiracy beliefs are held for strategic reasons (Enders and Smallpage 2019; Smallpage et al. 2017). In the present study, we will examine whether beliefs in these types of conspiracies are indeed different in terms of the attitudes and psychological traits that predict them.

In the study, we attempted to augment what are sometimes called conspiratorial ideation (Bost 2015) or conspiracy mentality measures² (Imhoff and Bruder 2014). Our study attempts to isolate what we posit is the key underlying psychological construct driving performance on conspiracy mentality scales: the belief in hidden causal forces. The problem with most extant scales is that, although aiming for genericness, many still contain substantial real-world content, and that content is often not balanced across important factors. For example, of the five items on the much-used Conspiracy Mentality Questionnaire (CMQ; Bruder et al. 2013), two items refer to government and politicians, and three items refer to secret activities, in general. Thus, the only content that is specifically mentioned refers to governmental conspiracies, and there is no specific content mentioning corporate or industrial conspiracies, a very common type of conspiratorial belief.³

For this reason, we attempted to “purify” some items from these scales by removing any specific content from them and making sure that they focused, abstractly, on the presence of hidden causal forces. Our purified measure, which we call the Hidden Causal Forces scale (HCFS), builds on the fact that

almost all definitions of conspiracy draw on the ideas of hidden—undetected, unseen, opaque, or unrecognized—causal forces acting to bring about a goal that is, for whatever reason, empirically opaque to most of the public. This is the common theme present in many discussions of the conspiratorial mentality in both psychology and political science. For example, Oliver and Wood (2014) repeatedly refer to “unseen forces” as an underlying aspect of most conspiracy beliefs. Bensley et al. (2020) discuss nonreflective thinking being “fueled by a distrust of hidden powers” (26).

In naming the scale, we intend the term “hidden forces” to be interpreted in the most ecumenical sense, with “hidden,” for our purposes, considered to be synonymous with undetected and opaque causes—all taken in the most unrestrictive sense. For example, by hidden from the public we do not necessarily mean *deliberately* concealed. They can also arise because of the tacit collusion among large numbers of individuals. Conspiracies positing outgroup minorities as coordinating against the majority have this structure, as do those positing the presence of systemic societal mechanisms that disadvantage outgroups. Our broad definition of hidden forces is consistent with treatments in political science that view conspiratorial mentality as a political attitude, independent of ideology, that reflects the degree of political suspicion (Enders and Smallpage 2019).

Political scientists have studied several attitudes that may well be “upstream” from conspiracy beliefs. We believe these “upstream attitudes” will also be moderate predictors of belief in hidden causal forces as well. Prominent among these upstream attitudes in political science has been the study of populism and populist beliefs. Previous studies have shown populism to be a complex and multidimensional attitude (Butter 2020; Castanho Silva et al. 2017; Forgas et al. 2021; Oliver and Rahn 2016; Stavrakakis et al. 2017; Uscinski et al. 2021). Among its dimensions, however, the one with particular relevance for our investigation is the dimension of antiestablishment attitudes (sometimes called antielitism). Using an amalgam of items from the literature, we examine this dimension of populist thinking as a precursor of the belief in hidden causal forces.

While anti-establishment attitudes may act, by priming beliefs in hidden causal forces, to foster beliefs in both true and false conspiracies, there may be political attitudes that serve to *suppress* belief in both kinds of conspiracies. In this study, we examined two such attitudes—utopianism and credulity about government—using two new scales. The latter scale, in particular, is designed to operationalize a conjecture from an important theoretical paper by Hagen (2018) who argued that “rather than focusing on conspiracy theorists, many of these lines of investigation could be turned on people who believe official stories. It would be interesting, and arguably at least as important, and would go some way toward bringing balance to this area of research, if some effort was made to explore why it is that so many people believe false or dubious *official* stories” (21, italics added).

Although we included the design features just discussed to reflect contributions to the conspiratorial thinking literature

from the perspective of research in political science, we did not ignore variables from the psychological literature that have been shown to be consistent predictors. For example, the components of the Dark Triad of personality characteristics (narcissism, Machiavellianism, and psychopathy) have been studied in a considerable number of studies of conspiracy belief and seem to be mild/moderate predictors (Bowes et al. 2023; Stasielowicz 2022), so they were included in the present investigation. Likewise, belief in paranormal phenomena (or superstitious thinking) has also been a consistent predictor in the literature (Bowes et al. 2023; Smallpage et al. 2023; Srol 2022; Ståhl and van Prooijen 2018; Swami et al. 2011) and was an extremely strong predictor of conspiratorial thinking in our previous work (Stanovich and Toplak 2025b), so it was examined in this investigation as well. In the same previous study, we found that paranormal belief and actively open-minded thinking (AOT) could predict the tendency to believe in conspiracies as well as any two predictors in the literature when examined together. Scales measuring AOT have been the subject of much less research (see Bowes et al. 2023)—so it was important to include an AOT measure in the present investigation.

Conspiratorial thinking has been linked to negative personal and political outcomes such as: antidemocratic behavior and beliefs, lack of civic engagement, and a lower threshold for engaging in political aggression and violence (Imhoff et al. 2021; Jolley and Paterson 2020; Uscinski 2020; Uscinski and Parent 2014). Most of these connections, however, do not represent established causal connections but are simply correlational relationships. Nevertheless, we include an outcome variable in the present study that measures the tendency toward political violence and other antidemocratic tendencies. Additional predictors included measures of political ideology and partisanship, as well as religiosity. Meta-analyses of conspiracy belief correlates show that religiosity is examined in many studies (Bowes et al. 2023), and whether conservatives or liberals show more conspiratorial thinking remains a continuing point of theoretical contention and empirical dispute (Enders, Uscinski, et al. 2022; Enders et al. 2024).

2 | Method

2.1 | Participants

Participants were recruited using the online platform Prolific, a crowdsourcing platform that provides participants for psychological research (Peer et al. 2017). Filters placed on Prolific included a minimum age of 18, US nationality, English as participants' first language, an approval rate of 95–100, and a minimum of 100 previous submissions. Seventeen of the 601 subjects who attempted the survey did not complete it, and 12 subjects took less than 9 min to complete questionnaires, which was deemed not long enough for accurate responses, so they were removed. No subject in the remaining sample of 572 failed all three attention checks, but one subject did fail two. Of the remaining 571 subjects, 16 failed one attention check, and 555 failed none. It was decided to retain the sample of 572 for analysis (278 male, 279 female, 11 indicating other, and 4

preferring not to answer). The median age of the total sample was 37 years, and the mean was 40.1 years ($SD = 12.9$). The sample was 73.6% white (18.0% Black and Hispanic). Informed consent was obtained for experimentation with human subjects, and data privacy was maintained according to IRB guidelines of the second author's institution.

The demographics questionnaire filled out by each subject contained two items measuring political ideology. The first was “*Economically*, I would consider myself to be” and was answered on a six-point scale ranging from very conservative (scored 1) to very liberal (scored 6). The second was “*Socially*, I would consider myself to be” and was answered on a six-point scale ranging from very conservative (scored 1) to very liberal (scored 6). 61.9% of the sample indicated some degree of economic liberalism, and 70.5% of the sample indicated some degree of social liberalism. The two items displayed a correlation of 0.77. The responses on these two questions were standardized and summed to yield a composite ideology score. The disaggregated correlations are reported in the [Supporting Information](#).

