

RESEARCH ARTICLE

The illusion of explanatory depth and endorsement of conspiracy beliefs

Joseph A. Vitriol  & Jessecae K. Marsh

Psychology, Lehigh University, Bethlehem, Pennsylvania, USA

Correspondence

Joseph A. Vitriol, Department of Psychology,
Lehigh University, 17 Memorial Drive East,
Bethlehem, PA 18020, USA.
E-mail: joevitriol@gmail.com

Received: 22 July 2017

Accepted: 30 April 2018

<https://doi.org/10.1002/ejsp.2504>

Abstract

The average person possesses superficial understanding of complex causal relations and, consequently, tends to overestimate the quality and depth of their explanatory knowledge. In this study, we examined the role of this illusion of explanatory depth (IOED) in politics—inflated confidence in one's causal understanding of political phenomena—for endorsement of conspiracy beliefs. Utilizing a pre-/post-election panel design and a large sample of U.S. Citizens ($N = 394$) recruited in the context of the 2016 presidential election, we provide evidence that political IOED, but not a non-political IOED, was associated with increased support for general and election-specific conspiracy beliefs, particularly among political novices and supporters of the losing candidate. We find this pattern of results net the influence of a broad range of variables known to covary with conspiracy beliefs. Implications for theory and the need for future research are discussed.

Conspiracy theories about government actors and institutions are widespread and diverse, and are commonplace among individuals across the political ideological spectrum (Goertzel, 1994; Hofstadter, 1965; Olmsted, 2009). As many scholars and commentators have noted, conspiracist ideation can be understood as the tendency to attribute outsized influence to hidden actors or clandestine groups, often powerful and nefarious, who are perceived as colluding in wide-ranging activities to manipulate or shape important world actions, events, and outcomes. Because many of these beliefs are overly simplistic but non-falsifiable explanations of complex, ambiguous, and often randomly occurring phenomena, conspiracy beliefs function to imbue meaning to otherwise chaotic, uncertain, yet threatening phenomena (Graeupner & Coman, 2017; Miller, Saunders, & Farhart, 2016; Sunstein, 2014; Sunstein & Vermeule, 2009; Swami & Coles, 2010; Uscinski & Parent, 2014).

Prior research investigating the psychology of conspiracy beliefs has examined the role of personality characteristics or other individual differences (e.g., Abalakina-Paap, Stephan, Craig, & Gregory, 1999; Swami et al., 2011), political or social disenfranchisement (e.g., Federico, Williams, & Vitriol, 2017; Graeupner & Coman, 2017; Uscinski & Parent, 2014),

conspiratorial mindsets (Imhoff & Bruder, 2014), and identity-based motivated-reasoning processes (e.g., Carey, Nyhan, Valentino, & Liu, 2016). These findings point to many dispositional and situational factors that increase endorsement of conspiracy beliefs—including perceived lack of control, heightened need for uniqueness, high individual narcissism coupled with low self-esteem, powerlessness, low political knowledge, interpersonal and political distrust, disagreeableness, paranoid cognitions and sinister attributions, and superstitious ideation—particularly when adopting such perspectives satisfies important psychological and ideological needs for order, certainty, and control (Berinsky, 2012; Cichocka, Marchlewska, Golec de Zavala, & Olechowski, 2016; for a review, see Douglas, Sutton, & Cichocka, 2017; Imhoff & Lamberty, 2017; Jost, Federico, & Napier, 2009; Miller et al., 2016; Lantian, Muller, Nurra, & Douglas, 2017; Sunstein, 2014; Swami & Coles, 2010; Van Prooijen, Krouwel, & Pollet, 2015). Thus, conspiracist ideation can provide an *intuitively* plausible, internally consistent, and personally meaningful explanation for the *causes* of complex, consequential phenomena that reduce subjective uncertainty, threat, and ambiguity about the world (e.g., Kruglanski & Webster, 1996; Miller et al., 2016; Sunstein, 2014).

In this article, we extend these perspectives by examining the hypothesis that unjustified and inflated confidence in one's understanding of the underlying causal relationships among political phenomena (i.e.,

Joseph A. Vitriol is a Postdoctoral Fellow in the Department of Psychology at Lehigh University. Jessecae K Marsh is an Associate Professor of Psychology at Lehigh University.

actors, institutions, processes, events, and outcomes) increases conspiracy beliefs. A substantial body of work indicates that people generally tend to overestimate the quality of their own judgments and the depth of their explanatory knowledge, especially in content areas involving complex causal relations (see Rozenblit & Keil, 2002). A classic way that people's overestimation of their knowledge has been tested is through the illusion of explanatory depth (IOED) paradigm. In the IOED paradigm, participants initially rate their confidence in their understanding of how an object or phenomena works (e.g., how a faucet works; what we will refer to as the pre-explanation confidence judgment). Participants then provide as detailed an explanation as they can for how the object or phenomenon actually works that includes explaining the causal links between steps of that process. Then, participants re-rate their explanatory understanding of the object or phenomenon (post-explanation confidence judgment). This act of trying to explain a phenomenon reveals to participants how little they actually understand about the workings of that phenomenon, resulting in a pre- to post-explanation reduction in self-reported belief confidence (Fisher & Keil, 2014; Kominsky & Keil, 2014; Rozenblit & Keil, 2002).

Given that the average person possesses only a superficial grasp of many phenomena in daily life they regularly interact with such as zippers or watches (Wilson & Keil, 1998), it is no surprise that the complexity of political events, actors, and policies may likewise not be well understood (e.g., Conover & Feldman, 1989; Delli Carpini & Keeter, 1996). Perhaps in part because people tend to believe they are more objective and less biased than others (e.g., Pronin, 2007), many express excessive confidence in the superiority of their political beliefs (Raimi & Leary, 2014), despite lacking the ability to properly ascertain their own competence in most domains (Dunning, Johnson, Ehrlinger, & Kruger, 2003). Importantly, the act of explaining a political policy has been shown to be able to expose how little people actually understand of these political phenomena and results in a reduction of self-reported understanding of such policies (Alter, Oppenheimer, & Zemla, 2010; Fernbach, Rogers, Fox, & Sloman, 2013).

As previous work has suggested, people generally overestimate their knowledge and understanding of many complex phenomena. In this article, we explore whether the tendencies towards inflated confidence in one's causal understanding of political phenomena, and a resistance to changing this confidence, are particularly pronounced among those who endorse conspiracy beliefs. Previous work has suggested a basis for this possibility. Individuals with more (vs. less) accurate knowledge of politics are indeed less likely to endorse conspiracy beliefs (Berinsky, 2012). Furthermore, some work indicates that belief superiority and overconfidence can lead to political extremism (Fernbach et al., 2013; Raimi & Leary, 2014), and that political extremism covaries

with increased endorsement of conspiracy theories (Van Prooijen et al., 2015). These previous studies together suggest that a well-calibrated understanding of one's own knowledge in the political domain might buffer against acceptance of conspiratorial explanations. In this article, we conduct a novel investigation into whether people who overestimate or maintain unjustified confidence in their understanding of the causal relations among political phenomena are particularly likely to perceive conspiratorial influences behind political phenomena. Building on existing cognitive perspectives that focus on the role of paranoid cognitions and illusory pattern perceptions for the psychology of belief in conspiracy (e.g., Kramer, 1994; Sullivan, Landau, & Rothschild, 2010; Whitson & Galinsky, 2008), we leverage the IOED paradigm to investigate this hypothesis directly.

The IOED paradigm presents an especially interesting way to test the relationship between belief confidence and conspiracy beliefs. The act of explanation has been shown to illustrate to people how much they do not understand in a variety of domains (e.g., all of the inner workings of a zipper that allow it to function they did not previously comprehend; Fernbach et al., 2013; Rozenblit & Keil, 2002; Zeveney & Marsh, 2016). As such, the IOED paradigm has the unique ability to force people into assessing the accuracy of their beliefs and calibrating those beliefs. In this paradigm post-explanation self-reported understanding serves as an indicator of the extent to which participants maintain confidence in their causal understanding, despite the act of explanation providing reasons to doubt the quality of their own judgment (e.g., Rozenblit & Keil, 2002). Focusing on post-explanation confidence ratings therefore allows us to identify people who are highly confident in their understanding of how phenomena work, such as political phenomena, despite having that understanding exposed as poor. Therefore, using the IOED paradigm to measure the relationship between belief overconfidence and conspiracy beliefs allows us a unique ability to detect people who are particularly overconfident, despite being shown they should not be, and how that is related to conspiracy belief endorsement.

Using a large sample of U.S. Citizens ($N = 394$) in the context of the 2016 presidential election, we examine the relationship of illusions of explanatory depth in both a political and non-political paradigm with conspiracy beliefs. We reasoned that explaining the causal relation and underlying mechanisms of public policies would expose to participants their lack of understanding in these domains, leading them to express less confidence in their self-reported understanding of political or non-political phenomena, as has been shown in previous literature (Hypothesis 1).

