The Compelling Complexity of Conspiracy Theories

Jessecae K. Marsh (jessecae.marsh@lehigh.edu)
Department of Psychology, 17 Memorial Drive East
Bethlehem, PA 18015 USA

Cayse N. Coachys (coachysc@gmail.com)
Department of Psychology, 17 Memorial Drive East
Bethlehem, PA 18015 USA

Samantha Kleinberg (samantha.kleinberg@stevens.edu)
Department of Computer Science, 1 Castle Point on Hudson
Hoboken, NJ 07030 USA

Abstract

Causal explanations are important guides to understanding the world. While research suggests people prefer simple explanations, a seeming notable exception exists in the widespread endorsement of conspiracy theories. Researchers have described conspiracy theories as causally complex explanations of world events. We examined whether the lay public agrees with this assessment and sees conspiracy theories as complex explanations, as well as how perceptions of complexity relate to believability of these explanations. We tested publicly available (Experiment 1) and experimenter-generated (Experiment 2) conspiracy theories, alongside fact-based explanations for the same events. We asked participants to rate the complexity of each explanation, along with how believable they find the explanation. Participants across studies rated the conspiracy theory explanations as more complex. Interestingly, complexity was positively correlated with believability of the conspiracy theory, but not fact-based, explanations. We discuss what these findings suggest for the causal explanation field and our understanding of conspiracy theories.

Keywords: explanation; causality; conspiracy theories

Introduction

Causal explanations answer the question of why things happen. Such explanations let people predict future events (Ahn et al., 1995; Johnson & Ahn, 2017), aid in making decisions (Pennington & Hastie, 1988), shape memory (Marsh & Kulkofsky, 2015; Pacer & Lombrozo, 2017), and help people learn new concepts (Edwards et al., 2019; Lombrozo & Carey, 2006; Williams & Lombrozo, 2010). In short, causal explanations are powerful for what they help people understand and how they aid people's reasoning. Despite their importance, the causal explanations people believe are not always accurate depictions of the world (Rozenblit & Keil, 2002). In this paper, we focus on one specifically worrisome form of incorrect causal explanation beliefs; namely, conspiracy theories.

Conspiracy theories describe the concealed causal actions of a group of people to bring about a significant event (Keeley, 1999; Sunstein & Vermeule, 2009) and provide an alternative to the commonly taught historical, scientific, or political narrative (Keeley, 1999), i.e., the fact-based alternative explanation. Despite conspiracy theories being characterized as complex and inherently nonscientific causal explanations (Douglas et al., 2017), they are widely held (Oliver & Wood, 2014a). For example, 61% of Americans believe a conspiracy exists around the assassination of President Kennedy (Swift, 2013) and in pre-COVID surveys, almost half of participants endorsed at least one health-based conspiracy theory (Oliver & Wood, 2014b). Widely-held conspiracy theories have emerged concerning COVID-19 (Constantinou et al., 2021; Uscinski et al., 2020). Conspiracy theories are found worldwide (Swami & Coles, 2010), and throughout history (van Prooijen & Douglas, 2017). In short, conspiracy theories are everywhere.

The widespread endorsement of conspiracy theories is concerning in light of their consequences. Conspiracy theory exposure makes people less likely to engage in democratic processes like voting (Albertson & Guiler, 2020; Jolley & Douglas, 2014a). Endorsing health conspiracy theories correlates with avoiding use of traditional medicine (Oliver & Wood, 2014b). The act of just reading health conspiracy theories decreases general (Natoli & Marques, 2021) and specific (Jolley & Douglas, 2014b) intentions to engage in health behaviors. Previous work has also found that people who endorsed conspiratorial explanations for COVID-19 were less likely to believe official information about the pandemic (e.g., how the disease is transmitted; Vitriol & Marsh, 2021), as well as less likely to engage in critical pandemic mitigation behaviors such as social distancing (Constantinou et al., 2021; Romer & Jamieson, 2020; Teovanović et al., 2021; Vitriol & Marsh, 2021). From stoking public health crises to undermining democracy, conspiracy theory endorsement has dire consequences.