Subjects were asked a question about their 2020 vote in the US election and one question about their partisan affiliation, but results involving these questions were largely redundant with the composite ideology score, so results from these variables will be reported only in the [Supporting Information](#). Nevertheless, the results from these items indicate (like the results from the ideology variables) that the sample was more left/liberal than a census sample and also more composed of independents. In the 2020 election, 314 subjects voted for Joe Biden, 138 voted for Donald Trump, and 120 subjects voted for a third candidate. In rough parallel, 313 subjects identified as Democrats, 145 identified as independents, and 114 identified as Republicans.

The demographics questionnaire filled out by each subject contained two items measuring religiosity. The first was “Religion is important in my everyday life” and it was answered on a six-point scale ranging from disagree strongly (scored as 1) to agree strongly (scored as 6). The second question was “My feelings concerning the existence of God are” and was answered on a seven-point scale ranging from “I am certain that God does not exist” (scored as 1) to “I am certain that God exists” (scored as 7). The two items displayed a correlation of 0.75. The responses on these two questions were standardized and summed to yield the religiosity score.

2.2 | Procedure

The experiment was run online using Qualtrics. Subjects received monetary compensation for their participation, and the median time taken to complete the battery of tasks was 22 min. A short demographics questionnaire was administered first, followed by all of the remaining tasks. Items from all of the scales were intermixed and randomized together. For each item, subjects responded on a six-point scale with no neutral point: *strongly disagree* (1), *disagree* (2), *slightly disagree* (3), *slightly agree* (4), *agree* (5), *strongly agree* (6).

2.3 | Conspiracy Belief Scales

2.3.1 | False Conspiracy Belief (FCB) Scale

The FCB consisted of 12 items chosen from the 24 conspiracy items from the Conspiracy Beliefs subtest of the Comprehensive Assessment of Rational Thinking (CART; Stanovich et al. 2016). This scale was composed of a number of conspiracies that have been studied in the literature, and it covers a wide range of conspiratorial beliefs, such as those involving the assassination of President John F. Kennedy, the 9/11 attacks, fluoridation, pharmaceutical industry plots, the spread of AIDS, CIA activities, and Federal Reserve conspiracies (see the [Supporting Information](#) for the wording of each conspiracy and for the mean response on each item). The mean total score on the 12 false conspiracy items was 35.8 (SD = 12.2). This represents an average score of 2.98, which is a response scale location near slightly disagree. The reliability of the scale was high (Cronbach's $\alpha = 0.90$).

2.3.2 | True Conspiracy Belief (TCB) Scale

The TCB consisted of 12 items that came from three sources in the literature (see the [Supporting Information](#) for the wording of each conspiracy and for the mean response on each item). Three items (one rewritten) were chosen from the five “filler” items (actual conspiracies) included in the Conspiracy Beliefs subtest of the CART. Five items were chosen from Bensley and Lilienfeld (2019). Four items (all rewritten) were chosen from Wood (2016). This scale covers a wide range of conspiracies that have actually occurred, such as those involving tobacco company cover-ups, price fixing, the CIA conducting experiments on citizens without their consent, the Tuskegee experiments, the NSA secretly collecting phone records, and IRS harassment based on political opinions. The mean total score on the 12 true conspiracy items was 50.8 (SD = 11.3). This represents an average score of 4.23, which is a response scale location somewhat higher than slightly agree. The reliability of the scale was high (Cronbach's $\alpha = 0.88$).

2.3.3 | Partisan/Ideological Conspiracy Beliefs

Three variables were coded that reflected belief in conspiracies that are most popular among conservative/right-wing/Republican respondents. Subjects responded on the same six-point scale to three separate conspiracy beliefs: “Political and medical elites are hiding the truth about how the COVID-19 vaccines are dangerous” (Vaccine); “The 2020 Presidential election of Joe Biden was fraudulent because it was tampered with by high-ranking politicians, voting machine programmers, and poll workers” (Election20); “The government, media, and financial worlds in the United States are controlled by a group of Satan-worshipping pedophiles who run a global child sex trafficking operation” (QAnon). All three items were taken from Shermer (2022) and McCaffree and Saide (2022a), but the Vaccine item was rewritten. The mean correlation between the three items was 0.61. See the [Supporting Information](#) for the mean response on each item.

A fourth item we utilized was: “The 2016 Presidential election of Donald Trump was fraudulent because it was tampered with by high-ranking politicians and computer programmers in Russia” (Election16). This item was taken from Shermer (2022) and McCaffree and Saide (2022a) and represents a left-wing conspiracy belief. However, the purpose of this study was not to balance ideological types of conspiracies and then test whether the left or right is more conspiracy prone. That has been the goal of many previous studies (Enders, Farhart, et al. 2022; Enders et al. 2024).

Instead, our intent was to explore items that were quite conceptually different and that reflected a broad definition of conspiracy (see Footnote 1) that included tacit collusion.⁴ Thus, the remaining two variables were composite variables involving multiple items tapping tacit belief that collusion among large groups creates systemic discrimination based on sex (four items) and race (five items). Both of these variables amalgamated left-wing items, but again, we model each separately and do not make ideological comparisons that require balanced items. Regarding the four sex discrimination items, feminist scholars themselves (Hill and Allen 2021; Tsapos 2024) have discussed how positing the existence of a patriarchy (a large-scale systemic structure whose effects are more difficult to detect than overt discrimination against an individual) that impedes and discriminates against women is conceptually equivalent to positing a conspiracy under the broad definitions used in this study. Shermer (2022); McCaffree and Saide (2022b) included an item tapping belief in this kind of systemic conspiracy that results from implicit collusion among institutional structures: “The way the founders of the United States set things up ensures that, even today, only men can be truly free and successful.” We included this item and three others (e.g., “Women are discriminated against in getting a university degree”) to create the Systemic Conspiracy: Sexism composite variable. All of the items were summed to form the composite variable. See the [Supporting Information](#) for the wording of each item and for the mean response on each. The mean total score was 11.8 (SD = 4.7). This represents an average score of 2.95, which is a response scale location close to slightly disagree. The reliability of the four-item composite was 0.82 (Cronbach's α).

The five-item Systemic Conspiracy: Racism composite variable was conceptualized in parallel to its sexism counterpart. Generically, conspiracies occur because of causal forces unseen by the public. Sometimes those forces are the actions of specific people, and sometimes they are the result of complex interactive systems whose workings are hard to trace. As has been pointed out by several commentators (Latour 2004; McWhorter 2021; Savodnik 2021; Weiss 2023), contemporary claims of systemic racism posit opaque but all-pervasive forces that discriminate in ways not directly discernible by conventional observational means. Scholars examining the systemic racism concept have stressed: that there is an “inherent stealth” to systemic racism (Rose 2024, 10); that it is “hidden” (22, Rose 2024), “masked” (Rose 2024, 5), and “hides in plain sight” (Rose 2024, 7); is unlike “easily seen” racism (Rose 2024, 8); and that it is important that systemic racism be “made visible” (Helms 2017, 719) because it normally is not (Fuentes et al. 2023). Uscinski (2020) discusses why these types of beliefs amount to positing conspiracies (see, 92–95, on “long-term rigging”).