We predict that people who exhibit high post-explanation confidence are more likely to endorse conspiracy beliefs. An open question is whether conspiracy beliefs are best predicted by overconfidence in political

beliefs specifically, that is beliefs in the same domain as conspiracy beliefs,¹ or are equally well predicted by inflated confidence in one's causal understanding of phenomena across domains (devices to political phenomena). Attitudinal researchers have long known that attitudes in one domain are most closely related to judgments and behaviors within the same domain. For this reason, we predict that endorsement of political conspiracies will be specifically related to post-explanation belief confidence in political domains (Hypothesis 2). However, we also test the relationship between post-explanation belief confidence for non-political phenomena and conspiracy beliefs to evaluate whether conspiracy beliefs are related to a more global overconfidence in one's beliefs. We further expect to observe these relationships above and beyond the effect of a broad range of variables known to covary with conspiracist ideation. To properly evaluate the role of political-IOED on conspiracy beliefs, we therefore control for political and interpersonal trust, political cynicism and efficacy, political knowledge, partisan identity and ideological self-placement, as well as demographic variables.

We also consider the role of both a dispositional and a situational variable as moderators of the predicted effect of variability in post-explanation political belief confidence on conspiracy beliefs. High levels of confidence in one's understanding of political phenomena *after* the illusion has been revealed may covary with accurate political knowledge; that is, people who know more about politics may be rightfully expressing greater understanding of the phenomena. Given that conspiracy beliefs are less common among individuals with high (vs. low) levels of political knowledge (Berinsky, 2012), we predict that the relationship between conspiracy beliefs and higher post-explanation understanding judgments will be stronger among individuals with low levels of political knowledge (Hypothesis 3). That is, people who know little about politics but still show high levels of confidence in their understanding of political phenomena after the revealing act of explanation are likely to be people who hold conspiracy beliefs. As such, divergence between self-perceived and actual understanding of political phenomena may serve as a more robust predictor of conspiracy belief.

Finally, prominent perspectives on the psychology of conspiracy beliefs suggest that endorsements of conspiracy beliefs are motivated by psychological needs for order, structure, and certainty (e.g., Miller et al., 2016) and thereby provide an internally consistent and personally meaningful explanation for complex and threatening social and political events and change (e.g., Federico, Williams, Vitriol, 2017), including undesirable electoral outcomes (Edelson, Alduncin,

Kreswon, Sieja, & Uscinski, 2017). The threat associated with having supported a losing candidate can promote conspiracist ideation and lead to increased endorsement of political conspiracies among *all* supporters of that candidate (e.g., Edelson et al., 2017; Uscinski & Parent, 2014). Conspiratorial explanations of undesirable electoral outcomes provide a means by which voters can cope with having supported a losing candidate without having to revise their preference for that candidate or their expectation that such a candidate should have, in fact, won the election (i.e., partisan-based motivated reasoning; e.g., Miller et al., 2016). However, we expect political conspiracies to be particularly attractive to overconfident individuals who lack objective knowledge about politics, in part, because individuals with high (vs. low) levels of political knowledge should be better able to generate non-conspiratorial explanations for political outcomes that threaten preexisting expectations and preferences. Individuals who have unjustified confidence in their causal understanding of politics yet lack the requisite knowledge to account for undesirable electoral outcomes are both motivated to explain the outcome but *also* may be less able (or willing) to differentiate between credible and conspiratorial accounts. For these reasons, we expect divergence between self-perceived and actual political knowledge to increase support for conspiracy beliefs in general, but especially under conditions of threat that increase the motivation or need for causal explanation. As such, we expect the 2-way interaction between post-explanation political understanding and actual political knowledge to lead to increased *change* in conspiracy beliefs pre-/post-election among participants who voted for the losing candidate (i.e., Clinton supporters). We test these hypotheses on endorsement of a general set of political conspiracy theories (Hypothesis 4) as well as conspiratorial explanations for the outcome of the election (i.e., perceived electoral illegitimacy; Hypothesis 5).

More generally, Hypotheses 3, 4 and 5 may appear counter-intuitive, given existing evidence suggesting that individuals with high (vs. low) levels of political knowledge are more likely to engage in motivated reasoning to explain undesirable or attitudinally inconsistent information (e.g., Taber & Lodge, 2006), which has been found to increase conspiracy beliefs among supporters of losing candidates (Miller et al., 2016). However, the focus of this study is on the conditions under which and the individuals for whom inflated confidence in one's causal understanding of political phenomena relates to endorsement of conspiracy theories. As noted above, we expected inflated confidence in one's causal understanding of political phenomena to be particularly likely to promote conspiracy beliefs among individuals low (vs. high) in political knowledge (H3), precisely because people who know more about politics may have an accurate, not an inflated, understanding of their own knowledge. Thus, the effects of confidence in one's understanding of political phenomena on conspiratorial beliefs should be

¹Conspiracy beliefs even when not directly about political conspiracies are often politicized (e.g., Princess Diana was killed by the monarchy).

stronger among those who lack actual knowledge, and this relationship should strengthen further when the outcome of the election is undesirable. In sum, while it is possible that supporters of a losing candidate who are high (vs. low) in political knowledge will be motivated, in general, to endorse conspiracy theories and perceive as illegitimate the electoral outcome, we nonetheless expect that post-explanation confidence will be more strongly associated with general and election-specific conspiracy beliefs among individuals who lack actual political knowledge and who are motivated to explain an undesirable and threatening electoral outcome.

Method

Overview

We investigate the relationship between post-explanation political belief confidence and conspiracy beliefs in the context of the 2016 U.S. presidential election. To do so, we utilized an on-line two-wave panel design (Time 1 pre-election, October 18–19, 2016, $n = 404$; Time 2 post-election, November 10 to November 15, 2016, $n = 279$; election day was November 8, 2016). At Time 1, participants were randomly assigned to participate in either a political-IOED or non-political-IOED (device) procedure, and then completed a battery of measures designed to evaluate endorsement of conspiracy beliefs and perceptions of illegitimate, conspiratorial influences on the electoral process (i.e., Do you believe that this election will be “rigged?”), demographics, and other known covariates of conspiracy beliefs (described below). At T2, participants completed another battery of measures that reassessed their endorsement of conspiracy beliefs and perceptions of electoral illegitimacy. This longitudinal methodological design is uncommon in psychological research, but allows us to examine intra-individual change over time in a real world context as a function of the IOED and moderating variables.

Participants

Participants were 404 U.S. citizens recruited from Amazon MTurk (34% males; age $M = 37.94$, $SD = 13.05$; 83% identify as White; and 66.4% have earned at least a Bachelor's degree). As planned, 10 non-U.S. citizens were excluded from analyses, as our focus is primarily on Americans. Of the U.S. citizens recruited at Time 1 (T1), 69% or 279 were retained at Time 2 (T2). Although MTurk samples are not a representative, random sample of the American public, MTurk samples are older and more diverse than typical samples of university students, and more nationally representative than typical internet samples (e.g., Berinsky, Huber, & Lenz, 2012). By utilizing MTurk, we were able to obtain a large, non-random sample of Americans with sufficient variability on demographic

characteristics and, more importantly, the constructs of interest (see Paolacci & Chandler, 2014, on the usefulness of MTurk for psychological research). G*Power was used to determine the sample size needed to retain adequate statistical power to detect bivariate relationship for medium effect sizes at T1, and then MTurk participants were oversampled to adjust for the inclusion of non-citizens in the sample. Because estimated sample size was determined before any data analysis, it was not increased after preliminary data analyses. With the current sample size, we observed the following levels of statistical power in order to detect bivariate relationships between (i) T1 post-explanation political IOED belief confidence or T1 post-explanation device IOED belief confidence and (ii) constructs measured at T1 (Cohen's $d = .2$, Power = 41%; Cohen's $d > .5$, Power = 99%) or T2 (Cohen's $d = .2$, Power = 32%; Cohen's $d > .5$, Power = 98%).

Procedure

At the start of T1, participants were randomly assigned to see items from one of two domains: devices or politics. This paradigm adapted the basic IOED procedure developed by Rozenblit and Keil (2002) for each domain (see Fernbach et al., 2013; Zeveney & Marsh, 2016). Participants first learned how to rate their understanding of phenomena on a 7-point scale (1 = very vague understanding, 7 = very thorough understanding) using instructions from Rozenblit and Keil (2002) and a crossbow as an example. Participants then reported how well they understand six political policies or devices, depending on condition assignment. Political issues included the following: (i) “The impact of imposing unilateral sanctions on Iran for its nuclear program”, (ii) “The impact of raising the retirement age for Social Security”, (iii) “The impact of transitioning to a single-payer health care system”, (iv) “The impact of establishing a cap-and-trade system for carbon emissions”, (v) “The impact of reforming the immigration system”, and (vi) “The impact of raising the minimum wage”. Devices included: (i) “How a zipper works”, (ii) “How a piano key makes sounds”, (iii) “How a flush toilet operates”, (iv) “How a cylinder lock opens with a key”, (v) “How a helicopter flies”, and (vi) “How a sewing machine works”.

After reporting their level of understanding of the six political issues or devices, participants were asked to explain how each policy or device works as follows (adapted from Rozenblit & Keil, 2002).

As best you can, please describe all the details you know about __, going from the first step to the last, and providing the causal connection between the steps. That is, your explanation should state precisely how each step causes the next step in one continuous chain from start to finish. In other words, try to tell as complete a story as you can,

with no gaps. Please take your time, as we expect your best explanation.