What remains a puzzle is why conspiracy theories are so appealing, as they violate some of the key properties of good explanations. Conspiracy theories have been widely discussed as inherently complex explanations (Douglas et al., 2017). However, the causal explanation literature has suggested that when given a choice, people prefer simple explanations of the world (Lombrozo, 2007; Read & Marcus-Newhall, 1993). In this literature, simplicity is operationalized as either the number of causes used to explain an effect (e.g., an explanation that uses one cause to explain

an effect is preferable to an explanation that uses two) or the number of unexplained causes present (e.g., an explanation with a root cause that explains all other causes is simpler than an explanation without that root cause; Pacer & Lombrozo, 2017).

However, there are cases where simplicity is not always ideal in an explanation. People strongly prefer simple explanations when the events in the story are deterministic, but when some probability in whether the events happen is introduced, the preference for simplicity decreases (Johnson et al., 2019). More complex explanations can be preferred if they make the explained effect more likely to occur (Zemla et al., 2017). Likewise, people prefer a probable explanation over a simple explanation when the simple explanation is extremely unlikely (Lombrozo, 2007). Additionally, the simplicity preference is weaker for events in the social domain than for events in the physical domain (Johnson et al., 2019). Overall, simplicity is preferred in explanations except in cases where complexity adds to the probability of the explained outcome.

Given these findings on simplicity, why might conspiracy theories be seen as believable causal explanations of the world? One possibility is that conspiracy theories are not seen by laypeople as complex, and instead are perceived as simplifying explanations (Mirabile & Horne, 2019). Attributing the reason for a complex set of events to a shadowy, all-powerful group could provide a simple, single root cause that explains a multitude of subsequent events. Likewise, the presence of a bad actor behaving maliciously could make events seem more probable than a series of unfortunate events that must all happen independently to produce an event (e.g., the multiple surrounding factors that led to Princess Diana's death). In these ways, laypeople may disagree with scholars and see conspiracy theories as simpler explanations of events.

Alternatively, it is possible that conspiracy theories as a whole are not seen as simpler explanations of events. Rather, people who believe a conspiracy may perceive that specific theory as simpler than its alternative. For example, in trying to explain strange events around a crash in Roswell, NM a person could believe aliens crashed and the government covered it up to hide their existence or they could believe the official government stance of a crashed weather balloon. If a person believes the news stories and personal accounts surrounding the event are more simply explained by a government alien coverup, then that person may come to believe that version of events. In this way, a perception that a given conspiracy theory is a simpler explanation of events could drive belief in that theory. Likewise, it may be that there is nothing in the nature of conspiracy theories in of themselves that is more or less complex (e.g., having a single root node, or fewer components). Rather, seeing a conspiracy theory explanation as simple could promote endorsement.

Finally, it is possible that what makes a conspiracy theory explanation appealing is different than what makes other types of explanations appealing. That is, the complexity of conspiracy theories as they describe many moving parts to produce an outcome may make for a good story that feels compelling. Unlike the previous causal explanation literature findings, something about this complex narrative may be compelling and stoke their endorsement.

Across two experiments, we explore people's perceptions of the complexity of conspiracy theory explanations and how this influences their believability. To assess the complexity of conspiracy theories, we compare them to fact-based alternative explanations for the same events. Importantly, we also test how perceived complexity relates to belief in the conspiracy theory explanation as a true explanation of events. If simplicity drives beliefs, then conspiracy theories which are commonly believed may be perceived as simple. However, if conspiracy theories function differently than other types of explanations, then we may see different perceptions of complexity for these important world explanations. In Experiment 1 we use real-world conspiracy theories taken from public websites, and in Experiment 2 we use novel conspiracy theories to test these possibilities. Our studies provide new insights into what in the structure of a conspiracy theory makes it believable.

Experiment 1

Conspiracy theories are often described as complex, while prior work suggests people prefer simple explanations for events. However, it is not known whether people truly perceive conspiracies as complex, and if they do, whether this influences whether they are believed. We now test whether conspiracy theories are seen as more complex explanations of events than fact-based explanations. We further test how complexity relates to believing these explanations.

