Something's Going on Here

Psychological Predictors of Belief in Conspiracy Theories

Joshua Hart and Molly Graether

Department of Psychology, Union College, Schenectady, NY, USA

Abstract: Research on individual-difference factors predicting belief in conspiracy theories has proceeded along several independent lines that converge on a profile of conspiracy believers as individuals who are relatively untrusting, ideologically eccentric, concerned about personal safety, and prone to perceiving agency in actions and profundity in bullshit. The present research represents the first attempt at an integrative approach to testing the independent contributions of these diverse factors to conspiratorial thinking. Two studies (N = 1,253) found that schizotypy, dangerous-world beliefs, and bullshit receptivity independently and additively predict endorsement of generic (i.e., nonpartisan) conspiracy beliefs. Results suggest that "hyperactive" agency detection and political orientation (and related variables) might also play a role. The studies found no effects of situational threats (mortality salience or a sense of powerlessness) – though it remains to be seen whether real-world instantiations of situational threats might move some people to seek refuge in conspiratorial ideation.

Keywords: conspiracy belief, personality, schizotypy, dangerous-world beliefs, bullshit receptivity, agency detection, mortality salience, control

People develop beliefs about the world partly to cultivate a sense of safety and security (e.g., Hart, 2014). Because of this, common worldviews generally depict a universe that is coherent, stable, predictable, and benevolent; these qualities impart a feeling of equanimity that promotes psychological well-being (e.g., Greenberg, Solomon, & Pyszczynski, 1997).

Why, then, would some people entertain worldviews that construe the world as burdened by insidious, malevolent actors who secretly control societal institutions to further their own selfish purposes? Such conspiracy theories tend to be highly specific and sometimes bizarre – for example, that aircraft contrails are actually chemical agents the government sprays for mind-control purposes, or that gun-control factions perpetrated (or staged) the 2012 massacre of children at Sandy Hook elementary school. Therefore, any given conspiracy theory is not endorsed by most people. This should make such beliefs relatively unappealing, because believing in them might undermine a soothing sense of social consensus (e.g., Marks & Miller, 1987). And yet, most people believe in at least one conspiracy theory (Miller, Saunders, & Farhart, 2016).

Research supports a range of explanations for conspiracy beliefs that point to dispositional causes, such as personality traits, and situational ones, such as the salience of uncontrollable threats. However, most research has proceeded along separate lines, exploring at most two or three factors at a time, so we cannot know the extent to which the various explanations overlap or interact with one another. For example, people higher in schizotypy and paranoid ideation are more likely to hold conspiracy beliefs (e.g., Darwin, Neave, & Holmes, 2011), as are people who think the world is a dangerous place (Moulding et al., 2016). But given likely covariance between schizotypy and dangerous-world beliefs, without assessing their association with conspiracy beliefs simultaneously (e.g., in a multiple regression analysis), it is impossible to know whether they contribute independent, interacting, or redundant explanations.

We undertook the present research with the purpose of integrating several lines of research concerning psychological explanations to gain a more precise and comprehensive understanding of dispositional and (less comprehensively) situational factors predicting conspiracy belief.

Conspiracy Theories Appeal to Certain Dispositions

Conspiracy theories often have a partisan bent, so one of the strongest predictors of belief in specific conspiracy theories is political orientation (e.g., Miller et al., 2016). However, separate from partisanship, people differ in the general tendency to interpret information in a conspiratorial fashion (Uscinski, Klofstad, & Atkinson, 2016; although this tendency might be related to political extremism, van Prooijen, Krouwel, & Pollet, 2015).

What personal, psychological factors predict such a disposition? One possibility might be a low sense of personal *control*, which may prompt people to look to external sources of control (e.g., Kay, Gaucher, Napier, Callan, & Laurin, 2008) to thwart a sense of chaos. This possibility has been seen in research showing that asking participants to imagine scenarios in which or topics about which they had no control increased their endorsement of specific conspiracy theories (Sullivan, Landau, & Rothschild, 2010; van Prooijen & Acker, 2015). It is also reflected in findings that people in groups that are out of power – for example, because their political party has lost an election – are more likely to engage in conspiracist ideation (e.g., Uscinski & Parent, 2014). Although low control or a sense of powerlessness has usually been studied as a situational factor, a dispositional sense of not having control might also make people more prone to conspiracy-like thinking (Sullivan et al., 2010).