After generating an explanation for a single issue or device, participants then again rated their level of understanding for each issue or device. This process was repeated for each of the six policies or devices, in a random order. Participants' T1 ratings were averaged across the six devices or six policies for each participant to form an indicator of self-reported confidence in one's understanding of political or non-political phenomena. Participants' T2 ratings were similarly averaged to form indicators of post-explanation self-reported confidence. As indicated in Table 1, the items that form each of these measures were internally consistent and highly interrelated. Next, participants completed a battery of measures (described below) and were informed that they would be contacted after the election for a follow-up survey. At T2, participants completed a series of measures (described below) and were debriefed and thanked for their time.

Measures

All continuous variables were rescaled to run from 0 to 1 using a linear transformation for easier interpretation and comparison of effect sizes.

Administered Only at T1.

Ideological Self-Placement and Partisan Identification. To assess ideological self-placement, participants were asked, "How would you describe your political outlook?" The responses were: 1 (*very liberal*), 2 (*liberal*), 3 (*somewhat liberal*), 4 (*moderate*), 5 (*somewhat conservative*), 6 (*conservative*), and 7 (*very conservative*). To evaluate partisan identification, participants were asked, "How would you describe your political party preference?" (1 = *Strong Democrat*, 2 = *Weak Democrat*, 3 = *Lean Democrat*, 4 = *Independent*, 5 = *Lean Republican*, 6 = *Weak Republican*, 7 = *Strong Republican*). We controlled for both indicators of political identity to minimize the extent to which our observations are confounded with ideological self-placement and partisan identification.

Political Efficacy. This was assessed using two items, including "Sometimes politics and government seem so complicated that people like me can't really understand what's going on", "People like me have no say in what the government does." Both of these items were answered on a 7-point scale ranging from 1 (strongly disagree) to 7 (strongly agree), with higher values coded to represent higher levels of political efficacy.

Political Cynicism. Eight items were used to assess political cynicism on a 7-point scale. Such items include "So many other people vote in the national election that it doesn't matter much to me whether I vote or not", and "I feel that I could do as good a job in public office as most other people". These items were

answered on a 7-point scale ranging from 1 (strongly disagree) to 7 (strongly agree). Higher values were coded to represent higher levels of political cynicism.

Interpersonal Trust. This was assessed using three items, including "Generally speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people?", "Would you say that most of the time people try to be helpful, or that they are just looking out for themselves?", and "Do you think most people would try to take advantage of you if they got the chance, or would they try to be fair?". Each of these items was answered on a 7-point scale, with higher values representing higher levels of interpersonal trust.

Political Trust. Seven items were used to evaluate political trust on a 7-point scale, including "Do you think that people in government waste a lot of the money we pay in taxes, or don't waste very much of it?", "Do you think that quite a few of the people running government are crooked, or do you think hardly any of them are crooked?", and "How much do you feel that having elections makes the government pay attention to what the people think—a good deal, or not much?". Responses were coded such that higher values represent higher levels of political trust.

Political Knowledge. The number of correct responses to the following items indexed political knowledge: (i) "What job or political office does Joseph Biden currently hold?" (ii) "What job or political office does John Roberts currently hold?" (iii) "What job or political office does Theresa May currently hold?" (iv) "What job or political office does Paul Ryan currently hold?" (v) "Which political party currently has the most members in the Senate in Washington?" (vi) "Which political party currently has the most members in the House of Representatives in Washington?" (vii) "How long is the term of office for a U.S. Senator?" (viii) "Whose responsibility is it to nominate judges to the Federal Courts—the President, the Congress, or the Supreme Court?".

Vote Preference. Participants responded to the following item: "If the election were held today, which of the following candidates for the President of the United States would you vote for?", which was used to assess vote preference for the major political party candidates (1 = Donald Trump, 0 = Hillary Clinton).

Demographics. Participants reported their age, gender, race, and level of education.

Administered at Both T1 and T2.

Conspiracy Beliefs. At each measurement period, participants were asked to report the extent to which they believe in each of 17 different political conspiracies on a 7-point scale (1 = completely false, 7 = completely true; modified version of Swami et al.'s (2010)

Table 1. Mean, SD, Cronbach's alpha, and correlations between all continuous variables used in Study 1

Variables	M	SD	α	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. T1 Pre-explanation political IOED understanding	0.44	0.26	.91	—															
2. T1 Post-explanation political IOED understanding	0.33	0.26	.89	.80**	—														
3. T1 Pre-explanation device IOED understanding	0.52	0.23	.96	—	—	—													
4. T1 Post-explanation device IOED understanding	0.41	0.23	.89	—	—	.75**	—												
5. T1 Ideological self-placement	0.43	0.28	—	.20**	.26**	.05	.07	—											
6. T1 Partisan identification	0.39	0.28	—	.03	.08	.02	—	.77**	—										
7. T1 Political efficacy	0.51	0.16	.53	.17**	.15**	.09†	.07	.07*	.13**	—									
8. T1 Political cynicism	0.49	0.16	.63	—	.46**	.003	—	.13**	.22**	.06†	—								
9. T1 Interpersonal trust	0.48	0.22	.79	.005	—	—	.08†	—	.19**	—	.25**	—							
10. T1 Political trust	0.39	0.13	.59	—	.03	.03	.02	—	.22**	—	.36**	.32**	—						
11. T1 Vote Preference	0.34	0.47	—	.05	.11*	.11*	.07	.61**	.61**	.12**	.16**	—	.15**	—					
12. T1 Conspiracy endorsement	0.29	0.21	.95	.17**	.23**	.12*	.11*	.34**	.25**	.06†	.20**	.13**	—	.25**	—				
13. T2 Conspiracy endorsement	0.29	0.23	.96	.25**	.24**	.16*	.12*	.30**	.19**	.11**	.17**	.23**	.13**	.23**	.89**	—			
14. T1 Electoral illegitimacy	0.47	0.24	.87	.12*	.14*	.03	.004	.44**	.48**	.16**	.31**	.26**	.35**	.51**	.57**	.54**	—		
15. T2 Electoral Illegitimacy	0.42	0.16	.82	.16*	.17*	—	—	.01	.02	.16**	.07	.20**	.30**	.01	.40**	.45**	.43**	—	
16. T2 Vote Choice	0.38	0.49	—	.15	.22*	.04	.07	—	.13†	.17*	.19**	.14*	.15*	.86**	.43**	.36**	.63**	.09	—

Note: † $p < .10$; * $p < .05$; ** $p < .01$.

15-item Belief In Conspiracy Theories Scale). Such items include “There is no “secret cabal” of powerful people pulling the world’s strings” (Reverse-coded), “US government agencies intentionally created the AIDS epidemic and administered it to Black and gay men in the 1970s”, “The assassination of John F. Kennedy was not committed by the lone gunman, Lee Harvey Oswald, but was rather a detailed, organized conspiracy to kill the President”, and “Princess Diana’s death was not an accident, but rather an organized assassination, possibly by members of the British royal family who disliked her.” Higher values represent increased endorsement of conspiracy theories. We selected this measure not only because of its demonstrated utility in existing work, but also because it captures beliefs either involving (i) the outsized influence of *political* individuals, actors, or institutions in shaping world events, or (ii) explanations for events involving *political* individuals, actors or institutions.

Perceived Electoral Illegitimacy. At both T1 and T2, participants responded to eight items (on a 7-point scale) designed to measure belief in the existence of illegitimate, conspiratorial influences on the electoral process. Participants responded to such items as, “Do you believe that this election will be ‘rigged’?” (1 = not at all, 7 = yes, definitely), “Do you believe the media is intentionally trying to influence the election in favor of a particular candidate?” (1 = not at all, 7 = yes, definitely), “How confident are you that, across the country, votes for the president will be accurately cast and counted this year?” (1 = not at all confident, 7 = very confident), and “In your opinion, how fair will the outcome of the 2016 presidential election be?” (1 = not at all fair, 7 = very fair). Higher values represented increased perceptions of illegitimacy.

Administered Only at T2².

Vote Choice. Participants responded to the following item: “Which of the following candidates for the President of the United States did you vote for in the 2016 Election?”, which was used to assess vote preference for the major political party candidates (1 = Donald Trump, 0 = Hillary Clinton).

Results

As a reminder, all measures were linearly transformed to run on a 0 to 1 scale.

²At T2, participants also completed an IOED adapted to evaluate confidence in understanding of how the 2016 election was decided. This paradigm was administered for research questions not addressed in the current study, so we do not include it in our analyses reported below.

Hypothesis 1: Explanation Will Reduce an Illusion of Political Understanding

To begin, we examine the IOED for both the political and non-political domain. To do so, a repeated-measures ANOVA was used to compare differences in self-reported understanding of political issues or devices, separately, before and after the illusion. No covariates were included in this model. Analyses showed a significant effect of time for both political, $F(1, 174) = 77.45$, $p < .001$; Pre-explanation $M = 0.44$, $SD = 0.26$; Post-explanation $M = 0.33$, $SD = 0.26$, and non-political items, $F(1, 230) = 105.31$, $p < .001$; Pre-explanation $M = 0.52$, $SD = 0.23$; Post-explanation $M = 0.41$, $SD = 0.23$. Thus, we observe a significant decrease in participants’ self-perceived understanding across both domains as has been shown in previous research (Hypothesis 1), suggesting that the procedure successfully revealed the IOED to participants assigned to both a political and non-political condition (Figure 1).