Method

Participants We recruited 200 participants through the Prolific online survey platform. Eight participants were excluded for entering nonsense answers in attention check questions at the end of the study, leaving a total of 192 participants for analysis. The demographics of the participants used for analysis were as follows. Our participants (mean age = 32.5; age range 18 – 67) reported as majority male (60.4%; female = 36.5%; nonbinary = 3.1%), non-Hispanic (83.3%; Hispanic = 9.9%; prefer not to respond = 6.8%), and white (75%; American Indian or Alaskan Native = 2.1%; Asian = 4.7%; Black = 11%; prefer not to respond = 7.3%). Our participants varied in their highest degree attained: high-school or equivalent = 25.5%, bachelor's degree = 30.7%; master's degree = 21.4%; M.D. = 12.5%; Ph.D. = 5%; Other = 4.7%.

Materials To select conspiracy theories for our materials, we conducted a pilot study where participants (N = 50) rated 20 conspiracy theories and their paired fact-based alternative explanations taken from publicly available websites. For each of the explanations, participants rated how good of an example of a conspiracy theory the explanation was on a 0 (not at all a good example of a conspiracy theory) to 100 (an extremely good example of a conspiracy theory) scale. We

Table 1: Sample explanations of the death of Princess Diana used in Experiment 1.

Conspiracy Theory Explanation	Fact-based Alternative Explanation
The British state murdered Princess Diana because she was pregnant with her boyfriend, Mohamed "Dodi" Fayed's child and the couple were about to be engaged. The dislike of the idea of a non-Christian within the British Royal Family meant such a relationship between the mother of the future king and a prominent Egyptian Muslim would not be tolerated. The British state, including Prince Philip and Diana's sister, were involved in a plot to kill the Princess so as to prevent such a scandal.	Princess Diana died in a hospital after being injured in a car crash. The car crash was caused by the erratic behavior of the paparazzi following the car and by Henri Paul, the driver, being intoxicated and under the effects of prescription drugs. Anti-depressants in combination with traces of an anti-psychotic medication in Paul's blood worsened his inebriation, causing him to lose control of the car while driving at a high speed and ultimately causing the lethal car crash.

had participants make two additional ratings to ensure that our fact-based alternatives were seen as fact-based: how good of an example the explanation was of a scientific explanation and how good of an example the explanation was for the type of explanation available in the public record. Participants made these ratings on a 0 (not at all good example) to 100 (extremely good example) scale.

From this pilot data, we found that many of the explanations rated as good examples of conspiracy theories involved a paranormal element, such as aliens. To provide diversity in the types of causal agents and outcomes being explained, we selected 5 explanation pairs that included a traditional conspiracy theory (the death of Princess Diana, the 9/11 attacks, NASA moon landing, vaccination safety, the Sandy Hook Massacre) and 5 that included a conspiracy theory that involved paranormal actors (Roswell alien event, existence of Bigfoot, the Bermuda Triangle, existence of extraterrestrial life, sleep paralysis). For all of our selected pairs, the conspiracy theory (M = 84.5; SE = 1.78) was rated as a significantly better example of a conspiracy theory than its fact-based alternative explanation of the same event (M = 12.6; SE = 1.85). We also ensured that the fact-based explanations for the pairs we selected were rated as better examples of scientific explanations (M = 57.9; SE = 2.66) and were better examples of explanations found in the public record (M = 65.4; SE = 2.40) than their conspiracy theory pairs (scientific rating: M = 7.69; SE = 1.48; public record rating: M = 10.2; SE = 1.49). See Table 1 for an example conspiracy theory and fact-based explanation pair.

Procedure Participants rated either the conspiracy theory or the fact-based alternative form of each of the 10 explanation pairs. This manipulation was done to prevent participants directly comparing the two forms of the same explanation. We assigned participants to one of two versions that varied which of the 10 explanations were presented as a conspiracy theory versus a fact-based explanation. In doing this, we could assure that participants saw a roughly equal number of paranormal and nonparanormal items (either 2 or 3) in each explanation type. Overall, participants made ratings for 10 explanations, half of which were presented as conspiracy theories and half of which were presented as fact-based alternative explanations.