Another personality-based factor that seems related to conspiracy beliefs is *schizotypy* (e.g., van der Tempel & Alcock, 2015), a personality trait dimension comprising a constellation of tendencies related to schizotypal personality disorder symptomology: for example, interpersonal suspiciousness, social anxiety and isolation, and eccentric ideas and perceptions (e.g., Edmundson, Lynam, Miller, Gore, & Widiger, 2011). These tendencies appear to combine to lead individuals higher in the trait to distrust official explanations for negative events and to entertain less-plausible alternatives.

Combined with research suggesting that conspiracy theorists are more likely to believe that the world is a dangerous place full of bad people (Moulding et al., 2016), the picture that emerges from these findings depicts conspiracy theorists as disproportionately likely to feel ill at ease with the world. People who find it difficult to trust others and who view the world as a dangerous and uncontrollable place may, ironically, find solace in worldviews that cast hidden villains as responsible for life's disappointments and miseries, and the self as having special insight into the machinations of these malevolent actors. Perhaps conspiracy worldviews are a consolation for individuals who have difficulty seeing reality through a more benevolent lens, because the belief that someone is responsible for negative events might be preferable to concluding that the universe is wantonly cruel and unjust.

Finally, there may be a set of cognitive tendencies that combine with or augment the association between broader or more motivation- and emotion-based personality traits on conspiracy beliefs. In other words, conspiracy mentality may in part reflect particular information-processing dispositions. For example, people who are prone to detecting *agency* – intention – behind events and actions should be more likely to entertain the possibility of conspiracy, and research supports this hypothesis (Douglas, Sutton, Callan,

Dawtry, & Harvey, 2016; van der Tempel & Alcock, 2015). Along similar lines, individuals' eagerness to seek or find meaning or patterns in ambiguous or random information might predispose conspiratorial thinking. Evidence for this can be seen in research showing that people higher in *bullshit receptivity* – a tendency to perceive profundity in nonsensical but superficially meaningful ideas – are more likely to engage in conspiratorial ideation (as well as to hold paranormal beliefs; Pennycook, Cheyne, Barr, Koehler, & Fugelsang, 2015). The same is true of people who are less likely to engage in analytical thinking (Swami, Voracek, Steiger, Tran, & Furnham, 2014) or more likely to rely on heuristics (Moulding et al., 2016). Given associations between agency detection and supernatural beliefs (van Elk, 2013), it also seems possible that religious worldviews would be associated with conspiracy beliefs (i.e., because agency detection may be a common cognitive mechanism underlying both).

Possible Overlap or Interactions Among Individual Differences

The present research includes as one of its main goals the attempt to probe whether known individual-difference predictors of conspiracy belief are independent, or whether they overlap or even interact with one another. As noted above, there are theoretical reasons to believe that dangerous-world beliefs and schizotypy overlap substantially. For example, a key feature of the schizotypal personality dimension is paranoia, which is also thematically at the heart of a worldview depicting human society as chaotic, fragile, and full of malevolent actors. We are unaware of any research directly correlating schizotypy and dangerous-world beliefs, but given that both have been shown to predict conspiracy belief in separate lines of research, it is worth examining if individuals higher in schizotypy are more likely to believe in conspiracy beliefs simply because of their tendency toward paranoia. Conversely, it is worth examining if individuals higher in dangerous-world beliefs are more likely to believe in conspiracies because they tend to be higher in schizotypal tendencies that are consistent with such beliefs (e.g., unusual thoughts and experiences).

Similarly, there is theoretical commonality between individual differences in bullshit receptivity and agency detection. The tendency to perceive profundity or agency where they do not exist (or are unlikely to exist) may reflect a common "failure to reflect on and inhibit…ontological confusions" (Pennycook et al., 2015, p. 551) – in this case, to take as true or real things that seem or "feel" true or real, even when such intuitions are based on category confusions (e.g., conflating the mental and physical). Again, no research that we know of directly compares bullshit receptivity and agency detection, but given that both have been associated with conspiracy belief and share common

underlying features, they deserve to be examined simultaneously as predictors.