H2: An Illusion of Political Understanding Will Increase Endorsement of Conspiracy Theories

Here, we investigate the predictive utility and incremental effect of political versus non-political IOED on pre-election conspiracy beliefs, above and beyond the effects of known correlates of endorsement of conspiracy theories,³ including demographics, partisan and ideological self-placement, political and interpersonal trust, political cynicism and efficacy, and political knowledge. Because participants’ confidence in their self-reported understanding of political or non-political phenomena decreased post-explanation in the IOED paradigm, post-explanation self-reported understanding serves as an indicator of the extent to which participants have confidence in their causal understanding, despite the act of explanation providing reasons to doubt the quality of their own judgment (e.g., Rozenblit & Keil, 2002). We expect that variability in post-explanation belief confidence in the political (but not the non-political) domain would be associated with conspiracy beliefs (H2).

For these analyses, ordinary least squares regression was used to regress T1 conspiratorial beliefs on post-explanation self-reported understanding of politics or devices, separately, along with the aforementioned covariates. Robust standard errors were used in all tests on coefficients in this section to protect against heteroskedasticity (Long & Ervin, 2000). Results suggest that self-reported understanding of politics post-explanation was associated with increased T1 endorsement of conspiracy, $b = .25$, 95% CI (0.06, 0.44), $p = .01$. In contrast, post-explanation understanding

³Analyses without covariates are available upon request, although these results do not differ in statistically or substantively meaningful ways from the results reported in the main text.

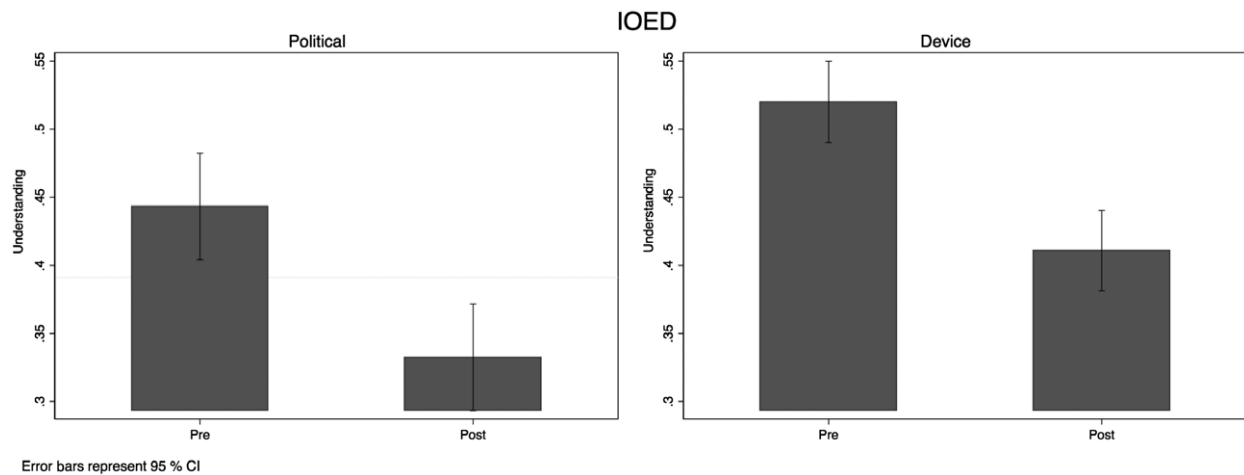


Fig. 1: Self-reported understanding of politics and devices pre-/post-explanation

of devices was unrelated to T1 conspiracy beliefs, $b = .14$, 95% CI $(-0.03, 0.31)$, $p = .13$. These findings provide support for our hypothesis that ratings of political understanding post-explanation are a robust predictor of conspiracy beliefs (H2). Furthermore, these results show that it is not just any type of high confidence that predicts conspiracy beliefs, in that participants' post-explanation ratings for devices were not predictive of conspiracy beliefs. Given that all variables were recoded to run from 0 to 1, these findings indicate that, moving from the lowest to highest levels of post-explanation political belief confidence corresponded with a 25% increase in endorsement of conspiracy theories, independent of the effect of the covariates.

H3: An Illusion of Political Understanding Will Increase Endorsement of Conspiracy Theories for Voters with Low (vs. High) Levels of Political Knowledge

Next, we examined whether the bivariate relationship between the self-reported understanding of politics post-explanation and conspiracy beliefs varied as a function of explicit political knowledge, with the expectation that the relationship would be stronger among respondents with lower (vs. higher) levels of actual political knowledge, net the effect of the covariates. The interaction was significant for T1 conspiratorial beliefs, $b = -.98$, 95% CI $(-1.62, -0.33)$, $p = .003$.⁴ Simple slope analyses suggest that the effect of post-explanation political understanding ratings on T1 conspiratorial beliefs obtained significance among individuals low, $b = 1.24$, 95% CI $(0.55, 1.94)$, $p = .001$, but not high, $b = .77$, 95% CI $(0.37, 1.18)$, $p = .20$, in political knowledge. Figure 2 represents these findings graphically. This 2-way interaction was

also observed for T2 conspiracy beliefs.⁵ Thus, we obtained support for H3.

H4: An Illusion of Political Understanding Will Increase Endorsement of Conspiracy Theories, Pre/Post Election, for Voters with Low (vs. High) Levels of Political Knowledge and Who Supported the Losing Candidate

Next, we explore the extent to which the 2-way interaction between post-explanation political understanding and political knowledge is conditioned on vote choice, with the expectation that the relationship between increased self-reported post-explanation understanding and increased conspiratorial belief would be greatest among individuals (i) low (vs. high) in knowledge and (ii) who voted for the losing (vs. winning) candidate, in this case, Clinton (vs. Trump). For this analysis, we are interested in *change* in conspiratorial belief pre-/post-election as a function of T1 (i) post-explanation belief confidence, (ii) explicit political knowledge, and (iii) vote choice. To estimate the change in a dependent variable over time, we included its lagged value (e.g., the value from T1) as a predictor in OLS regression—in this case, T1 conspiracy endorsement (see Finkel, 1995; Lenz, 2013).

Consistent with H4, the 3-way interaction on T1 to T2 change in conspiracy endorsement was marginally significant, $b = .71$, 95% CI $(-0.03, 1.45)$, $p = .06$. However, the 2-way interaction between political knowledge was marginally significant for Clinton, $b = -.52$, 95% CI $(-1.08, 0.04)$, $p = .07$, but not Trump supporters, $b = .02$, 95% CI $(0.02, 0.56)$, $p = .98$. Simple slope analyses on Clinton supporters indicate that post-explanation political belief confidence was associated with a marginally significant increase in conspiratorial beliefs for participants high

⁴The 2-way interaction between political knowledge and post-explanation device IOED was not significant as a predictor of T1 conspiracy endorsement ($p > .4$).

⁵These analyses are redundant with T1 conspiracy endorsement, but are available upon request.

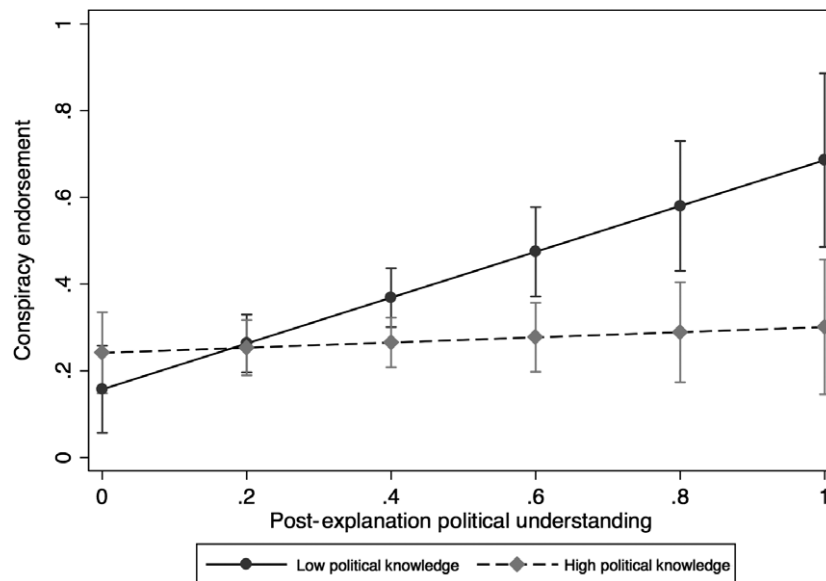


Fig. 2: Effect of post-explanation understanding of politics on T1 endorsement of conspiracy beliefs by explicit political knowledge

in political knowledge, $b = 0.29$, 95% CI $(-0.05, 0.63)$, $p = .09$, and among individuals low in political knowledge, $b = 0.54$, 95% CI $(-0.05, 0.63)$, $p = .08$, although inspection of the unstandardized coefficients suggests this effect was larger among people low (vs. high) in explicit political knowledge. These estimates are summarized in Tables 2–4.