Participants made three ratings for all explanations: how complex the explanation was on a 0 (not at all complex) to 100 (extremely complex) scale; how believable the explanation was on a 0 (not believable at all) to 100 (extremely believable) scale; and how good of an example of a conspiracy theory the explanation was on the same scale as used in the pilot. We blocked ratings so that participants made all of the complexity ratings, then all of the believability ratings, then all of the conspiratorial ratings, with the explanation being presented again for each rating. The order of explanations was randomized within each block. Participants then completed demographics questions as listed in the participant section and an attention check question that asked them what they did in the study. Participants also answered an open-ended question that asked participants to explain what they thought made an explanation complex and what made an explanation believable.[1]

Results

To confirm that our materials were interpreted as expected, we first analyzed whether our participants viewed the conspiratorial versions of our explanations as more conspiratorial than the fact-based alternatives. We calculated average conspiracy ratings for each participant across the five conspiracy theory and the five fact-based alternative explanations they rated. We submitted these ratings to a one-way ANOVA with explanation type (conspiracy theory vs. fact-based) as a within-subjects variable. We found a main effect of explanation type, $F(1, 191) = 230.8$, $p < .001$, $\eta_p^2 = .547$. This confirms that conspiracy theory explanations (M = 72.2; SE = 1.38) were viewed as more conspiratorial than fact-based alternative (M = 34.9; SE = 1.67) explanations. As a second check, we analyzed whether mean believability ratings differed between the explanation types. Using mean ratings as calculated above and the same ANOVA, we found

[1] We looked at these answers to see if there were any common responses for defining complexity and believability. There was not strong consensus among answers. The most common responses for complexity referenced either the possession or absence of many components, being hard to understand, containing or missing a logical argument, or using complex language. For believability, the most common answers were it was supported by facts, it was logical, or it was probable.

a main effect of believability, $F(1, 191) = 271.7$, $p < .001$, $\eta_p^2 = .587$. That is, fact-based alternative explanations ($M = 70.3$; $SE = 1.10$) were rated as more believable than their conspiracy theory pairs ($M = 36.0$; $SE = 1.61$) for the same events.

We now turn to our first research question, examining whether conspiracy theory explanations were rated as more complex than their fact-based alternative explanations. We calculated mean complexity ratings for each participant for the two types of explanations (Figure 1). We submitted the mean complexity ratings to a one-way repeated-measures ANOVA with explanation type (conspiracy theory vs. fact-based) as the within-subjects variable. We found a main effect of explanation type, $F(1, 191) = 12.3$, $p < .001$, $\eta_p^2 = .061$. Conspiracy theory explanations ($M = 45.7$; $SE = 1.74$) were viewed as more complex than their fact-based alternative ($M = 41.1$; $SE = 1.58$) explanations.

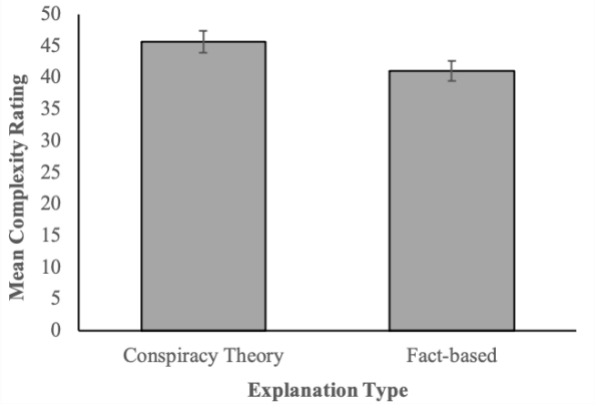

Figure 1: Mean complexity ratings for Experiment 1.