The issue of interactions between predictors is a bit trickier, given all the possible ways that the individual differences we are examining could interact. Generally speaking, it seems possible that some traits or tendencies would predict conspiracy belief only or mainly in the presence of complementary traits or tendencies. For example, some researchers have posited that the relation between schizotypy and conspiracy thinking might be enhanced among individuals prone to hyperactive agency detection (van der Tempel & Alcock, 2015). In other words, maybe hyperactive agency detection is a crucial factor that leads people with eccentric and/or paranoid tendencies to endorse conspiracy theories per se, as opposed to other nonmainstream beliefs that do not involve hidden agents.

The Present Research

In the present research, we sought to integrate previous findings to examine how situational and personal factors explain people's tendency to endorse conspiracy beliefs. Combining previously identified explanatory factors in the context of a single statistical analysis allows us to identify (a) the extent of the unique contribution made by factors that share common variance, and (b) any potential interactions between these factors.

In a first study, we examined the influence of situational threats and a range of individual-difference factors on endorsement of generic, nonpartisan conspiracy beliefs. For the situational threats, we induced either a control threat (i.e., a sense of not having control) mortality salience (i.e., death awareness) – the latter being a broader personal threat that might be more motivationally potent. For the individual-difference factors, we measured schizotypy, dangerous-world beliefs, bullshit receptivity, and "hyperactive" agency detection. We then replicated this study in a second study after making a few adjustments and roughly doubling the sample size.

Previous research led us to predict that mortality salience and control threats would increase the likelihood that participants would endorse conspiracy beliefs, as would each of the individual-difference variables. However, we only had tentative predictions as to whether or how any study variables would interact with one another. Some previous research suggests that conspiracy-predisposing variables might interact synergistically (e.g., van der Tempel & Alcock, 2015). Previous theory and research did not provide much basis for hypothesizing about the extent to which individual-difference predictors of conspiracy beliefs would prove redundant; thus, for example, we did not have any expectations regarding whether schizotypy and dangerous-world beliefs would prove to be unique predictors of conspiracy

beliefs, or whether one variable would mediate the influence of the other.

Study 1

Participants

Participants were adults located in the United States who were paid $2.50 to complete a survey posted on Mechanical Turk (MTurk; see Buhrmester, Kwang, & Gosling, 2011). Before analysis, we excluded 15 participants who failed to follow the instructions for the experimental manipulation. This left 422 participants (227 men, 193 women, and 2 "other") aged 19–79 ($M = 36.71$, $SD = 10.61$).

Materials and Procedure

All participants completed online questionnaires in the same (arbitrary) order, as follows:

Bullshit Receptivity

Participants' receptivity to superficially profound statements was measured using the Bullshit Receptivity Scale (Pennycook et al., 2015). This measure consists of nine seemingly impressive statements that follow rules of syntax and contain fancy words, but do not have any intentional meaning (e.g., "Wholeness quiets infinite phenomena"; "Imagination is inside exponential space time events"). Participants rated each of the items' profoundness on a scale from 1 (= *Not at all profound*) to 5 (= *Very profound*). They were given the following definition of profound for reference: "of deep meaning; of great and broadly inclusive significance."

Hyperactive Agency Detection

To measure participants' tendency to attribute intent to events, we asked them to interpret the actions portrayed by animated shapes (Abell, Happé, & Frith, 2000), a series of videos lasting from 30 s to 1 min depicting two triangles whose actions range from random (e.g., bumping around the screen following a geometric pattern) to resembling complex social interactions (e.g., one shape "bullying" the other). These animations were originally designed to detect deficits in the development of theory of mind.

We modified the original procedure, wherein participants are shown 12 videos and asked to describe what is happening in an open-ended response format. Participants are asked to categorize the interactions of the shapes in each video as reflecting no interaction, physical interaction, or mental interaction.

To save time, we arbitrarily chose two random and two goal-directed videos (we did not use any of the theory of mind videos to avoid a ceiling effect). Participants were shown the videos one at time and answered questions about each on a separate page before moving on.

To measure agency detection we asked three questions about each video. First, as in a multiple-choice version (White, Coniston, Rogers, & Frith, 2011), we asked "What was the nature of the interaction between the two triangles in the video?" Response options ("No interaction," "Physical interaction," or "Mental interaction") were scored from 1 to 3. Second, we asked, "Which is the best description of what happened in the video?" and participants could select one of four descriptions of the shapes' movement: "random movement of shapes," "some pattern- or rule-based movement of shapes," "shapes interacting with each other," or "shapes trying to influence each other." Responses were coded from 1 to 4, respectively. The third question defined agency as "willful control of one's actions to fulfill goals" and asked participants to rate how much agency the shapes exhibited on a scale from 1 (= *None*) to 5 (= *Total*).