Shermer (2022) included an item tapping belief in this kind of systemic conspiracy that results from implicit collusion among many people managing our institutional structures: “The way the founders of the United States set things up ensures that, even today, only whites can be truly free and successful.” We included this item and four others (e.g., “Prestigious universities conspire to keep out minority students”) to create the Systemic Conspiracy: Racism composite variable. All of the items were summed to form the composite variable. See the [Supporting Information](#) for the wording of each item and for the mean response on each. The mean total score was 16.1 (SD = 5.5). This represents an average score of 3.2, which is a response scale location a little higher than slightly disagree. The reliability of the five-item composite was 0.82 (Cronbach’s α). The Systemic Conspiracy: Racism variable displayed a 0.74 correlation with the Systemic Conspiracy: Sexism variable and a 0.36 correlation with the Election16 item. The latter displayed a correlation of 0.40 with the Systemic Conspiracy: Sexism variable.

2.4 | Psychological Variables

2.4.1 | Paranormal Beliefs

The Paranormal Beliefs scale consisted of 12 items (see the [Supporting Information](#) for the wording of each item and for the mean response on each item). Two items were taken from Tobacyk (2004); two items were taken (and rewritten) from the Superstitious Thinking subtest of the CART; two items were taken from Irwin and Marks (2013). Six items were new to this scale; example items: “I believe in reincarnation—that a person may have lived before in another body,” “Homes can be haunted by spirits or ghosts.”

The scale covers a wide range of purported paranormal phenomena: spirits, predicting the future, ESP, Tarot cards, police psychics, karma, mediums, psychokinesis, and more. The mean total score on the 12 paranormal belief items was 30.9 (SD = 13.7). This represents an average score of 2.58, which is a response scale location midway between slightly disagree and disagree. The reliability of the scale was high (Cronbach’s $\alpha = 0.94$).

2.4.2 | Actively Open-Minded Thinking (AOT)

The AOT scale that was used has a long history and has undergone many revisions (Stanovich and West 1997, 2007). Stanovich and Toplak (2023) discuss the entire 25-year history of the scale and the rationale for the 13-item scale used here (see the [Supporting Information](#) for the wording of each item and for the mean response on each item). The current 13-item measure is shorter and more coherent than the corresponding 30-item measure used in the CART. Importantly, none of the items in the 13-item version employ the word “belief” which has been found to lead to biased estimates of correlations, especially in studies on politicized topics (see Stanovich and Toplak 2019).

Some items on the current version tap the disposition toward reflectivity: “Intuition is the best guide in making decisions”

(reverse scored). Other items assess the tendency toward epistemic overconfidence (e.g., “Considering too many different opinions often leads to muddled thinking” reverse scored). However, the majority of the items assessed the tendency to revise opinions in the face of new evidence (e.g., “One should disregard evidence that conflicts with your current opinions” reverse scored). Conceptually, the scale focuses strongly on issues of epistemic self-regulation (Samuelson and Church 2015). It was originally conceived as a marker for the avoidance of epistemological absolutism, willingness to perspective-switch, and the tendency to consider alternative opinions and evidence.

The mean total score on the 13 AOT items was 60.9 (SD = 8.5). This represents an average score of 4.68, which is a response scale location midway between slightly agree and agree. The reliability of the scale was 0.85 (Cronbach’s α).

2.4.3 | Dark Triad: Machiavellianism, Psychopathy, Narcissism

The Machiavellianism scale consisted of the four items used by Uscinski et al. (2022). The Psychopathy scale consisted of the four items used by Uscinski et al. (2022). The Narcissism scale consisted of nine items: the four items used by Uscinski et al. (2022) and five items chosen from the narcissistic grandiosity scale used by Rosenthal et al. (2020). See the [Supporting Information](#) for the wording of each item and for the mean response on each item. The reliability of the three scales (Cronbach’s α) was 0.78, 0.66, and 0.88, respectively.

2.5 | Political Attitudes and Values

2.5.1 | Hidden Causal Forces Scale (HCFS)

The HCFS consisted of eight items drawn from several sources in the literature (see the [Supporting Information](#) for the wording of each item and for the mean response on each item). We intended this scale to assess a person’s generic prior regarding hidden forces/unknown causes (Hagen 2018). We examined several conspiracy ideation/mentality scales and chose eight items that stressed forces hidden from the public and opaque causes without referring to much specific content. One item (“There are many very important things happening in the world about which the public is not informed”) was drawn from the conspiracy mentality measure used by Imhoff and Bruder (2014). One item was drawn from Wood (2017) and slightly modified (“The real truth about many important things is being kept from the public”). Four items were drawn from Stojanov and Halberstadt (2019), two from items loading on their conspiracy ideation factor and two loading on their rational suspicion factor. Two of the four items of the American Conspiracy Thinking scale (ACTS; Uscinski and Parent 2014; Uscinski et al. 2022) were used, but were rewritten to make them more generic. For example, we used the item “The people who really “run” the country are not known to the citizens” which substituted the more generic “citizens” for the term “voters.” In another ACTS item, we removed reference to “the outcomes of elections.” The mean total score on the eight HCFS items was 33.3 (SD = 7.5). This represents an average score of 4.13, which is a response scale location close to

slightly agree. The reliability of the scale was high (Cronbach's $\alpha = 0.87$).

2.5.2 | Anti-Establishment Attitudes (AEA) Scale

The AEA scale consisted of six items. Two of the items came from the populism scale used by Enders et al. (2023) and were rewritten; one item came from the antielitism dimension of a scale used by Oliver and Rahn (2016); one item from the populist attitudes scale of Schulz et al. (2018) was slightly rewritten; one item from the populism dimension of the scale studied by Akkerman et al. (2014); and one item from the populist index of Stavrakakis et al. (2017) was rewritten. See the [Supporting Information](#) for the wording of each item and for the mean response on each item. A typical item on the scale is: "Policies that are popular with the people are often ignored in favor of what benefits the establishment." The mean total score on the six AEA items was 27.0 (SD = 4.9). This represents an average score of 4.50, which is a response scale location midway between slightly agree and agree. The reliability of the AEA scale was 0.75 (Cronbach's α).

2.5.3 | Government Credulity Scale

Recently, more theorists have been emphasizing that the political attitudes that underlie belief in false conspiracies are a two-edged sword with a signal detection logic: an extreme tendency to avoid FCBs results in failing to detect actual conspiracies that occur in our complex sociopolitical environment (Hagen 2018; Rääkkä and Basham 2019; Shermer 2022). Governments at all levels, as well as corporations, engage in undisclosed planning for outcomes that might not be popular with the public. Social media companies have, for many years now, engaged in undisclosed planning to create products that are addictive. In the early days of Covid-19, the government and the media together colluded to discredit the hypothesis that the virus originated from a lab leak in Wuhan (Jilani 2021; Stanovich 2023; Taibbi 2021; Zweig 2023). Recall Hagen's (2018) point quoted earlier that we would have a more balanced field if we focused more attention on why so many people believe false, or at least dubious, *official* stories.

To balance the AEA's focus on skepticism toward elites, we constructed the Government Credulity scale designed to tap the tendency to be *overly* trusting of government entities. The scale had nine items (see the [Supporting Information](#) for the wording of each item and for the mean response on each item). It included: items focused on generic trust in government ("The federal government in Washington can be trusted to do what is right"—a "trust" item from Uscinski et al. 2022); items stressing that government spending never involves deficit spending (e.g., "Governments don't overspend because experts make sure inflows and outflows balance"); items stressing that government spending is always economically rational ("Government programs are not started unless cost/benefit analyses guarantee that the benefits outweigh the costs"); and items claiming that government programs and regulations do not involve any tradeoffs ("When the government raises the salaries of its employees, the taxpayers get more benefits and services" and "Government regulations on private developers make it cheaper

to build homes"). The mean total score on the nine Government Credulity items was 25.5 (SD = 7.1). This represents an average score of 2.83, which is a response scale location just below slightly disagree. The reliability of the Government Credulity scale was 0.79 (Cronbach's α).