Finally, we examine our second research question, testing whether there is a relationship between complexity of an explanation and how believable it is. We calculated Pearson's correlations between complexity and believability ratings separately for conspiracy theory and fact-based alternative explanations. We found a significant positive correlation between complexity and believability for conspiracy theory explanations, $r(190) = .454$, $p < .001$. We found a negative correlation between complexity and believability for fact-based explanations, though this did not reach significance, $r(190) = -.131$, $p = .069$.

Discussion

We find that conspiracy theories are seen as more complex explanations of the world than their fact-based alternatives. Interestingly, this complexity was related to believability in different ways for conspiracy theory versus factual explanations. For conspiracy theories, more complex theories were viewed as more believable. The same relationship was not significant and in fact was in the opposite direction for fact-based alternative explanations; more complex fact-based explanations tended to be less believed.

Our findings suggest that what makes a conspiracy theory explanation believable is different from what makes factual explanations believable. Simpler explanations may be preferred in many domains (Lombrozo, 2007), but people who believe in a conspiracy theory may be seeking something different (e.g., Zemla et al., 2017). It is an open question whether people seek out conspiracy theories because they believe that official accounts of an event do not match the degree of needed complexity to explain the event (Lim & Oppenheimer, 2020), or whether the complexity of a conspiracy is appealing for other reasons.

One explanation for why people may have found conspiracy theories more complex is that the conspiracy theory explanations could have involved more explanatory components than their fact-based alternatives. For example, a conspiracy theory account may rely on multiple different nefarious causal agents coming together to produce an event. We used actual conspiracy theories for actual events, as this allowed us to examine believability and perceived complexity of theories that people may endorse in everyday life. However, as we aimed to capture how conspiracy theories are presented in publicly available sources like websites, we did not match the total number of important parts across explanation types. It is possible that if the factual explanations were presented with the same number of components as the conspiracy theories they would be perceived as similarly complex. We test this possibility in Experiment 2.

Experiment 2

In our first experiment we examined the relationship between complexity and believability of conspiracy theories, using theories taken from public sources. We now aim to address a limitation of that experiment, the inability to match the number of components present in the conspiracy theory and fact-based explanations. In this experiment we take the same approach to testing the complexity of conspiracy theory explanations as in Experiment 1, but now with novel conspiracy theories.

Method

Participants We recruited 200 participants through the Prolific online survey platform. No participants entered nonsense answers in attention check questions at the end of the study, so all remain in analysis. The demographics of the participants were as follows. Our participants (mean age = 30.6; age range 18 – 64) reported as majority male (49.0%; female = 48.5%; nonbinary = 1.5%), non-Hispanic (86.0%; Hispanic = 10.0%; prefer not to respond = 4.0%), and white (65%; American Indian or Alaskan Native = 1.0%; Asian = 17.5%; Black = 11%; prefer not to respond = 5.5%). Our participants varied in their highest degree attained: high-school or equivalent = 51.0%, bachelor's degree = 36.0%; master's degree = 5.5%; M.D. = 0%; Ph.D. = 1%; Other = 6.5%.

Table 2: Sample explanations of the creation of *The Jetsons* used in Experiment 2.

Conspiracy Theory Explanation	Fact-based Alternative Explanation
The Cold War between the Soviet Union and the USA was a point of high tension that peaked in 1962 after the Cuban Missile Crisis. The television show *The Jetsons* aired in 1962 through 1963 as a string of pro-Soviet propagandic messages from the Soviet Union. The Soviet government paid high-powered Hollywood producers to air the show to gain support from US citizens.	The Cold War between the Soviet Union and the USA was a point of high tension that peaked in 1962 after the Cuban Missile Crisis. The television show *The Jetsons* aired in 1962 through 1963 as a look into the future to provide hope to the USA. The US government paid high-powered Hollywood producers to air the show to lift the dismal spirits of US citizens.