In sum, we find evidence to suggest that higher post-explanation political belief confidence was associated with increased conspiratorial beliefs, particularly among participants low in explicit political knowledge

who voted for the losing candidate in the 2016 presidential election.

H5: An Illusion of Political Understanding Will Increase Perceived Electoral Illegitimacy, Pre/Post Election, for Voters with Low (vs. High) Levels of Political Knowledge and Who Supported the Losing Candidate

Finally, we investigate the predictive utility and incremental effect of political versus non-political

Table 2. Pre/post-election change in general conspiracy theory endorsement and perceived electoral illegitimacy as a function of political IOED, political knowledge, and major party vote choice

Predictor	General conspiracy endorsement		Electoral illegitimacy	
	<i>b</i>	95% CI	<i>b</i>	95% CI
Race (1 = white)	0.02	−0.04, 0.07	0.06 ⁺	−0.01, 0.13
Gender (1 = male)	−0.02	−0.06, 0.02	0.01	0.04, 0.07
Education	−0.00	−0.12, 0.12	−0.05	−0.21, 0.10
Age	0.06	−0.03, 0.16	0.05	−0.07, 0.18
Ideology	0.04	−0.09, 0.17	−0.14 ⁺	−0.31, 0.03
Party ID	−0.03	−0.16, 0.10	−0.06	−0.24, 0.12
Political efficacy	0.08	−0.06, 0.21	0.15 ⁺	−0.02, 0.32
Political trust	0.09	−0.12, 0.29	0.01	−0.26, 0.28
Interpersonal trust	−0.05	−0.16, 0.06	−0.07	−0.20, 0.07
Political cynicism	0.02	−0.15, 0.19	−0.06	−0.27, 0.16
T1 DV	0.88***	0.77, 0.99	0.30***	0.15, 0.44
Vote choice(1 = Trump)	0.24 ⁺	−0.003, 0.49	0.28 ⁺	−0.05, 0.60
Political knowledge	0.29*	0.05, 0.53	0.45**	0.14, 0.77
Political IOED	0.53*	0.02, 1.05	0.89*	0.20, 1.58
2-way (PK/IOED)	−0.66*	−1.28, −0.04	−1.13**	−1.95, −0.30
2-way (PK/VC)	−0.35*	−0.66, −0.03	−0.44*	−0.84, −0.03
2-way (IOED/VC)	−0.58 ⁺	−1.18, 0.01	−0.65	−1.43, 0.14
3-way	0.71 ⁺	−0.03, 1.45	0.99*	0.01, 1.96
Intercept	−0.27 ⁺	−0.55, 0.003	−0.07	−0.42, 0.28
<i>F</i> (df)	37.42 (18, 96), $p < .001$		3.51 (18, 96), $p < .001$	
Adjusted R^2	0.78		0.28	
<i>N</i>	115		115	

Notes: Entries are ordinary least squares unstandardized regression coefficients. Variances estimates based on the HC3 method.

⁺ $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$.

Table 3. Pre/Post-election change in general conspiracy theory endorsement and perceived electoral illegitimacy as a function of political IOED and political knowledge, Clinton supporters only

Predictor	General conspiracy endorsement		Electoral illegitimacy	
	<i>b</i>	95% CI	<i>b</i>	95% CI
Race (1 = white)	−0.00	−0.05, 0.07	0.07 ⁺	−0.01, 0.15
Gender (1 = male)	−0.02	−0.03, 0.02	0.01	0.06, 0.08
Education	0.03	−0.09, 0.12	−0.07	−0.28, 0.13
Age	0.03	−0.07, 0.16	0.04	−0.14, 0.22
Ideology	0.03	−0.10, 0.17	−0.07	−0.28, 0.14
Party ID	0.04	−0.10, 0.10	−0.14	−0.39, 0.11
Political efficacy	0.04	−0.10, 0.21	0.19 ⁺	−0.04, 0.42
Political trust	0.15	−0.07, 0.29	−0.19	−0.57, 0.18
Interpersonal trust	−0.06	−0.18, 0.06	−0.16	−0.36, 0.05
Political cynicism	−0.01	−0.18, 0.19	−0.05	−0.32, 0.22
T1 DV	0.90***	0.77, 0.99	0.29**	0.10, 0.48
Political knowledge	0.26*	0.05, 0.89	0.49**	0.14, 0.84
Political IOED	0.42 ⁺	−0.05, 0.47	0.91*	0.12, 1.69
2-way (PK/IOED)	−0.52 ⁺	−1.08, 0.04	−1.16*	−2.09, −0.22
Intercept	−0.25 ⁺	−0.51, −0.01	0.00	−0.41, 0.42
<i>F</i> (df)	28.45		3.65 (14, 61), <i>p</i> < .001	
	(14, 61), <i>p</i> < .001			
Adjusted <i>R</i> ²	0.84		0.33	
<i>N</i>	76		76	

Notes: Entries are ordinary least squares unstandardized regression coefficients. Variances estimates based on the HC3 method.

+*p* < .10; **p* < .05; ***p* < .01; ****p* < .001.

understanding on pre-/post-election change in perceived electoral illegitimacy, above and beyond variables known to covary with conspiratorial beliefs, and as a function of explicit political knowledge and major party vote choice. *Change* in conspiratorial beliefs about the electoral process before and after the 2016 U.S. presidential election provides an even stronger test of the extent to which such theories are attractive explanations for important albeit threatening world events. We have already shown that general endorsement of political conspiracies was more common among participants with inflated post-explanation confidence in their causal understanding of political (but not non-political) phenomena, who lack actual knowledge of politics, and who supported a losing candidate. Here, we extend this logic to evaluate whether a similar dynamic also accounts for increased support for conspiracy theories that provide a plausible account for a significant but threatening world event (election of the opposition candidate for U.S. presidency). For these analyses, ordinary least squares regression was used to regress T1 to T2 change in perceived electoral legitimacy on post-explanation self-reported understanding of politics or devices, separately, along with the covariates. Robust standard

errors were used in all tests on coefficients in this section to protect against heteroskedasticity. The primary test of our hypothesis concerns the interaction between post-explanation politics understanding, explicit political knowledge, and vote choice. We expected post-explanation self-reported understanding of politics, but not devices, to be associated with increased perceptions of electoral illegitimacy among participants low in political knowledge and who voted for the losing candidate (H5).

Tables 2–4 summarize the results of these analyses. Results indicate that the 3-way interaction between (i) post-explanation belief confidence, (ii), explicit political knowledge, and (iii) vote choice on pre-/post-election perceptions of electoral legitimacy obtained significance for the political IOED condition, *b* = .99, 95% CI (0.01, 1.96), *p* = .05, but not the device IOED condition, *b* = −.16, 95% CI (−1.09, 0.77), *p* = .73. Furthermore, the interaction between the political IOED and explicit political knowledge obtained significance for Clinton supporters, *b* = −1.16, 95% CI (−2.09, −0.22), *p* = .02, but not Trump supporters, *b* = −.03, 95% CI (−0.62, 0.55), *p* = .91. Among Clinton supporters, post-explanation political belief confidence was more strongly associated with pre-/post-election increases in perceived electoral illegitimacy for people low, *b* = 1.19, 95% CI (0.18, 2.19), *p* = .02, but not for those high, *b* = −.20, 95% CI (−0.57, 0.18), *p* = .30, in political knowledge. The effect of post-explanation political belief confidence on pre-/post-election change in perceived electoral illegitimacy as a function of political knowledge is represented graphically in Figure 3 for Clinton and Trump supporters, separately. Thus, consistent with H5, inflated confidence in one's understanding of political phenomena even after having to explain those phenomena was associated with increased perceptions of conspiratorial influences on the electoral process among participants with low (vs. high) levels of actual political knowledge and who voted for the losing candidate.

General Discussion

In this study, we examined the role of inflated confidence in one's causal understanding of political phenomena for endorsement of conspiratorial beliefs. The average person possesses superficial understanding of complex causal relations and, consequently, tends to overestimate the quality and depth of their explanatory knowledge (e.g., Kruger & Dunning, 1999; Wilson & Keil, 1998). This illusion of explanatory depth has been examined in a broad range of areas (e.g., Rozenblit & Keil, 2002), but a paucity of research has investigated these processes in political domains (but see Fernbach et al., 2013)—an inherently abstruse yet consequential context (e.g., Conover & Feldman, 1989; Delli Carpini & Keeter, 1996; Vitriol, Reifen Tagar, & Federico, 2017; Wilson & Keil, 1998). Conspiratorial beliefs serve as explanations for complex,

Table 4. Pre/post-election change in general conspiracy theory endorsement and perceived electoral illegitimacy as a function of political IOED at 1 SD above/below the mean of political knowledge, Clinton supporters only