Because a principal components analysis suggested that these three items reflected one underlying component, we combined them to form a single agency detection score (the first component, which was the only one extracted, explained 60% of the variance, and each item had a loading of over .75). To create the combined score, we standardized each item and then averaged the standardized scores.

Dangerous-World Beliefs

The Dangerous Worldview Scale is a subscale of the Social Worldview Scale (Duckitt, Wagner, du Plessis, & Birum, 2002). Ten items assess dangerous-world beliefs (e.g., "Any day now chaos and anarchy could erupt around us. All the signs are pointing to it"; "The 'end' is not near. People who think earthquakes, wars, and famines mean God might be about to destroy the world are being foolish" [reverse-coded]) on a scale of 1 (= *Definitely not true*) to 7 (= *Definitely true*).

Scientific and Religious Belief

We measured participants' religiosity and science-mindedness, respectively, with one item each: "I am religious," and "I identify with the scientific worldview." Both were scored from 1 (= *Strongly disagree*) to 7 (= *Strongly agree*).

Schizotypy

To measure schizotypal personality, we used four subscales from the Five-Factor Measure of Schizotypal Personality Disorder (Edmundson et al., 2011). For brevity, we chose the subscales that seemed most closely related to conspiracy thinking: interpersonal suspiciousness, odd and eccentric character, aberrant ideas, and aberrant perceptions.

Each subscale comprises 10 items scored from 1 (= *Strongly disagree*) to 7 (= *Strongly agree*). For interpersonal suspiciousness, items tap wariness of others' intentions and a sense of unease (e.g., "I have to keep a look out to keep others from taking advantage of me"), with three items reverse-scored (e.g., "I find it easy to trust other people"). Odd and eccentric items measure how much participants view themselves as having peculiar interests and behaving in an odd way (e.g., "I like doing things that other people would find bizarre"). The aberrant ideas subscale is similar except that it focuses on thoughts rather than behavior (e.g., "I have thoughts that other people would find strange"; "I have never been told that my ideas are weird" [reverse-coded]). Aberrant perceptions tap participants' unusual sensory experiences (e.g., "There have been times when my body has felt unusual or different from normal").

Threat Manipulation

Participants were randomly assigned to complete one of three writing exercises, each consisting of two open-ended prompts written in roughly parallel language across conditions. The three topics were meant to prime a sense of having control (i.e., a comparison condition), lacking control, or mortality salience, respectively.

These prompts adapted a control-threat manipulation (Whitson & Galinsky, 2008) to fit the two-question format of the Mortality Attitudes Personality Survey (Rosenblatt, Greenberg, Solomon, Pyszczynski, & Lyon, 1989), a standard way of manipulating mortality salience. Depending on the random assignment, participants were asked to think about a time in which they had complete control over a situation (the comparison condition), a time in which they had no control over a situation, or about the thought of their own death. The first prompt asked them to describe the emotions the thought aroused in them, and the second asked them to think about the physical experience of the event. For both, participants were instructed to respond with their gut-level reactions.

Affect

To provide a distraction and to allow time for the manipulation to take effect (Pyszczynski, Greenberg, & Solomon, 1999), we had participants fill out the Positive and Negative Affect Scale (PANAS; Watson, Clark, & Tellegen, 1988). Participants rated their current mood on a 1 (= *Very slightly or not at all*) to 5 (= *Extremely*) scale.

Conspiracy Belief

To measure the tendency to believe in conspiracy theories, we used the Generic Conspiracist Beliefs scale (Brotherton, French, & Pickering, 2013), which comprises 15 items that could describe any number of modern conspiracy theories.

Items are about suppression of information (e.g., "A lot of important information is deliberately concealed from the public out of self-interest"), abuse of people (e.g., "Experiments involving new drugs or technologies are routinely carried out on the public without their knowledge or consent"), extraterrestrial activity (e.g., "Some UFO sightings and rumors are planned or staged in order to distract the public from real alien contact"), power illusions (e.g., "The power held by heads of state is second to that of small, unknown groups who really control politics"), and government atrocities (e.g., "The government permits or perpetrates acts of terrorism on its own soil, disguising its involvement"). Participants rated their agreement with each statement on a 1 (= *Definitely not true*) to 7 (= *Definitely true*) scale.