Materials We created a set of explanations that explained 12 different events (e.g., the creation of *The Jetsons*, the origins of the restaurant chain the Olive Garden). We created a conspiracy theory explanation of the event by describing a nefarious group or secretive plot that was behind the event. We then created a fact-based alternative explanation based on information from public websites that used the same number of components in the explanation but did not call to any type of hidden or nefarious entities (see Table 2 for an example). To make the explanations more realistic and believable, we included multiple details and causal connections, as opposed to one simple causal link. We kept the total number of elements and the causal structure of the events (e.g., a 3-event chain) the same across the conspiracy theory and fact-based versions. Half of the conspiracy theory explanations involved a paranormal entity in the explanations (e.g., the coverup of alien intervention in the stock market) to match the paranormal explanations of Experiment 1, and half did not have a paranormal entity involved to match the nonparanormal explanations of Experiment 1.

Procedure We used the same procedure as Experiment 1. Participants rated all 12 explanations, half in their conspiracy theory form and half in their fact-based form. Of the six conspiracy theories a given participant rated, half were from a paranormal pair and half were not. Participants completed the same ratings as in Experiment 1 in the same blocked manner. Participants completed the demographics and open-ended questions of Experiment 1.

Results

As in Experiment 1, we first checked whether our conspiracy theory explanations were seen as more conspiratorial than their fact-based alternatives. We calculated average conspiracy ratings for each participant across the six conspiracy theory and the six fact-based alternative explanations they rated. We submitted these ratings to a one-way ANOVA with explanation type (conspiracy theory vs. fact-based) as a within-subjects variable. We found a main effect of explanation type, $F(1, 199) = 393.8$, $p < .001$, $\eta_p^2 = .664$. This confirms that our novel conspiracy theory explanations ($M = 71.2$; $SE = 1.61$) were viewed as more conspiratorial than the fact-based alternatives we created ($M = 23.9$; $SE = 1.33$). We also analyzed whether mean believability ratings differed between the explanation types. The same ANOVA conducted over mean ratings found a main effect of believability, $F(1, 199) = 1872.0$, $p < .001$, $\eta_p^2 = .904$. That is, fact-based alternative explanations ($M = 77.9$; $SE = 0.90$) were rated as more believable than their conspiracy theory pairs ($M = 14.7$; $SE = 1.02$). These analyses provide evidence that we have created artificial materials that mimic real conspiracy theories but are matched in explanatory components.

We next analyzed whether complexity ratings differed across our conspiracy theory and fact-based alternatives (Figure 2). While these explanations were designed to be equated in explanatory components, we find that participants still differentiated them in complexity. Mean complexity ratings submitted to a one-way ANOVA with explanation type (conspiracy theory vs. fact-based) as a within-subjects variable found a main effect of explanation type, $F(1, 199) = 16.8$, $p < .001$, $\eta_p^2 = .078$. Conspiracy theory explanations ($M = 40.5$; $SE = 1.58$) were viewed as more complex than fact-based alternative ($M = 33.3$; $SE = 1.25$) explanations.

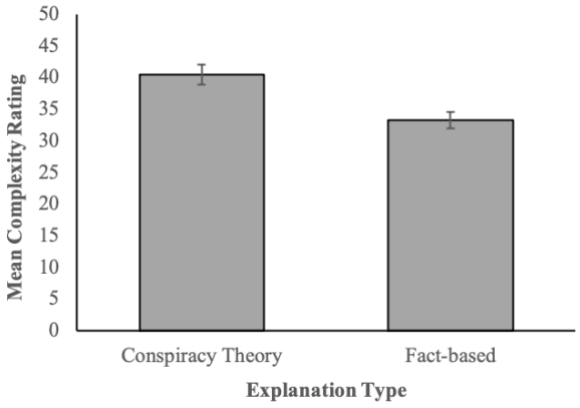

Figure 2: Mean complexity ratings for Experiment 2.

Finally, we again tested whether there is a relationship between complexity and believability. We conducted Pearson's correlations between complexity and believability ratings separately for conspiracy theory and fact-based alternative explanations. As in Experiment 1, we found a significant positive correlation between complexity and believability for conspiracy theory explanations, $r(198) = .352$, $p < .001$. Again, we found a negative correlation for fact-based explanations that did not reach significance, $r(198) = -.134$, $p = .059$.