	Low political knowledge				High political knowledge			
	General CT endorsement		Electoral illegitimacy		General CT endorsement		Electoral illegitimacy	
	<i>b</i>	(95% CI)	<i>b</i>	(95% CI)	<i>b</i>	(95% CI)	<i>b</i>	(95% CI)
Race (1 = white)	−0.00	(−0.05, 0.05)	0.07 ⁺	(0.05, 0.53)	−0.00	(−0.05, 0.05)	0.07 ⁺	(0.05, 0.53)
Gender (1 = male)	−0.01	(−0.03, 0.06)	0.01	(−0.03, 0.17)	−0.01	(−0.03, 0.06)	0.01	(−0.03, 0.17)
Education	0.03	(−0.09, 0.16)	−0.07	(−0.06, 0.08)	0.03	(−0.09, 0.16)	−0.07	(−0.06, 0.08)
Age	0.03	(−0.07, 0.14)	0.04	(−0.31, 0.17)	0.03	(−0.07, 0.14)	0.04	(−0.31, 0.17)
Ideology	0.03	(−0.10, 0.15)	−0.07	(−0.15, 0.23)	0.03	(−0.10, 0.15)	−0.07	(−0.15, 0.23)
Party ID	0.04	(−0.10, 0.19)	−0.14	(−0.27, 0.13)	0.04	(−0.10, 0.19)	−0.14	(−0.27, 0.13)
Political efficacy	0.04	(−0.10, 0.18)	0.19 ⁺	(−0.40, 0.13)	0.04	(−0.10, 0.18)	0.19 ⁺	(−0.40, 0.13)
Political trust	0.15	(−0.07, 0.36)	−0.20	(−0.66, 0.27)	0.15	(−0.07, 0.36)	−0.20	(−0.66, 0.27)
Interpersonal trust	−0.06	(−0.18, 0.07)	−0.16	(−0.37, 0.06)	−0.06	(−0.18, 0.07)	−0.16	(−0.37, 0.06)
Political cynicism	−0.01	(−0.18, 0.16)	−0.05	(−0.41, 0.31)	−0.01	(−0.18, 0.16)	−0.05	(−0.41, 0.31)
T1 DV	0.89***	(0.77, 1.03)	0.29*	(0.05, 0.53)	0.89***	(0.77, 1.03)	0.29	(0.05, 0.53)
Political knowledge	0.26*	(0.05, 0.47)	0.49*	(0.09, 0.89)	0.26*	(0.05, 0.47)	0.49*	(0.09, 0.89)
2-way	−0.52 ⁺	(−1.08, 0.04)	−1.16*	(−2.14, −0.17)	−0.52 ⁺	(−1.08, 0.04)	−1.16*	(−2.14, −0.17)
Political IOED	0.54 ⁺	(−0.06, 1.15)	1.19*	(0.14, 2.23)	0.29 ⁺	(−0.05, 0.63)	0.63*	(0.04, 1.22)
Intercept	−0.19	(−0.41, 0.04)	−0.11	(−0.28, 0.52)	−0.19	(−0.41, 0.04)	0.12	(−0.28, 0.52)
<i>R</i> ²	6.17 (14, 61)		28.45 (14, 61)		28.45 (14, 61)		6.17 (14, 61)	
Adjusted <i>R</i> ²	0.33		0.84		0.84		0.33	
<i>N</i>	76		76		76		76	

Notes: Entries are ordinary least squares unstandardized regression coefficients. Variances estimates based on the HC3 method.

⁺*p* < .10; **p* < .05; ***p* < .01; ****p* < .001.

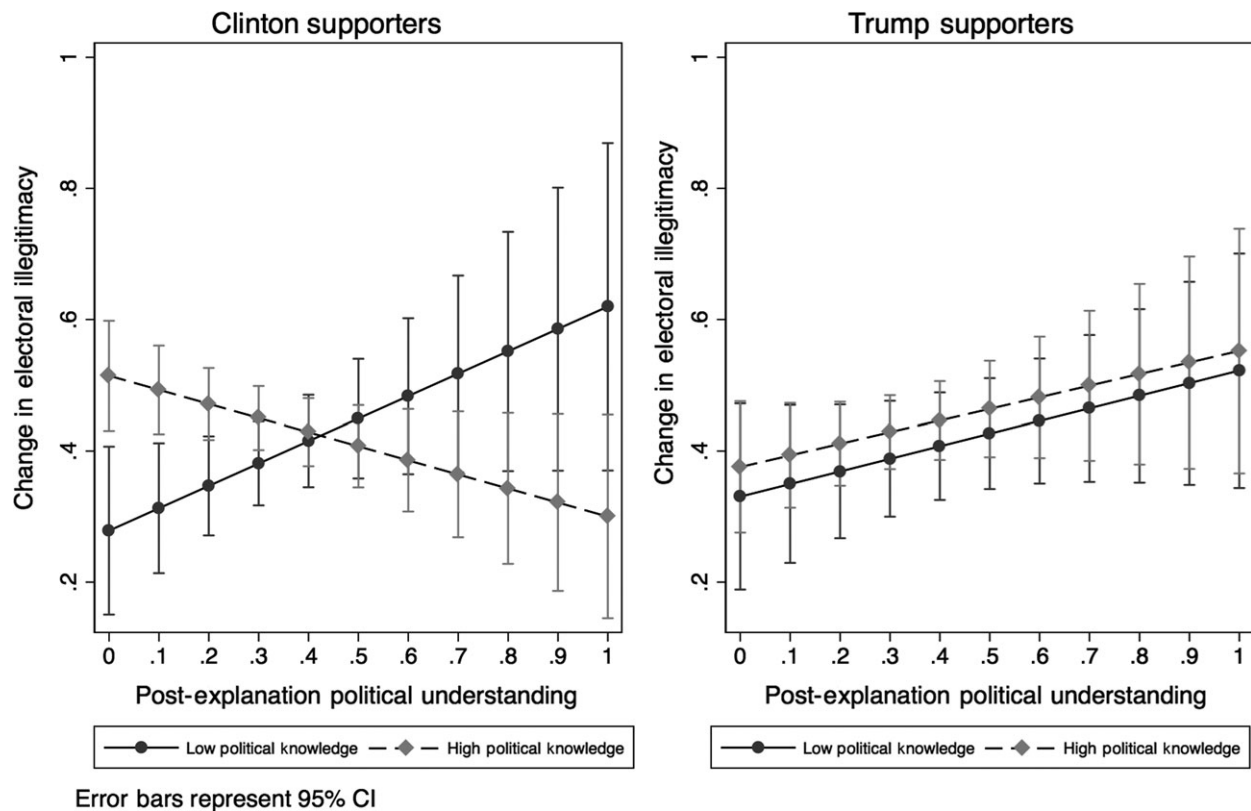


Fig. 3: Effect of post-explanation understanding of politics on pre-/post-election change in perceived electoral illegitimacy by political knowledge, Clinton or Trump support

ambiguous, and threatening political phenomena (e.g., Graeupner & Coman, 2017; Miller, Saunders, & Farhart, 2016; Sunstein & Vermeule, 2009; Swami & Coles, 2010; Uscinski & Parent, 2014; Federico, Williams, Vitriol, 2017). Accordingly, we reasoned that illusions of explanatory depth for political phenomena would be uniquely related to endorsement of conspiratorial beliefs. Yet, the extent to which illusions of causality and explanatory understanding underpin conspiratorial thinking, as has been observed for belief in pseudoscience and superstition (e.g., Matute, Yarritu, & Vadillo, 2011), has been empirically and theoretically neglected.

We addressed this gap in research on the psychology of conspiratorial beliefs in the context of the 2016 U.S. presidential election. We found that requiring participants to explain political and non-political phenomena decreased self-reported belief confidence, consistent with other research on the IOED (e.g., Fernbach et al., 2013; Fisher & Keil, 2014; Kominsky & Keil, 2014; Zeveney & Marsh, 2016). More importantly, we found that variability in post-explanation confidence in one's understanding of political (but not non-political phenomena) predicted general conspiratorial beliefs, net the effects of a broad range of variables known to associate with conspiratorial ideation. In other words, people who still held high confidence in their political understanding despite the sobering effects of explanation were more likely to hold conspiratorial beliefs. Together, this pattern of evidence supports our claim that political illusions of explanatory depth,

independent of but along with a host of other individual difference variables, are associated with belief in conspiracy theories.

In addition to extending the IOED paradigm to political domains in novel ways, our findings also enrich existing perspectives investigating the psychology of conspiratorial beliefs. In particular, prior work suggests that endorsement of conspiracy theories is particularly common among political novices and individuals who are political disenfranchised or powerless (Berinsky, 2012; Miller et al., 2016; Uscinski & Parent, 2014). For these reasons, we tested the moderating role of individual differences in political knowledge and of having voted for the losing candidate for the effects of the post-explanation political belief confidence on endorsement of conspiracy theories. Our findings support prior research by showing that, among political novices and supporters of the losing candidate, post-explanation political belief confidence predicted pre- to post-election *change* in both general conspiratorial beliefs and specific conspiratorial theories that provide a causal explanation for the outcome of the election; net controls, higher post-explanation political belief confidence was associated with an increase in general and election-specific conspiratorial beliefs among voting citizens with lower levels of actual political knowledge and for whom the electoral outcome was inconsistent with candidate preferences. That the political IOED was associated with *change*, pre-/post-election, in conspiratorial beliefs as a function of both theoretically relevant dispositional and situational

moderators provides even stronger evidence for the important role of inflated confidence in one's causal understanding of politics for conspiratorial beliefs (e.g., Finkel, 1995).