2.5.4 | Utopianism Scale

To tap another political attitude that contrasts with the pessimism of the AEA scale, we constructed a scale to measure utopian tendencies. The Utopianism scale had five items (see the [Supporting Information](#) for the wording of each item and for the mean response on each item). It included items focused on world peace (e.g., "If we would just get rid of national borders, it would bring peace to the world") and items focused on socio-economic improvement (e.g., "Most people have the talents to be successful, but society keeps many down"). The mean total score on the five Utopianism items was 15.5 (SD = 4.4). This represents an average score of 3.10, which is a response scale location close to slightly disagree. The reliability of the Utopianism scale was 0.69 (Cronbach's α).

2.6 | Negative Political Correlates

2.6.1 | Political Violence and Antidemocratic Attitudes (PVADA) Scale

The PVADA scale had seven items (see the [Supporting Information](#) for the wording of each item and for the mean response on each item). It included three items measuring the tendency to engage in political violence (e.g., "Violence is sometimes an acceptable way for Americans to express their disagreement with aspects of society") and four items reflecting antidemocratic attitudes ("People who are caught spreading misinformation on the internet should not be able to vote"). The mean total score on the seven PVADA scale items was 17.9 (SD = 6.0). This represents an average score of 2.56, which is a response scale location between slightly disagree and disagree. The reliability of the PVADA scale was 0.72 (Cronbach's α).

3 | Results

Table 1 presents the correlations between performance on the true and false conspiracy scales and the rest of the predictor variables in the study.⁵ Responses on the false (FCB) and the true conspiracy scale (TCB) displayed a 0.52 correlation, somewhat higher than that shown in our earlier study (0.38; Stanovich and Toplak 2025b) and in other investigations (0.45 in Bensley et al. 2020).

3.1 | Predictors of Belief in False Conspiracies

Turning specifically to predictors of FCB scores, the strongest predictor by far was the HCFS, with a large correlation of 0.71. Correlations in the mid-0.40s were shown by the Paranormal Beliefs scale and the AOT (the latter negatively correlated). In order to examine which of these variables are explaining

unique variance, we examined all of the predictors in a step-wise regression with FCB total score as the criterion variable and a $p < 0.001$ entry criterion because of the large sample size. The HCFS entered first into the regression equation, followed by the AOT, followed by the Paranormal Beliefs scale. No other variable exceeded the 0.001 criterion. These three variables predicted over 60% of the variance (final equation $R^2 = 0.606$; $F(3,568) = 291.14$). In the final equation, all three beta weights (HCFS = 0.610; AOT = -0.256; Paranormal Beliefs scale = 0.128) were significant at the 0.001 level, but the HCFS was the dominant predictor.

Figure 1 presents a path model in which these three variables are direct contributors to belief in false conspiracies, but based on the discussion above concerning the political beliefs that are connected with belief in hidden causal forces, the AEA scale is included as a predictor of performance on the HCFS, which in turn is a predictor of paranormal thinking. Additionally, the model posits that AOT, as a measure of modernist thinking styles that has been a potent predictor in other studies (Newton et al. 2023; Stanovich and Toplak 2025b), will be an exogenous predictor of all the other modes of thinking that are endogenous in the model (HCFS, Paranormal Beliefs, FCB). The

TABLE 1 | Correlations of performance on the true and false conspiracy scales and the predictor variables.

	1	2	3	4	5	6	7	8	9	10	11	12	13
FCB													
TCB	0.52												
Discrimination index	-0.51	0.35											
HCFS	0.71	0.52	-0.27										
AOT	-0.44	0.08	0.44	-0.22									
Paranormal beliefs	0.45	0.06	-0.39	0.35	-0.44								
AEA	0.36	0.53	0.05	0.54	0.08	0.05							
Government credulity	-0.07	-0.37	-0.24	-0.20	-0.29	0.22	-0.37						
Utopianism	0.12	0.09	-0.13	0.10	-0.06	0.23	0.24	0.29					
Narcissism	0.22	-0.01	-0.23	0.13	-0.37	0.30	-0.10	0.32	0.08				
Mach	0.15	0.19	0.03	0.14	-0.18	0.08	0.12	0.09	0.08	0.46			
Psychopathy	0.15	0.20	0.05	0.10	-0.19	0.02	0.17	-0.02	0.09	0.23	0.53		
Ideology	-0.30	0.02	0.23	-0.21	0.36	-0.07	0.09	0.10	0.48	-0.09	-0.02	-0.05	
Religiosity	0.23	-0.14	-0.32	0.10	-0.36	0.30	-0.14	0.17	-0.16	0.24	-0.02	-0.20	-0.45

Note: All correlations larger than 0.082 in absolute value are significant at the 0.05 level.

Abbreviations: AEA = Antiestablishment Attitudes Scale; AOT = Actively Open-Minded Thinking Scale; FCB = False Conspiracy Belief Scale; HCFS = Hidden Causal Forces Scale; TCB = True Conspiracy Belief Scale.

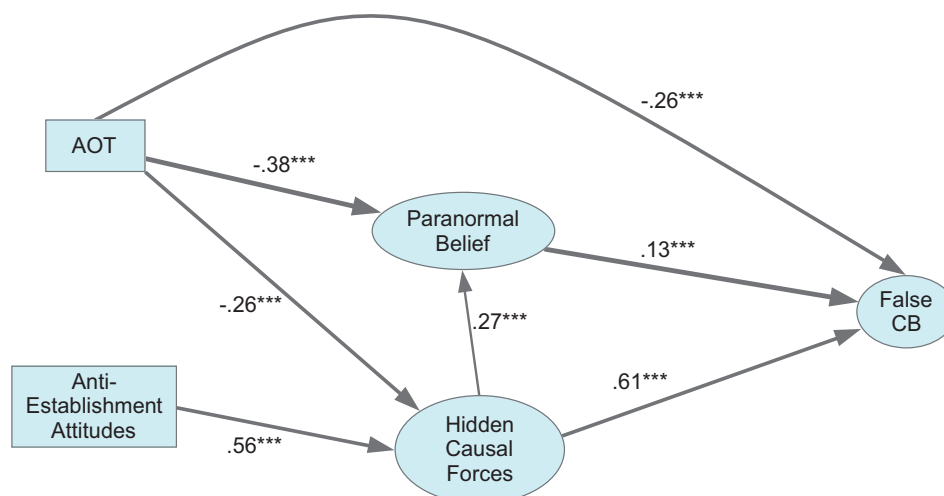


FIGURE 1 | Path model predicting the score on the false conspiracy belief scale.