Discussion

Overall, our findings from Experiment 2 replicate our findings from Experient 1. First, we again find that conspiracy theories are seen as more complex than their fact-based alternatives, and that there is a significant correlation between believability and complexity for conspiracy theories. However, whereas in Experiment 1 the conspiracy theories could have been naturally more complex in some respects, in this experiment we matched the number of causal components described in each explanation. This suggests that our results are not driven by conspiracy theories being presented differently than factual explanations or having more detail, but rather that people perceive them differently than they do factual explanations and that there may be factors beyond the causal structure that drive perceptions of complexity.

General Discussion

Across a set of two experiments, we tested people's perceptions of the complexity of conspiracy theory explanations and how this relates to their believability. We found that conspiracy theories taken from publicly available sources, as well as experimenter-generated conspiracy theories, were seen as more complex than their fact-based alternatives. Furthermore, complexity was positively correlated with believing the conspiracy theory. For fact-based explanations, complexity was not significantly related to believability, and trended in the opposite negative direction.

Our findings add to the greater literature on causal explanations. While a preference for simplicity has been demonstrated, boundary conditions for those preferences have also been established related to the probability of the explanations or their mechanisms (Johnson et al., 2019; Lombrozo, 2007; Zemla et al., 2017). In our studies we did not provide any explicit probability information about how likely the explanations were. Furthermore, a conspiracy theory and fact-based alternative pair explained the same event, meaning they did not differ in domain which has also been linked to differing complexity beliefs (Johnson et al., 2019). Instead, more complex explanations were seen as more believable for conspiracy theories without any additional information beyond the existence of an underlying conspiratorial element. These findings help further delineate the boundaries of when simplicity is preferred in explanations.

An open question from our findings is what elements of conspiracy theories make them seem complex. In Experiment 1 we used explanations as they are found in public sources. We did this to determine if the form of conspiracy theories people normally encounter are naturally more complex than their fact-based alternatives. This also means we did not control for the number of causal factors or causal links described in the explanation. In Experiment 2, when we equated the number of explanatory components across the conspiracy theories and their fact-based alternatives, we still found higher complexity ratings for our artificial conspiracy theories. What differentiated our explanation types was that the conspiracy theories called to secretive actions or a secretive group being behind public events. It is possible that this secrecy element suggests complexity. Keeping a clandestine group hidden or keeping the reasons for events secretive may suggest to people a causal web of events outside of the provided explanation. In this way, people may infer that there are more explanatory components in the case of conspiracy theories. Attempting to equate explanatory components may be difficult if the secrecy of conspiracy theories implies additional components. This is a limitation of this work and related research that equates complexity on number of causes alone. Previous work has not explored this issue of how the nature of some causal components may imply the presence of a larger causal explanatory web. It is an interesting question for future research to explore how conspiracy theories may allow for more inferences than other types of explanations.

Another interesting finding from these experiments is that complexity did not relate to the believability of fact-based alternatives. If anything, there were suggestions of a negative relationship where more complex fact-based alternatives were seen as less believable. We plan on testing this finding in a larger sample of fact-based explanations to see if we find effects that align with the demonstrated preference for simplicity found in the causal explanation literature (Lombrozo, 2007; Pacer & Lombrozo, 2017). As our findings stand, fact-based explanations did not have their believability linked to complexity in either direction. It is an interesting question for future research to future explore what may drive complexity ratings for these fact-based explanations and why that may or may not be linked to believability.

Our findings have implications for efforts to promote the uptake of science and fact-based explanations. Including more details for fact-based explanations could increase their complexity but may not necessarily make them seem more believable. On the other hand, it may be possible to reduce the believability of conspiracy theories by simplifying their explanations. Educators could potentially use these principles to help fight anti-science narratives. We are designing follow-up experiments to investigate these possibilities.

Overall, conspiracy theories provide a complex way to explain events. Illuminating what drives the complexity of these theories as causal explanations can help us better understand why they remain compelling, yet damaging ways of understanding the world.

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