Our findings additionally expand our knowledge of how the IOED influences people's reasoning and decision-making in several ways. First, our findings add to the growing observations of the IOED in phenomena besides everyday devices (Alter et al., 2010; Fernbach et al., 2013; Fisher & Keil, 2014; Sloman & Rabb, 2016; Zeveney & Marsh, 2016), further demonstrating the robustness of people's overconfidence in their perceived causal understanding of the world. Second, our results provide one of the first demonstrations of how the IOED can affect other kinds of beliefs (Fernbach et al., 2013), enriching our understanding of the consequences explanation can have in other areas of reasoning. Finally, we contribute to a growing body of work that has explored individual differences within an IOED paradigm. Previous work has shown that people with more formal education show less of an illusion for familiar everyday phenomena than people with less formal education (Fisher & Keil, 2016). Such work has focused on how certain people are better calibrated about their prior knowledge and therefore show a smaller drop pre- and post-explanation because of lower pre-explanation ratings. To our knowledge, we are the first to explore how levels of confidence after explanation are associated with other beliefs like conspiratorial beliefs.

It is important to note that, while we have confidence in our overall pattern of findings and believe this aptly characterizes some of the psychological processes underpinning conspiratorial belief, we have only tested these hypotheses in a single U.S. electoral context and using an MTurk sample. The 2016 U.S. election, in particular, was a closely contested, confrontational, and polarizing campaign that featured anti-establishment and even conspiratorial rhetoric (e.g., Horton, 2016), widely disseminated false information (e.g., Swire, Berinsky, Lewandowsky, & Ecker, 2017), and ongoing questions about the legitimacy of the electoral outcome (Kiley, 2017). Perhaps the 2016 U.S. presidential election was ripe for conspiratorial beliefs in ways that made particularly relevant the impact of inflated causal understanding of political phenomena on political choice and beliefs, including conspiratorial ideation. Furthermore, the evidence in support of Hypothesis 4—that the political IOED would lead to increased endorsement of conspiracy theories among individuals with low (vs. high) levels of political knowledge and who supported the losing candidate—was supported with marginally significant findings. Thus, future research should seek to extend and replicate these findings in additional political contexts, including outside the U.S., involving a different set of candidates and using alternative convenience sampling techniques or more nationally representative samples.

Several additional questions also await future research. For example, what individual difference variables covary with inflated political belief confidence? We included as controls in our analyses variables known to associate with conspiratorial belief, but an additional line of inquiry could focus on factors associated with overconfidence (e.g., Fisher & Keil, 2016), such as inaccurate self-evaluations (Mabe & West, 1982; Pronin, 2007), self-perceived knowledge (Dunning et al., 2003), and exposure to partisan and polarized, yet attitudinally congruent, information sources (e.g., Prior, 2013). Additional research should also consider alternative downstream consequences beyond attitude extremity (Fernbach et al., 2013) and conspiratorial beliefs, including, for example, its potential effect on information seeking (e.g., biased hypothesis testing; Devine, Hirt, & Gehrke, 1990), ideological constraint (e.g., Ansolabehere, Rodden, & Snyder, 2008), social action and political participation (Federico, Fisher, & Deason, 2017), pseudoscientific (e.g., Pennycook, Cheyne, Barr, Koehler, & Fugelsang, 2015) and superstitious beliefs (Matute et al., 2011), and illusory pattern perception (e.g., Whitson & Galinsky, 2008), among others.

Finally, to the extent that conspiratorial belief is underpinned by illusions of explanatory understanding, the IOED paradigm might be a useful strategy for reducing conspiratorial ideation. Political misperceptions are very difficult to correct (Lewandowsky, Oberauer, & Gignac, 2013; Nyhan & Reifler, 2010), and efforts to do so often backfire (Flynn, Nyhan, & Reifler, 2017). However, one promising avenue to correcting political misperceptions focuses on replacing inaccurate causal inferences with an alternative causal explanation (e.g., Nyhan & Reifler, 2015). Perhaps requiring participants to explain the underlying causal relation among factors central to a particular conspiracy theory would reduce confidence in those beliefs and, over time, attenuate conspiratorial thinking. Examination of potential antecedents and alternative downstream consequences of political IOED represents a fruitful way of extending our investigation to better understand the role of inflated confidence in one's causal understanding of political phenomena for cognition and behavior, and may even point to strategies for attenuating endorsement and dissemination of conspiratorial beliefs.

Conflict of Interest

The authors declare that there are no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

References

- Abalakina-Paap, M., Stephan, W. G., Craig, T., & Gregory, W. L. (1999). Beliefs in conspiracies. *Political Psychology*,

- 20(3), 637–647. <https://doi.org/10.1111/0162-895x.00160>
- Alter, A. L., Oppenheimer, D. M., & Zemla, J. C. (2010). Missing the trees for the forest: A construal level account of the illusion of explanatory depth. *Journal of Personality and Social Psychology*, 99, 436–451. <https://doi.org/10.1037/a0020218>
- Ansolabehere, S., Rodden, J., & Snyder, J. M. (2008). The strength of issues: Using multiple measures to gauge preference stability, ideological constraint, and issue voting. *American Political Science Review*, 102(2), 215–232. <https://doi.org/10.1017/s0003055408080210>
- Berinsky, A. J. (2012). *Rumors, truths, and reality: A study of political misinformation*. Unpublished manuscript, Massachusetts Institute of Technology. Retrieved from <https://drive.google.com/a/umn.edu/?tab=mo#folders/0B6tFsgslztWbR1pJNIVyQk84dEU>
- Berinsky, A. J., Huber, G. A., & Lenz, G. S. (2012). Evaluating online labor markets for experimental research: Amazon.com's Mechanical Turk. *Political Analysis*, 20(3), 351–368. <https://doi.org/10.1093/pan/mpr057>
- Carey, J. M., Nyhan, B., Valentino, B., & Liu, M. (2016). An inflated view of the facts? How preferences and predispositions shape conspiracy beliefs about the Deflate-gate scandal. *Research & Politics*, 3(3), 1–9.
- Cichocka, A., Marchlewska, M., Golec de Zavala, A., & Olechowski, M. (2016). "They will not control us": In-group positivity and belief in intergroup conspiracies. *British Journal of Psychology*, 107, 556–576. <https://doi.org/10.1111/bjop.12158>
- Conover, P. J., & Feldman, S. (1989). Candidate perception in an ambiguous world: Campaigns, cues, and inference processes. *American Journal of Political Science*, 33(4), 912–940. <https://doi.org/10.2307/2111115>
- Delli Carpini, M. X., & Keeter, S. (1996). *What Americans know about politics and why it matters*. New Haven, CT: Yale University Press.
- Devine, P. G., Hirt, E. R., & Gehrke, E. M. (1990). Diagnostic and confirmation strategies in trait hypothesis testing. *Journal of Personality and Social Psychology*, 58(6), 952–963. <https://doi.org/10.1037/0022-3514.58.6.952>
- Douglas, K. M., Sutton, R. M., & Cichocka, A. K. (2017). The psychology of conspiracy theories. *Current Directions in Psychological Science*, 26(6), 538–542. <https://doi.org/10.1177/0963721417718261>
- Dunning, D., Johnson, K., Ehrlinger, J., & Kruger, J. (2003). Why people fail to recognize their own incompetence. *Current Directions in Psychological Science*, 12(3), 83–87. <https://doi.org/10.1111/1467-8721.01235>
- Edelson, J., Alduncin, A., Kreswon, C., Sieja, J. A., & Uscinski, J. E. (2017). The effect of conspiratorial thinking and motivated reasoning on belief in election fraud. *Political Research Quarterly*, 70, 933–946. <https://doi.org/10.1177/1065912917721061>
- Federico, C. M., Fisher, E. L., & Deason, G. (2017). The authoritarian left withdraws from politics: Ideological asymmetry in the relationship between authoritarianism and political engagement. *The Journal of Politics*, 79(3), 1010–1023. <https://doi.org/10.1086/692126>
- Federico, C. M., Williams, A., & Vitriol, J. A. (2017). #NotMyPresident: The role of system identity threat in conspiracy theory endorsement. Manuscript submitted for publication.
- Fernbach, P. M., Rogers, T., Fox, C. R., & Sloman, S. A. (2013). Political extremism is supported by an illusion of understanding. *Psychological Science*, 24, 939–946. <https://doi.org/10.1177/0956797612464058>
- Finkel, S. E. (1995). *Causal analysis with panel data*. Thousand Oaks, CA: Sage. <https://doi.org/10.4135/9781412983594>
- Fisher, M., & Keil, F. (2014). The illusion of argument justification. *Journal of Experimental Psychology General*, 143, 425–433. <https://doi.org/10.1037/a0032234>
- Fisher, M., & Keil, F. C. (2016). The curse of expertise: When more knowledge leads to miscalibrated explanatory insight. *Cognitive Science*, 40, 1251–1269. <https://doi.org/10.1111/cogs.12280>
- Flynn, D. J., Nyhan, B., & Reifler, J. (2017). The nature and origins of misperceptions: Understanding false and unsupported beliefs about politics. *Political Psychology*, 38 (S1), 127–150. <https://doi.org/10.1111/pops.12394>
- Goertzel, T. (1994). Belief in conspiracy theories. *Political Psychology*, 15(4), 731–742. <https://doi.org/10.2307/3791630>
- Graeupner, D., & Coman, A. (2017). The dark side of meaning-making: How social exclusion leads to superstitious thinking. *Journal of Experimental Social Psychology*, 69, 218–222. <https://doi.org/10.1016/j.jesp.2016.10.003>
- Hofstadter, R. (1965). *The paranoid style in American politics and other essays*. New York, NY: Knopf.
- Horton, H. (2016). *The five weirdest conspiracy theories about the US Election*. Retrieved from <http://www.telegraph.co.uk/news/2016/11/07/the-five-weirdest-conspiracy-theories-about-the-us-election/>
- Imhoff, R., & Bruder, M. (2014). Speaking (un-) truth to power: Conspiracy mentality as a generalised political attitude. *European Journal of Personality*, 28(1), 25–43. <https://doi.org/10.1002/per.1930>
- Imhoff, R., & Lamberty, P. (2017). Too special to be duped: Need for uniqueness motivates conspiracy beliefs. *European Journal of Social Psychology*, 47, 724–734. <https://doi.org/10.1002/ejsp.2265>
- Jost, J. T., Federico, C. M., & Napier, J. L. (2009). Political ideology: Its structure, functions, and elective affinities. *Annual Review of Psychology*, 60, 307–337. <https://doi.org/10.1146/annurev.psych.60.110707.163600>
- Kiley, J. (2017). *U.S. public sees Russian role in campaign hacking, but is divided over new sanctions*. Retrieved from <http://www.pewresearch.org/fact-tank/2017/01/10/u-s-public-says-russia-hacked-campaign/>
- Kominsky, J. F., & Keil, F. C. (2014). Overestimation of knowledge about word meanings: The "misplaced meaning" effect. *Cognitive Science*, 38(8), 1604–1633. <https://doi.org/10.1111/cogs.12122>
- Kramer, R. M. (1994). The sinister attribution error: Paranoid cognition and collective mistrust in organizations. *Motivation and Emotion*, 18, 199–230. <https://doi.org/10.1007/bf02249399>
- Kruger, J., & Dunning, D. (1999). Unskilled and unaware of it: How difficulties in recognizing one's own incompetence lead to inflated self-assessments. *Journal of Personality and Social Psychology*, 77(6), 1121–1134. <https://doi.org/10.1037/0022-3514.77.6.1121>