Demographics
Participants were probed about their perception of the study's purpose and asked to provide their gender, age, ethnicity, political orientation on a scale from 1 (= *Extremely conservative*) to 9 (= *Extremely liberal*), and MTurk ID.

Results

As an initial test of hypotheses regarding the correlates of conspiracy beliefs, we first examined zero-order correlations among the main study variables (see Table 1, which also lists Cronbach's alpha coefficients). The hypotheses confirmed our predictions and generally replicated previous research: people who reported greater belief in conspiracy theories tended to be higher in schizotypy, dangerous-world beliefs, bullshit receptivity, and agency detection. Conspiracy believers also tended to be more religious, female, and younger in age. Moreover, as expected, in most cases these predictor variables correlated with one another.[1]

Next, we performed a multiple regression analysis including all of the individual-difference variables reported above, along with dummy coded variables for control threat (1 = threat; 0 = comparison) and mortality salience (1 = mortality salience; 0 = comparison). Together, these variables explained 30% of the variance (adjusted R^2) in conspiracy belief. In the second step of the regression, we entered two-way interaction terms for the main variables of interest: experimental condition, schizotypy, dangerous-world beliefs, agency detection, and bullshit receptivity. In the third step we entered three-way interaction terms including these variables.

Results from the regression (Table 2) suggested that only gender, schizotypy, dangerous-world beliefs, and bullshit receptivity explained unique variance in conspiracy belief when all study variables were simultaneously controlled. Interestingly, neither mortality salience nor the control threat influenced conspiracy belief.[2] Furthermore, there were no significant two- or three-way interactions ($ps > .09$).[3]

To evaluate the stability of the regression results, we conducted a cross-validation procedure according to Tabachnick and Fidell's (2013) recommendations. Specifically, we randomly selected approximately 80% of the sample and ran the first step of the regression analyses described above. This produced an adjusted R^2 value of .31. We then used the beta coefficients from this subsample to create predicted scores for the remainder of the sample, and correlated the predicted and actual scores (i.e., on the conspiracy beliefs measure) with the predicted scores in the smaller sample. This produced a coefficient of $r = .48$ (i.e., $R^2 = .23$), indicating a reasonable level of consistency compared with the larger sample. Moreover, the Variance Inflation Factor (VIF) scores for all variables did not exceed 1.60, suggesting that multicollinearity was not a problem.

Brief Discussion

Study 1 confirmed our hypotheses about the individual-difference variables that would predict conspiracy belief. Schizotypy and dangerous-world beliefs emerged as the strongest predictors, followed by bullshit receptivity. Agency detection also correlated with conspiracy belief, but this (small) correlation disappeared in the regression analysis, suggesting that the correlation was due to variance shared with one of the other variables. Exploratory regression analyses showed that the association between agency detection and conspiracy belief dropped most markedly

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[1] To satisfy the curiosity of readers with special interest in the unique relations among the main predictor variables of schizotypy, dangerous world beliefs, bullshit receptivity, and agency detection, we computed partial correlations between all four variables controlling for each other and the remaining individual-difference variables listed in Table 1. Three significant correlations replicated across the two studies: Bullshit receptivity correlated with both agency detection ($r = .35$, $p < .001$ in Study 1; $r = .31$, $p < .001$ in Study 2) and schizotypy ($r = .11$, $p < .05$ in Study 1; $r = .11$, $p < .01$ in Study 2); and dangerous world beliefs correlated with schizotypy ($r = .25$, $p < .001$ in Study 1; $r = .35$, $p < .001$ in Study 2).

[2] This remained true even when we conducted additional content-coding on the narratives participants wrote and excluded an additional 43 participants whose narratives expressed affect that was markedly inconsistent with the goal of the manipulation (e.g., participants who expressed pleasure in the control-threat condition or a high degree of negative affect in the (high control) comparison condition). The same was true when we applied this more stringent inclusion criterion in Study 2.

[3] We also ran a regression in which the schizotypy subscales were disaggregated; in this analysis three of the four subscales remained significant positive predictors of conspiracy belief, suggesting that they each explained unique variance. The fourth ("odd and eccentric") subscale became negatively related due to a suppressor effect from multicollinearity with the other subscales. The three schizotypy subscales retained in Study 2 also explained unique variance in conspiracy belief when disaggregated.