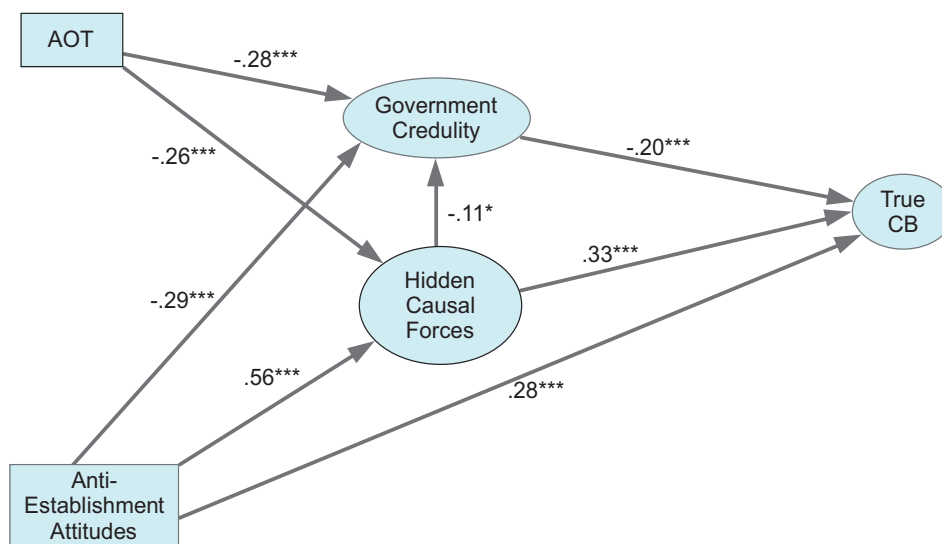


FIGURE 2 | Path model predicting the score on the true conspiracy belief scale.

model showed acceptable fit, $\chi^2(2)=9.98$, $p<0.01$; CFI=0.992, RMSEA=0.083, SRMR=0.020. All of the standardized coefficients in Figure 1 are significant at the 0.001 level. Belief in hidden causal forces is strongly driven by antiestablishment political attitudes, and it is also moderately negatively related to AOT. High paranormal belief is determined by both low levels of AOT and high levels of belief in hidden causal forces. High scores on the HCFS, in conjunction with high levels of paranormal belief and low levels of AOT, are associated with stronger tendencies to believe in false conspiracies.

3.2 | Predictors of Belief in True Conspiracies and True/False Discrimination

Examining Table 1 for the variables that predict belief in true conspiracies (TCB), we see that the dominant predictors are the HCFS and the AEA ($r=0.52$ and 0.53 , respectively). It is posited, consistent with the model displayed in Figure 1, that the correlation with the AEA is primarily mediated through HCFS. The third most potent predictor of TCB was performance on the Government Credulity scale, and here the correlation was negative (-0.37), as expected. The more credulity one has toward government actions, the less likely one is to detect conspiracies when they actually happen.

Two variables that were predictors of belief in false conspiracies, the Paranormal Belief scale and the AOT, were largely uncorrelated with belief in true conspiracies. We believe, however, that the latter is still implicated in TCB performance, through its effect on both HCFS and credulity about government motives. Therefore, we tested a path model to predict TCB that was structurally similar to the model portrayed in Figure 1 except that performance on the Government Credulity scale was substituted for paranormal belief and the direct path from AOT to TCB was removed. This model did not fit well. Modification indices indicated that the reason for the poor fit was that there were direct paths from AEA to both government credulity and TCB. Thus, the model with those modifications (see Figure 2) was run and displayed an acceptable fit, $\chi^2(1)=5.62$, $p<0.01$;

CFI=0.993, RMSEA=0.090, SRMR=0.018. All of the standardized coefficients in Figure 2 are significant at the 0.001 level except the negative standardized coefficient from HCFS to Government Credulity. As in Figure 1, belief in hidden causal forces is strongly driven by antiestablishment political attitudes and it is also moderately negatively related to AOT. High government credulity is determined by low levels of AOT and AEA and, to a lesser extent, low levels of belief in hidden causal forces. Belief in true conspiracies has moderate positive independent relationships with AEA and HCFS and a moderate/low negative relationship with the Government Credulity scale.

We also conducted a signal detection analysis of the ability to discriminate between true and false conspiracies. After converting the item responses on the FCB and TCB scales from our six-point scale into a 1/0 (believe/not believe) scoring scheme, our analysis followed the steps described by Batailler et al. (2022) in order to calculate a d' discrimination index for each subject. This index was correlated with the other variables in the study (see Table 1). Of course, the d' index was negatively correlated with the score on the FCB scale (-0.51) and positively correlated with the score on the TCB scale (0.35). But beyond the correlations with its components, the d' index measure showed the largest correlation with AOT (0.44) and paranormal beliefs, the latter a negative correlation of -0.39 . Negative correlations of lesser magnitude were obtained with religiosity (-0.32), HCFS (-0.27), Government Credulity scale (-0.24), Narcissism (-0.23), and a positive correlation with ideology (0.23), liberals scoring higher on the d' discrimination index.

We took the following steps in developing our path model of the discrimination index. Several of the variables with the highest correlations mentioned above were involved in the previous models of the true and false conspiracy belief scales and were retained. Narcissism and ideology were not in previous models, and neither variable explained unique variance in the d' index after the variance explained by AOT and paranormal belief was accounted for. Thus, these two variables were removed in order to simplify the model. Religiosity did account for unique variance after the variance explained by AOT and paranormal belief

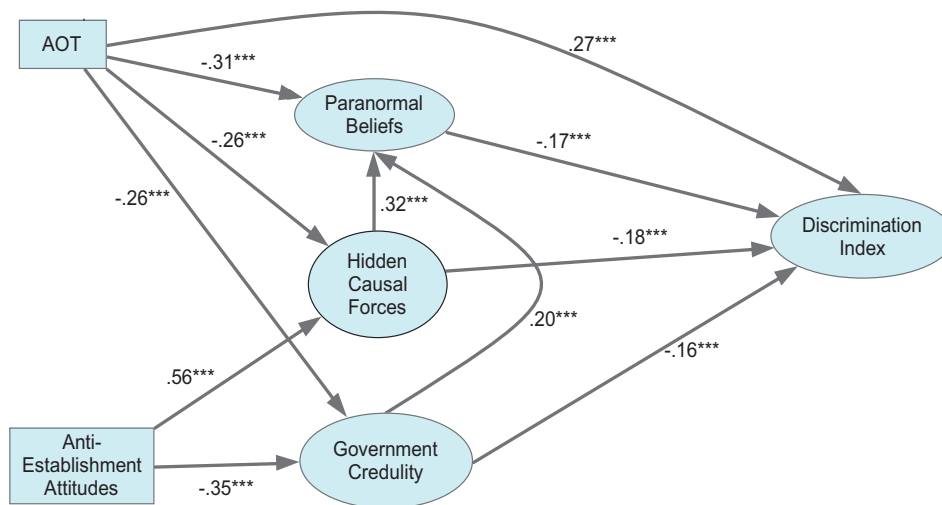


FIGURE 3 | Path model predicting the ability to discriminate true from false conspiracy beliefs.