- Kruglanski, A. W., & Webster, D. M. (1996). Motivated closing of the mind: "Seizing" and "freezing". *Psychological Review*, 103(2), 263–283. <https://doi.org/10.1037/0033-295x.103.2.263>
- Lantian, A., Muller, D., Nurra, C., & Douglas, K. M. (2017). 'I know things they don't know!': The role of need for uniqueness in belief in conspiracy theories. *Social Psychology*, 48, 160–173. <https://doi.org/10.1027/1864-9335/a000306>
- Lenz, G. S. (2013). *Follow the leader? How voters respond to politicians' policies and performance*. Chicago, IL: University of Chicago Press.
- Lewandowsky, S., Oberauer, K., & Gignac, G. E. (2013). NASA faked the moon landing—therefore, (climate) science is a hoax: An anatomy of the motivated rejection of science. *Psychological Science*, 24(5), 622–633. <https://doi.org/10.1177/0956797612457686>
- Long, J. S., & Ervin, L. H. (2000). Using heteroscedasticity consistent standard errors in the linear regression model. *The American Statistician*, 54, 217–224. <https://doi.org/10.1080/00031305.2000.10474549>
- Mabe, P. A., & West, S. G. (1982). Validity of self-evaluation of ability: A review and meta-analysis. *Journal of Applied Psychology*, 67(3), 280–296. <https://doi.org/10.1037/0021-9010.67.3.280>
- Matute, H., Yarritu, I., & Vadillo, M. A. (2011). Illusions of causality at the heart of pseudoscience. *British Journal of Psychology*, 102(3), 392–405. <https://doi.org/10.1348/000712610x532210>
- Miller, J. M., Saunders, K. L., & Farhart, C. E. (2016). Conspiracy endorsement as motivated reasoning: The moderating roles of political knowledge and trust. *American Journal of Political Science*, 60, 824–844. <https://doi.org/10.1111/ajps.12234>
- Nyhan, B., & Reifler, J. (2010). When corrections fail: The persistence of political misperceptions. *Political Behavior*, 32(2), 303–330. <https://doi.org/10.1007/s11109-010-9112-2>
- Nyhan, B., & Reifler, J. (2015). Does correcting myths about the flu vaccine work? An experimental evaluation of the effects of corrective information. *Vaccine*, 33(3), 459–464. <https://doi.org/10.1016/j.vaccine.2014.11.017>
- Olmsted, K. (2009). *Real enemies: Conspiracy theories and American Democracy, World War I to 9/11*. Oxford, UK: Oxford University Press.
- Paolacci, G., & Chandler, J. (2014). Inside the Turk: Understanding Mechanical Turk as a participant pool. *Current Directions in Psychological Science*, 23(3), 184–188. <https://doi.org/10.1177/0963721414531598>
- Pennycook, G., Cheyne, J. A., Barr, N., Koehler, D. J., & Fugelsang, J. A. (2015). On the reception and detection of pseudo-profound bullshit. *Judgment and Decision Making*, 10(6), 549–563.
- Prior, M. (2013). Media and Political Polarization. *Annual Review of Political Science*, 16, 101–127. <https://doi.org/10.1146/annurev-polisci-100711-135242>
- Pronin, E. (2007). Perception and misperception of bias in human judgment. *Trends in Cognitive Sciences*, 11(1), 37–43. <https://doi.org/10.1016/j.tics.2006.11.001>
- Raimi, K. T., & Leary, M. R. (2014). Belief superiority in the environmental domain: Attitude extremity and reactions to fracking. *Journal of Environmental Psychology*, 40, 76–85. <https://doi.org/10.1016/j.jenvp.2014.05.005>
- Rozenblit, L., & Keil, F. (2002). The misunderstood limits of folk science: An illusion of explanatory depth. *Cognitive Science*, 26(5), 521–562. https://doi.org/10.1207/s15516709cog2605_1
- Slooman, S. A., & Rabb, N. (2016). Your understanding is my understanding: Evidence for a community of knowledge. *Psychological Science*, 27, 1451–1460. <https://doi.org/10.1177/0956797616662271>
- Sullivan, D., Landau, M. J., & Rothschild, Z. K. (2010). An existential function of enemyship: Evidence that people attribute influence to personal and political enemies to compensate for threats to control. *Journal of Personality and Social Psychology*, 93, 434–449. <https://doi.org/10.1037/a0017457>
- Sunstein, C. R. (2014). *Conspiracy theories and other dangerous ideas*. New York, NY: Simon and Schuster.
- Sunstein, C. R., & Vermeule, A. (2009). Conspiracy theories: Causes and cures. *Journal of Political Philosophy*, 17(2), 202–227. <https://doi.org/10.1111/j.1467-9760.2008.00325.x>
- Swami, V., & Coles, R. (2010). The truth is out there: Belief in conspiracy theories. *The Psychologist*, 23(7), 560–563.
- Swami, V., Coles, R., Stieger, S., Pietschnig, J., Furnham, A., Rehim, S., & Voracek, M. (2011). Conspiracist ideation in Britain and Austria: Evidence of a monological belief system and associations between individual psychological differences and real-world and fictitious conspiracy theories. *British Journal of Psychology*, 102, 443–463. <https://doi.org/10.1111/j.2044-8295.2010.02004.x>
- Swire, B., Berinsky, A. J., Lewandowsky, S., & Ecker, U. K. (2017). Processing political misinformation: Comprehending the Trump phenomenon. *Royal Society Open Science*, 4(3), <https://doi.org/10.1098/rsos.160802>
- Taber, C. S., & Lodge, M. (2006). Motivated skepticism in the evaluation of political beliefs. *American Journal of Political Science*, 50(3), 755–769. <https://doi.org/10.1111/j.1540-5907.2006.00214.x>
- Uscinski, J. E., & Parent, J. P. (2014). *American conspiracy theories*. Oxford, UK: Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780199351800.001.0001>
- Van Prooijen, J.-W., Krouwel, A. P. M., & Pollet, T. (2015). Political extremism predicts belief in conspiracy theories. *Social Psychological and Personality Science*, 6, 570–578. <https://doi.org/10.1177/1948550614567356>
- Vitriol, J. A., Reifen Tagar, M., & Federico, C. M. (2017). Ideological uncertainty and investment of the self in politics. Manuscript submitted for publication.
- Whitson, J. A., & Galinsky, A. D. (2008). Lacking control increases illusory pattern perceptions. *Science*, 322, 115–117. <https://doi.org/10.1126/science.1159845>
- Wilson, R. A., & Keil, F. (1998). The shadows and shallows of explanation. *Minds and Machines*, 8(1), 137–159. <https://doi.org/10.1023/a:1008259020140>
- Zeveney, A. S., & Marsh, J. K. (2016). The illusion of explanatory depth in a misunderstood field: The IOED in mental disorders. In A. Pagafragou, D. Grodner, D. Mirman & J. C. Trueswell (Eds.), *Proceedings of the 38th annual conference of the cognitive science society* (pp. 1020–1025). Austin, TX: Cognitive Science Society.