Table 1. Correlation matrix for both studies' main variables

	Conspir. Belief	Schizotypy	Dang. World	Agency Det.	BS Receptivity	Religion	Science	Age	Gender	Liberalism
Conspir. Belief	(.96, .95)	.42***	.36***	.10*	.26***	.11*	−.10	−.12*	.13**	−.07
Schizotypy	.47***	(.96, .93)	.18***	.07	.12*	−.03	.06	−.24***	−.10*	.09
Dang. World	.38***	.27***	(.91, .90)	.12*	.10*	.35***	−.40***	.05	.20***	−.26***
Agency Det.	.06	.04	.09*	(.65, .67)	.39***	.12*	−.01	−.05	.15**	.02
BS Receptivity	.17***	.15***	.16***	.32***	(.85, .90)	.16**	−.05	.00	.16**	.03
Religion	.02	−.07*	.33***	.09**	.12**	(N/A)	−.52***	.14**	.15**	−.33***
Science	−.13***	.06	−.37***	−.05	−.12**	−.47***	(N/A)	−.10*	−.15**	.39***
Age	−.06	−.26***	.04	−.03	−.14***	.08*	−.09*	(N/A)	.09	−.14**
Gender	.07	−.09*	.18***	.08*	.08*	.10**	−.18***	.14***	(N/A)	.15**
Liberalism	−.08*	.05	−.28***	−.03	−.08*	−.43***	.39***	−.07*	.08*	(N/A)

Notes. Study 1's correlation coefficients are above the diagonal; Study 2's are below the diagonal. Coefficient alphas are reported in parentheses along the diagonal (Study 1, Study 2). Conspir. Belief = Conspiracy belief; Dang. World = Dangerous world beliefs; Agency Det. = Agency detection; BS Receptivity = Bullshit receptivity. *p < .05, **p < .01, ***p < .001 (all two-tailed).

Table 2. Regression results predicting conspiracy belief in Study 1

	B	SE	β
Gender	0.31	0.13	.11*
Age	−0.01	0.01	−.06
Liberalism	−0.04	0.03	−.07
Religiosity	−0.01	0.03	−.01
Science-Mindedness	0.03	0.05	.03
Mortality Salience	0.04	0.07	.03
Control Threat	−0.04	0.07	−.03
Schizotypy	0.50	0.06	.36***
Dangerous-World Beliefs	0.36	0.07	.26***
Agency Detection	−0.07	0.06	−.05
Bullshit Receptivity	0.28	0.06	.20***

Note. *p < .05, ***p < .001 (all two-tailed).

when controlling for bullshit receptivity (and to some extent dangerous-world beliefs). This suggests that a tendency toward agency detection might contribute to bullshit receptivity, or that they share a common psychological substrate in relation to their association with conspiracy belief.

Surprisingly, neither of the experimental manipulations influenced conspiracy belief, which represents a failure to replicate – conceptually, at least – previous research. In order to confirm Study 1's findings and to further probe this failure to replicate, we conducted a second study. We aimed to double Study 1's sample size to increase statistical power. We also made a change to the comparison (high control prime) condition that we thought might improve our ability to detect an influence of those manipulations. Specifically, we changed it from a control-affirming prompt to a more neutral scenario (watching television) to avoid the multi-valenced responses that some participants gave in Study 1 (e.g., expressing displeasure at the thought of

having control) and to decrease the chance of inadvertently priming participants with strong emotions.

Study 2

Participants and Procedure

Participants were recruited in the same manner as in Study 1. We also followed the same exclusion procedure (i.e., excluding 19 participants who failed to follow the instructions for the experimental priming), and added an attention check (Oppenheimer, Meyvis, & Davidenko, 2009) to ensure that the null effect of the priming manipulations in Study 1 could not be due to participants' lack of attention. This resulted in three additional exclusions. We also excluded 23 participants who had participated in Study 1. This left 831 participants (417 men, 409 women, and 5 "other"), aged 18–74 (M = 35.85, SD = 11.40). We followed the same procedure as in Study 1 with three exceptions. One was the previously described change to the comparison priming condition. The second was that we added one "random" and one "goal-directed" triangle video to increase the reliability of the hyperactive agency detection measure. And, to compensate for the extra time this and the attention check added to the survey, we eliminated the "odd and eccentric" subscale of schizotypy measure (which in Study 1 had exhibited the lowest correlation with conspiracy beliefs).