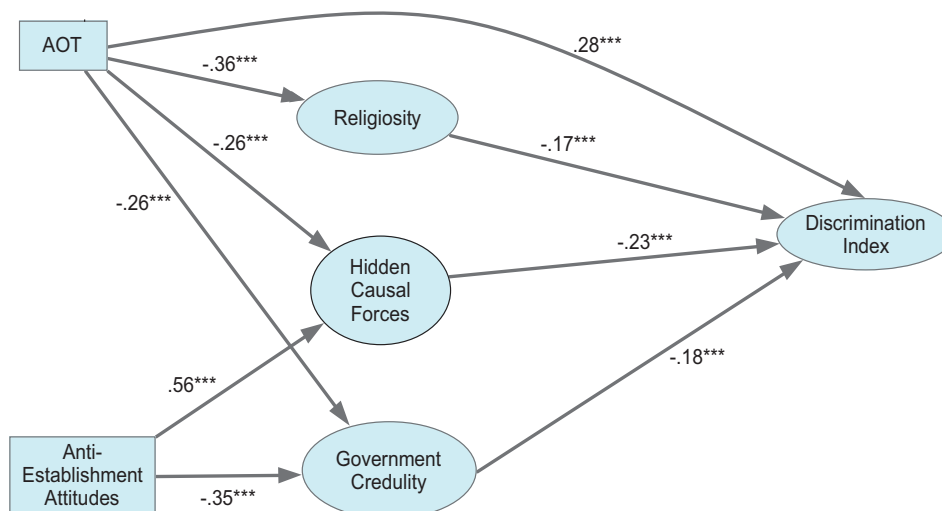


FIGURE 4 | Path model predicting the ability to discriminate true from false conspiracy beliefs.

was partialled, and thus was retained. However, the paranormal beliefs measure and the religiosity measure tended to steal variance from each other in various regression and path models. We thus developed separate models involving each (the model involving paranormal beliefs is presented in Figure 3, and that involving religiosity is presented in Figure 4). Finally, in developing a path model for understanding the relationships predictive of the discrimination index, we added to the model the AEA variable. Although it did not have a significant zero-order correlation with the d' index measure, we added the AEA variable as an exogenous measure because of the role that it played in predicting the belief in hidden forces variable in Figures 1 and 2.

The path model predicting the d' index in Figure 3 is an amalgamation of Figures 1 and 2. Output from modification indices resulted in one addition, the path from the Government Credulity variable to Paranormal Beliefs. The resulting path model displayed an acceptable fit, $\chi^2(3) = 13.32$, $p < 0.01$; CFI = 0.987, RMSEA = 0.078, SRMR = 0.025. All of the standardized coefficients in Figure 3 are significant at the 0.001 level. As in Figure 1, belief in hidden causal forces is strongly driven by

antiestablishment political attitudes, and it is also moderately negatively related to AOT. High government credulity is determined by both low levels of AOT and low levels of AEA. The ability to discriminate true from false conspiracies has a positive independent relationship with AOT, and negative independent relationships with HCFS, Paranormal Beliefs, and the Government Credulity scale.

The parallel model, substituting our Religiosity measure for Paranormal Beliefs, is presented in Figure 4. Modification indices suggested that the model fit somewhat better with the hidden forces and government credulity paths to Religiosity removed. The resulting path model displayed an adequate fit, $\chi^2(3) = 22.45$, $p < 0.01$; CFI = 0.971, RMSEA = 0.106, SRMR = 0.033. All of the standardized coefficients in Figure 4 are significant at the 0.001 level. Belief in hidden causal forces is strongly driven by antiestablishment political attitudes, and it is also moderately negatively related to AOT. High government credulity is determined by both low levels of AOT and low levels of AEA. The ability to discriminate true from false conspiracies has a positive independent relationship with AOT, and negative independent relationships with

TABLE 2 | Correlations between the six variables measuring partisan/ideological conspiracy beliefs and the predictor variables.

	Vaccine	2020 election	QAnon	2016 election	Systemic conspiracy sexism	Systemic conspiracy racism
Ideology	−0.54	−0.59	−0.37	0.27	0.44	0.54
Religiosity	0.34	0.35	0.34	−0.14	−0.13	−0.16
AOT	−0.48	−0.42	−0.47	−0.10	−0.08	−0.03
Paranormal beliefs	0.33	0.24	0.40	0.22	0.27	0.22
HCFS	0.48	0.36	0.43	0.12	0.06	0.10
AEA	0.12	0.11	0.14	0.11	0.19	0.25
Government credulity	−0.05	−0.08	0.11	0.19	0.21	0.22
Utopianism	−0.18	−0.21	0.07	0.37	0.64	0.68
Narcissism	0.20	0.19	0.26	0.11	0.12	0.14
Machiavellianism	0.11	0.07	0.11	0.07	0.08	0.14
Psychopathy	0.10	0.09	0.11	0.09	0.09	0.07

Note: all correlations larger than 0.082 in absolute value are significant at the 0.05 level.

Abbreviations: AEA = Antiestablishment Attitudes Scale; AOT = Actively Open-Minded Thinking Scale; HCFS = Hidden Causal Forces Scale.

HCFS, Religiosity, and the Government Credulity scale that were all very similar to the coefficients observed in Figure 3.

3.3 | Predictors of Belief in Partisan/Ideological Conspiracies

Table 2 presents the correlations of the predictor variables with the six variables measuring partisan/ideological conspiracy belief. As is apparent, the ideology variable has substantial correlations (although in different directions) with all six of the partisan/ideological conspiracy variables. Some variables, such as the Paranormal Belief scale, had fairly uniform positive relationships with conspiracy beliefs across the ideological spectrum. However, other predictor variables displayed relationships that were quite varied.

To bring some coherence to the plethora of relationships, we present the results of a series of multiple regressions in Table 3. What is presented there is the standardized beta weights in the final regression equation for each of the six partisan/ideological conspiracy variables. The regression analysis was run as follows. First, the ideology variable was forced into the equation. Next, the remaining predictors⁶ were allowed to enter in a stepwise fashion, and the regression analysis was stopped when no remaining variables were able to enter the equation at the 0.001 level. The numbers in Table 3 represent the standardized beta weights in the final equation.

Ideology remained a strong predictor of all six variables even after other predictors had been allowed to enter. Consistent with models of partisan conspiracy belief that conjoin motivated cognition with predispositions (Miller et al. 2016; Uscinski 2018; Uscinski et al. 2016), a number of psychological and political predispositions proved to be predictors of partisan conspiracies

in addition to ideology. Two psychological thinking dispositions (AOT and Paranormal Beliefs) were unique predictors of four of the six partisan conspiracy beliefs. All six of the partisan conspiracy variables had at least one of these two psychological thinking dispositions as a unique predictor. Five of the six partisan conspiracy variables had at least one of the three political dispositions related to skepticism and trust (HCFS, AEA, Government Credulity) as a unique predictor.

3.4 | Predictors of Political Violence and Anti-Democratic Attitudes

Because previous studies have linked, empirically and theoretically, tendencies toward antidemocratic behavior and beliefs with the tendency toward conspiratorial thinking (Imhoff et al. 2021; Jolley and Paterson 2020; Smallpage et al. 2023; Uscinski 2020; Uscinski and Parent 2014), we included a measure of political violence and anti-democratic attitudes in our battery, the PVADA scale. The first column of Table 4 indicates that FCB scores and the discrimination index were both significantly correlated with responses on the PVADA. Stronger belief in false conspiracies was positively related to antidemocratic attitudes, and the discrimination index was negatively related to the score on the PVADA. However, as Table 4 indicates, many of the predictor variables were also correlated with the PVADA variable, and many of these showed even stronger relationships than did belief in false conspiracies and the ability to discriminate true and false conspiracies.

To see which variables independently predicted PVADA scores, we examined all of the predictors, plus the three conspiracy belief measures (FCB, TCB, d' index), in a stepwise regression with PVADA total score as the criterion variable using a $p < 0.001$ entry criterion because of the large sample size. Seven predictors

TABLE 3 | Standardized beta-weights in the final regression equation for each of the six variables measuring partisan/ideological conspiracy beliefs.