Results

We followed the same analytic strategy as in Study 1. Table 1 displays zero-order correlations, and Table 3 displays the regression results (explaining 30% of the variance in conspiracy belief).

Table 3. Regression results predicting conspiracy belief in Study 2

	B	SE	β
Gender	0.13	0.08	.05
Age	0.01	0.00	.04
Liberalism	−0.02	0.02	−.04
Religiosity	−0.06	0.02	−.11**
Science-Mindedness	−0.06	0.03	.08*
Mortality Salience	−0.00	0.05	−.00
Control Threat	−0.04	0.05	−.03
Schizotypy	0.54	0.04	.41***
Dangerous-World Beliefs	0.32	0.05	.24***
Agency Detection	0.01	0.04	.00
Bullshit Receptivity	0.09	0.04	.07*

Note. *p < .05, **p < .01, ***p < .001 (all two-tailed).

Replicating Study 1's results, the largest correlates of conspiracy belief were schizotypy and dangerous-world beliefs, followed by bullshit receptivity. Agency detection was also still positively related, but only marginally (*p* = .09).

The relations between demographic factors and conspiracy belief also replicated to some extent, though not as cleanly. Contrary to Study 1, religiosity was not related to conspiracy belief; instead, science-mindedness was (more science-minded people were less likely to be conspiracy believers). And while being female and younger both bore the same positive relation to conspiracy belief as in Study 1, the correlations were not quite statistically significant (*p*s = .05 and .11, respectively). Finally, with the larger sample size, the nonsignificant association between political conservatism and conspiracy belief from Study 1 became significant in Study 2 (*p* = .02).

The multiple regression results also replicated Study 1 in that schizotypy, dangerous-world beliefs, and bullshit receptivity all remained significant independent predictors of conspiracy belief while simultaneously controlling for all study variables (different from Study 1, gender was not significant).[4] Additionally, despite using a different comparison condition, Study 2 again failed to detect an effect of either mortality salience or control-threat priming on conspiracy beliefs (*p*s > .35).

Study 2 also largely replicated the dearth of significant two- or three-way interactions. There was, however, one two-way interaction, in which the association between bullshit receptivity and conspiracy belief was stronger among individuals higher in schizotypy. There were also two significant three-way interactions that were not interpretable, not

suggested by Study 1's results, and, given the sheer number of interactions tested, likely spurious (i.e., Type I errors).

As in Study 1, we conducted a cross-validation procedure on a random subsample of approximately 20% of participants based on a regression analysis from a random subsample of approximately 80%. The correlation between the predicted and actual scores in the cross-validation sample was *r* = .58 (R^2 = .34), compared to (adjusted) R^2 = .29 in the 80% subsample. Again, this suggests reasonable stability in the results (and, as in Study 1, the VIF scores were tolerable, all less than 1.49).

Ad-Hoc Study

After conducting these two studies, Imhoff and Lamberty (2017) reported evidence demonstrating that individuals who have a greater need for uniqueness tended to be more likely to believe in conspiracy theories. To examine whether need for uniqueness could contribute to the explanation of generic conspiracy belief provided by the present studies' variables, we conducted an ad-hoc MTurk study (*N* = 107) measuring schizotypy, bullshit receptivity, need for uniqueness (using Imhoff & Lamberty's measure), and generic conspiracy belief. The results confirmed that need for uniqueness correlated with conspiracy belief (*r* = .41, *p* < .001). Additionally, need for uniqueness was highly associated with schizotypy (*r* = .67, *p* < .001), and to a lesser extent, bullshit receptivity (*r* = .29, *p* < .01).

To tease apart unique contributions, we conducted a regression analysis predicting conspiracy belief from the three individual-difference variables. This analysis revealed that when controlling for schizotypy and bullshit receptivity, need for uniqueness no longer significantly predicted conspiracy belief (β = .15, *p* = .19), whereas both schizotypy and bullshit receptivity remained significant predictors. Therefore we tentatively conclude that the association between need for uniqueness and conspiracy belief may be largely explained by the overarching schizotypy dimension, which appears to subsume need for uniqueness.