	Vaccine	2020 Election	QAnon	2016 Election	Systemic conspiracy sexism	Systemic conspiracy racism
Ideology	−0.372	−0.469	−0.211	0.285	0.463	0.505
Religiosity	—	—	—	—	—	—
AOT	−0.269	−0.199	−0.257	—	−0.130	—
Paranormal beliefs	—	—	0.176	0.246	0.200	0.194
HCFS	0.340	0.216	0.273	—	—	—
AEA	—	—	—	—	0.203	0.276
Government credulity	—	—	—	—	0.155	0.230
Narcissism	—	—	—	—	—	—
Machiavellianism	—	—	—	—	—	—
Psychopathy	—	—	—	—	—	—
R ²	0.491	0.435	0.388	0.131	0.336	0.435

Note: all standardized beta-weights in the table are significant at the 0.001 level.

Abbreviations: AEA = Antiestablishment Attitudes Scale; AOT = Actively Open-Minded Thinking Scale; HCFS = Hidden Causal Forces Scale.

TABLE 4 | Correlations between political violence and antidemocratic attitudes and the predictor variables in the first column and standardized beta-weights in the final regression equation in the second column.

	Correlations	Beta weights
Ideology	0.254***	0.149***
Religiosity	−0.033	—
FCB	0.146***	—
TCB	−0.003	—
d' discrimination index	−0.207***	—
HCFS	0.089*	—
AOT	−0.297***	−0.223***
Paranormal beliefs	0.246***	—
AEA	0.147***	0.142***
Government credulity	0.358***	0.203***
Utopianism	0.534***	0.326***
Narcissism	0.395***	0.124**
Machiavellianism	0.220***	—
Psychopathy	0.233***	0.125***
R ²		0.439

Abbreviations: AEA = Antiestablishment Attitudes Scale; AOT = Actively Open-Minded Thinking Scale; FCB = False Conspiracy Belief Scale; HCFS = Hidden Causal Forces Scale; TCB = True Conspiracy Belief Scale.

* $p < 0.05$.

** $p < 0.01$.

*** $p < 0.001$.

entered the equation, and their beta weights in the final equation are listed in Table 4. Utopianism was the dominant predictor (0.326), followed by AOT (−0.223) and Government Credulity (0.203). The only variable with a significant *negative* beta weight was AOT.

None of the nonpartisan conspiracy belief measures (SFCB, TCB, d' index) were independent predictors. To provide a less stringent test of whether the nonpartisan conspiracy belief measures could explain unique variance, the three strongest predictors were entered first as a block, leaving out the other four predictors listed in the second column of Table 4. Even after eliminating those four predictors, none of the conspiracy belief variables could explain additional variance. The results suggest that perhaps the linkage in the literature between conspiracy belief and antidemocratic attitudes is not a causal one but, in fact, is mediated by other variables.

4 | Discussion

In our results, we can see that the statistical predictors of conspiracy belief vary considerably depending on the type of conspiracy that is under study. The variability shows the pitfalls of focusing on specific conspiracy beliefs, or even a small set of particular beliefs, and extrapolating the findings to conspiracy belief in general. Consider that when we take belief in implausible nonpartisan conspiracies as our target, the psychological model we get is one dominated by belief in hidden causal forces and, as a concomitant, anti-establishment attitudes look like a negative trait because they drive the primary variable leading to false beliefs (Figure 1). In contrast, if we model belief in conspiracies that have actually occurred, anti-establishment

attitudes seem very functional (see Figure 2). This is because they are an independent predictor of belief in true conspiracies; they facilitate a variable (HCFS) that is positively related to true beliefs, and they inhibit a variable (government credulity) that suppresses TCB. But finally, if we were to model discrimination accuracy (Figure 3), anti-establishment attitudes would seem to have a mixed effect. They *enhance* one variable that inhibits its discrimination accuracy (HCFS), but they *depress* a different variable that also inhibits discrimination accuracy (government credulity).

When we move from nonpartisan conspiracy beliefs to partisan/ideological conspiracy beliefs, the predictors change again. The dominant predictor of belief in ideologically charged conspiracies is, of course, political ideology, but various political and psychological thinking dispositions also predicted variance in our partisan conspiracy variables independent of ideology (see Table 3). At least one of the psychological thinking dispositions of AOT and Paranormal Belief was an independent predictor of all six of the partisan conspiracy variables. At least one of the three political attitudes related to skepticism and trust (HCFS, AEA, Government Credulity) was an independent predictor of five of the six partisan conspiracy variables after the effects of ideology were partialled out.

In short, when we adopt the research strategy of sampling only a small part of the conspiracy belief space, we effectively dictate the sociopsychological model that will apply. If an investigator selects a nonpartisan FCB about a secret international society, they will get one sociopsychological model of “believers.” If the investigator chooses a highly partisan right-wing conspiracy belief that is also false, they will get a different sociopsychological model of “believers.” If the investigator chooses a conspiracy that actually occurred, such as the CIA testing mind-control techniques on citizens without their consent, they will get yet another sociopsychological model of “believers,” and the list goes on.⁷

In our earlier work constructing the Conspiracy Beliefs subtest for the CART (Stanovich et al. 2016), we conceptualized conspiracy belief within a contaminated mindware framework (Stanovich et al. 2016). That is, we viewed the number of unwarranted conspiracy beliefs that a person held as a subset of the defective declarative knowledge that the individual had stored, and we assumed, for scoring purposes, that the optimal amount of contaminated mindware should be zero. The shifting models of conspiracy belief discussed above (i.e., the content dependence of the predictive models) have led us to think that the “conspiracy belief as mental contamination” framework that our lab used at the time of publishing our CART subtest was not the best approach. Instead, a focus on belief in forces hidden from the public as a psychological/political thinking disposition would help to prevent the mistaken assumption that any amount of conspiratorial thinking is *prima facie* nonoptimal.

The CART was intended as a measure of rational thinking. While it is true that a particular conspiracy belief may be so implausible that it is not wrong to deem it irrational, not all conspiratorial thinking should be labeled in the same way. This is even more true of the primary disposition underlying the tendency toward conspiratorial thought: the tendency to explain

events in terms of hidden causal forces. In a world of increasing complexity—and increasing conflicts between many polarized interest groups—why would you not think that some of the groups were colluding and coordinating to advance a goal that remains empirically opaque to the public? In light of these facts about the structure and complexity of the modern world, it is certainly adaptive for the average citizen to have *some* degree of suspicion that there are hidden or undetected forces determining the changes they see in their lives.

Of course, this cautionary mental attitude (belief in hidden causal forces) will sometimes be overdone, and will lead to epistemically unwarranted beliefs of various kinds (Bensley et al. 2020, 2022; Lobato et al. 2014; Srol 2022; Ståhl and van Prooijen 2018; van Prooijen and van Vugt 2018). Sometimes a highly cautionary attitude toward hidden forces will combine with other mental traits like the propensity for risky explanations (indicated in our study by the Paranormal Beliefs scale; see Douglas and Sutton 2023) and too low a prior probability that the institutions of modernity (Pinker 2021; Rauch 2021) have the correct explanation over and above our own intuitions (indicated in our study by the AOT). When this happens, the result is the appearance of the more epistemically unwarranted conspiracy beliefs. But, *a priori*, it is hard to know when one has crossed this very ambiguous line. Government officials do indeed often work for ends that serve themselves rather than their governmental function, and this is not rare—which is why it is hard to say what level of response on our HCFS is the optimal one and, likewise, how many false alarms in the operation of this cautionary mental style are an indication that its parameter is nonoptimally set.

4.1 | Actively Open-Minded Thinking as a Unique Predictor of Warranted Beliefs and Actions

Finally, we would draw attention to the ability of the AOT variable to associate in the adaptive direction with all of the variables and outcomes in the study. It was the strongest predictor of the discrimination index because it had a substantial negative correlation with false conspiracy beliefs and a positive (although not quite significant) correlation with true conspiracy beliefs. It was the only predictor variable that showed this optimal differential pattern. For example, several variables (Paranormal Beliefs scale, AEA, HCFS, Utopianism scale, Machiavellianism scale, psychopathy scale) had significant positive correlations with *both* true and FCBs. One variable had a *negative* correlation with both true and false conspiracy beliefs (the Government Credulity scale).

The AOT scale displayed negative correlations with all six of the partisan conspiracy variables (although just four were significant), and again, it was the only predictor variable to do so (to correlate with all six in the “right” direction). Most other predictor variables displayed *no* correlations in the “right” direction with the six partisan conspiracy variables, including the Paranormal Beliefs scale, AEA scale, HCFS, Narcissism scale, Machiavellianism scale, and Psychopathy scale. The Utopianism scale and the Government Credulity scale displayed negative correlations with two partisan conspiracy belief variables, but neither was significant in the latter case. Regarding

correlations with political violence and anti-democratic attitudes (the PVADA variable), the AOT stood out as the only predictor variable with a significant negative correlation (the discrimination index also had a significant negative correlation). All of the other psychological and political attitude variables displayed positive correlations.

The AOT displays a substantial 0.36 correlation with self-identified liberalism (our ideology variable), but interestingly, the AOT appears to carry the “good” aspects of liberal thought more than self-identified ideology does. For example, the AOT showed a higher correlation than ideology with the ability to discriminate between true and false conspiracies (0.44 vs. 0.23). The ideology variable had substantial positive correlations with all three of the left-wing conspiracy variables (0.54, 0.44, 0.27), whereas the AOT showed no positive correlations (−0.03, −0.08, −0.10), even though it is correlated in the positive direction with ideology. Finally, liberalism had a significant positive correlation with the PVADA variable (0.25), whereas the correlation of the AOT with the political violence variable was negative (−0.30). In the final regression equation predicting PVADA, the two variables had opposite signs (see Table 4). The AOT seems to be pretty distinctively tapping the part of liberalism that leads to good epistemic judgments and to democratic attitudes.

Author Contributions

Keith E. Stanovich: conceptualization, writing – original draft, data curation, writing – review and editing, formal analysis. **Maggie E. Toplak:** conceptualization, writing – review and editing, data curation, supervision, investigation.

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Ethics Statement

Ethics approval was obtained for this study from the second author's institution.

Consent

The authors have nothing to report.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The data that support the findings of this study are publicly available in the Open Science Framework (OSF) at: <https://osf.io/5hkes>.

Endnotes

¹ To frame our study, we adopt a definition of conspiracy that is minimalist and broad: “a belief that at least two agents have coordinated or colluded, undetected by the public, toward a goal of significant public interest.” We opted for a nonrestrictive definition in order to encompass all of the varied research traditions that have been

studied in both psychology and political science. We did not want to rule out prematurely any of the stimuli that had been used in either of these disciplines. Our definition is broad in that it does not restrict the conspiracy to just a few actors, as some definitions do. It does not require direct contact among the conspirators (Dentith and Orr 2018), but instead allows for tacit collusion or coordinated collaboration among a large number of actors. Likewise, because this definition allows tacit collusion among a large number of actors to be defined as a conspiracy belief, it does not require that the conspirators be powerful, as do some definitions (see Douglas and Sutton 2023 and Bost 2019, for discussions of many of the different definitions in the literature). Finally, as advised by Douglas and Sutton (2023), our definition does not stipulate that the conspiracy belief must be irrational or false (see Uscinski et al. 2024).

² Theoretical discussion about what these generic conspiracy mentality scales are actually measuring remains unsettled (Imhoff et al. 2022; Nera 2024; Sutton and Douglas 2020; Sutton et al. 2024; Swami et al. 2017). Theoretical positions vary, from viewing these scales as largely descriptive (“the disposition to believe in conspiracies”) to viewing them as measures of explanatory constructs. When these measures are viewed as tapping explanatory constructs, there is still much variation, ranging from viewing the construct as a political attitude (as in Imhoff and Bruder 2014) to alternatively viewing it as a general susceptibility to endorsing implausible explanations (Sutton and Douglas 2020). We view the generic scales as explanatory, and we opt for conceiving them as tapping a socio-political attitude, in the manner of Imhoff and Bruder's (2014) speculations (we separate this construct from the susceptibility to implausible beliefs, which we measure with a paranormal thinking scale).

³ It is likewise with the Generic Conspiracist Beliefs Scale (GCB; Brotherton et al. 2013). Of the 15 items in the scale, three single out government conspiracies, three single out extraterrestrial conspiracies, and three single out secret organizations controlling the world. The remaining six items are a potpourri of content. Only one item specifically singles out corporate/industrial conspiracies to deceive the public. Like the CMQ, one would expect the GCB to correlate more highly with belief in government conspiracies than in corporate/industrial conspiracies. In both scales, some content areas are singled out, but other well-known content areas that are the locus of conspiracy beliefs are left out entirely. For example, there are no items tapping minorities colluding against the general public or about majorities colluding to disadvantage minorities.

⁴ Note that we have not labeled any of the partisan conspiracy items as *false* conspiracy beliefs. Most of them would not fall within Keeley's (1999) concept of mature conspiracy belief (except perhaps the QAnon item)—one that remains unproven so long that the sheer length of time reduces its epistemic warrant. Especially contestable would be the items contained in the two tacit collusion variables. Indeed, we have taken to labeling belief in these types of tacit collusions as “contested beliefs” rather than false ones (Stanovich and Toplak 2025a).

⁵ Partisanship was omitted because it was largely redundant with political ideology, showing exactly the same patterns of correlations, although sometimes slightly lower in magnitude. All of the correlations involving partisanship are presented in the Supporting Information.

⁶ One predictor, Utopianism, was left out of this analysis because its high (0.48) correlation with ideology distorted estimates of the latter variable. The results including the Utopianism variable are reported in Table S2 of the Supporting Information.

⁷ The combinatorial possibilities here are actually fairly large. We have not explored all of these possibilities in this study, but consider what the actual space must look like when we take into account that: we can choose to focus on a specific conspiracy or a collection of them; we can choose to focus on implausible conspiracy beliefs or on plausible conspiracy beliefs (Hattersley et al. 2022); we can choose to examine the ability to discriminate between false and true conspiracies;

we can examine partisan conspiracy beliefs or nonpartisan conspiracy beliefs; and if we focus on partisan beliefs, we can examine largely left-wing conspiracies or largely right-wing conspiracies. Then there is the possibility of studying tribal conspiracies or proxy conspiracies (Shermer 2022). And, finally, there is the recently discussed issue of whether those endorsing conspiracy explanations are endorsing just their gist or their verbatim accuracy (Langdon et al. 2024). Each of these myriad choices will lead to a different psychosocial model of conspiracy belief (see Mao et al. 2024, for further taxonomic categories).

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Supporting Information

Additional supporting information can be found online in the Supporting Information section. **Table S1:** Correlations between all of the variables in the study. **Table S2:** Standardized beta-weights in the final regression equation for each of the six variables measuring partisan/ideological conspiracy variables.