General Discussion

"Conspiracy theorists believe in a conspiracy because that is more comforting. The truth of the world is that it is actually chaotic…Nobody is in control. The

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[4] Interestingly, in Study 2 both religiosity and science-mindedness were significant negative predictors of conspiracy belief in the regression equation. Although the negative effect for science-mindedness makes sense, the negative effect for religiosity does not, particularly in light of Study 1's results. Because there was no relation between religiosity and conspiracy belief in the zero-order correlations in Study 2, it is possible that the negative beta coefficient is due to a suppressor effect.

world is rudderless" – Alan Moore (Winkler, Arton, Vylenz, & Winkler, 2003).

The two studies reported here represent a step toward integrative complexity in the psychology of conspiracy belief. The studies simultaneously draw together the largest number of independent factors – many of which have been previously examined in isolation – of any investigation to date.

The results converge on an interpretation of conspiracy belief[5] as predisposed by a combination of personality traits and cognitive styles that seem to operate additively (i.e., independently). Consistent with previous research, schizotypy, a personality trait comprising suspiciousness and social anxiety, and odd or eccentric ideas, perceptions, and behaviors, was most strongly related to conspiracy belief. Belief that the world is a dangerous place came in a close second, followed by bullshit receptivity (proneness to perceive profundity in meaningless information). It also seems likely that a tendency to detect agency in actions disposes individuals to conspiracy belief. In the present studies, we measured agency detection in a rather indirect way in an attempt to be as objective as possible (i.e., we wanted to move beyond self-report measures). Our measure probably entailed a degree of error variance that attenuated the true relation between agency detection tendencies and conspiracy belief, which may explain why, in both studies, agency detection did not "survive" the more stringent multiple regression analysis. Finally, we found that demographic factors (age and gender) might play a marginal role, as might political orientation.

Interestingly, and surprisingly given previous research suggesting that control threats increase illusory pattern perception (Whitson & Galinsky, 2008) and conspiracy-like thinking (Sullivan et al., 2010), we did not find evidence that thoughts of mortality or lacking control increased conspiracy belief. This suggests that individual differences, more so than situations, are the key antecedents. However, it is possible that stronger threat manipulations or real-world threatening events (e.g., senseless tragedies, or being out of political power; Uscinski & Parent, 2014) generally increase people's willingness to entertain conspiracy theories. It is also possible that the context of our experimental manipulations – coming, as they did, after a series of questionnaires asking about the extent to which the world is a dangerous place and people are untrustworthy – instilled a mildly vulnerable mind-set that the experimental primes were not powerful enough to amplify. This could be addressed in future research that measures personality traits in a separate session. Lastly, it is possible that our choices for comparison conditions were not optimal, even though we followed previous research in making these choices, and even though we varied the conditions by changing the "high control" priming condition to a "watching TV" condition in Study 2. Nevertheless, it may be worth exploring additional comparison conditions in future research.

As with most personality research, the present results are correlational, and all the usual caveats apply. We cannot randomly assign people to be higher or lower in schizotypy, and our attempt to induce a sense of existential threat or being out-of-control had no effect, so we cannot know whether the factors we studied cause conspiracy belief or vice versa, or whether some additional factor explains the relations between them. However, the present studies benefit from relatively large and representative samples, the use of multiple regression analysis to tease out unique contributions, and relatively consistent results that explain a substantial proportion (nearly a third) of the variance in conspiracy belief. And, it stands to reason that relatively specific beliefs (as conspiracy theories are) would stem from more general dispositions as opposed to the other way around.

We speculated in the Introduction that many known predictors of conspiracy belief seem united by a sense of unease in the world and a yearning for meaning or understanding. We speculated that when the world seems incomprehensibly nefarious, perhaps there is some measure of comfort to be drawn from the notion that life's ills are (at least sometimes) attributable to hostile agents working in secret, because in that event, at least there is "theoretically" a solution to one's suffering. However, the explanatory contributions made by the various factors explored in the present research were apparently independent of one another. This suggests that people believe in conspiracy theories for multiple reasons that might not be easily integrated into a unified theory. Future research should explore the question of what precisely draws people who are higher in schizotypy, dangerous-world beliefs, bullshit receptivity, and agency detection (among other dispositions) to conspiracy theories.

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[5] We remind readers that the present research focuses on generic conspiracist ideation, not specific conspiracy theories, because we wanted to understand individual differences in the general propensity to believe conspiracy theories. It is certainly possible that results would vary when assessing belief in multiple specific conspiracy theories.

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Joshua Hart
Department of Psychology
Union College
807 Union Street
Schenectady, NY 12308
USA
hartj@union.edu