The Impact of Exposure to Media Messages Promoting Government Conspiracy Theories on Distrust in the Government: Evidence from a Two-Stage Randomized Experiment

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Does exposure to videos promoting government conspiracy theories cultivate cynicism toward the government? The results of a randomized experiment suggest that exposure to a video promoting a government conspiracy theory increased belief in the conspiracy immediately after the exposure and two weeks later. It is even more important that the immediate increase in the belief translated into higher levels of distrust in the government two weeks later. Further analysis indicated that engagement with the video might have explained the observed effects of the video on the belief and the distrust. The findings suggest that media messages promoting government conspiracy theories may have the potential to induce long-lasting cynicism toward the government through engaging viewers in the messages and, therefore, increasing belief in the theories.

Keywords: belief, conspiracy theories, distrust in the government, long-term effect, message engagement

According to national surveys conducted between 2006 and 2013 (Breed, 2013; Oliver & Wood 2014), more than half of Americans endorse at least one conspiracy theory. Given that most people have little or no firsthand information about the causes of many historical and social events, media play a crucial role in providing the public with explanations for these events—including conspiracy theories (Olmsted, 2009; Stempel, Hargrove, & Stempel, 2007; Sunstein & Vermeule, 2009). In fact, films and television programs on conspiracy theories often attract the attention of many people. For example, about 15 million Americans watched the television show *Conspiracy Theory: Did We Land on the Moon?* in February 2001 (Borenstein, 2002). A series of films entitled Loose Change—which claim that the U.S. government orchestrated the September 11 terrorist attacks—went viral online and has attracted at least 10 million viewers (Olmsted, 2009). These observations raise the questions of whether media messages

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¹ The authors would like to thank Joette Rockow for the assistance in data collection and the two anonymous reviewers for their constructive feedback.

promoting conspiracy theories may have a long-lasting impact on belief in such theories and how belief in the theories (as a result of media exposure) may affect public trust in the government, given that many conspiracy theories suggest that the government and its officials have been directly involved in plotting the conspiracies (Uscinski & Parent, 2014). However, the available evidence has not provided definitive answers to these questions.

Admittedly, some studies have established a short-term impact of exposure to media mesesages promoting conspiracy theories on belief in the theories (Einstein & Glick, 2015; Mulligan & Habel, 2012; Swami et al., 2013), and others have demonstrated that the exposure can have immediate negative impacts on political participation (Butler, Koopman, & Zimbardo, 1995; Jolley & Douglas, 2014b) and trust in the government (Einstein & Glick, 2015). However, these studies did not directly test whether belief in the theories mediated the impact of the exposure on political outcome variables (e.g., political participation and trust in the government); nor did they explore whether and why the influence of the exposure on the belief and, therefore, the political outcome variables may persist over an extended period of time even though people have the opportunity to encounter or seek further information about conspiracy theories—which may or may not support them—after initial exposure to messages about the theories.

To address these unanswered, yet important, questions left by previous research, we conducted a two-stage online experiment to test the short- and long-term effects of exposure to a video promoting a government conspiracy theory on belief in the theory, while considering the potential mediating role of video engagement. Moreover, the study explored whether belief in the theory as a result of the video viewing would translate into higher levels of distrust in the government two weeks later. Its findings not only suggest that exposure to media messages promoting government conspiracy theories may cultivate public belief in such theories but also indicate that belief in such theories (as a result of the exposure) may lead to long-lasting cynicism toward the government.

Belief in Conspiracy Theories and Media

Conspiracy theories propose that important and, especially, incredible historical and social events (e.g., Moon landings, the 9/11 attacks, and the death of Diana, Princess of Wales) are the result of concerted and conscious actions of powerful, highly organized, and secretive groups that withhold the truth from the public (Keeley, 1999; Oliver & Wood, 2014). Most of these theories share three important characteristics (Barkun, 2003; Oliver & Wood, 2014). First, they suggest that a secretive and malevolent force is behind some unusual social and political events. Second, in most narratives on conspiracy theories, there is a struggle between good (e.g., those who want to find out the truth) and evil (e.g., those who deceive the public for their own gain). Finally, conspiracy theories often suggest that the official or mainstream accounts of some unusual social and political events are designed to fool or distract the public.² Hence, conspiracy theories provide unofficial or alternative frames of interpretation of some public events and social developments (Oliver & Wood, 2014).

² Conspiracy theories are distinct from other concepts such as misinformation and rumor. Unlike misinformation, not all conspiracy theories turn out to be false. For example, Richard Nixon was indeed

Why, then, do people believe conspiracy theories rather than official or mainstream accounts of historical and social events? Some scholars have attributed belief in conspiracy theories to psychopathology, such as paranoia, delusional ideation, or narcissism (Oliver & Wood, 2014; Swami, Chamorro-Premuzic, & Furnham, 2010; Swami et al., 2011, 2013). Others have contended that conspiracy thinking is a way for members of minority groups to cope with an unequal social structure (Crocker, Luhtanen, Broadnax, & Blaine, 1999; Simmons, 2005; Uscinski & Parent, 2014). Still others have claimed that people believe in conspiracy theories to alleviate the confusion, frustrations, insecurities, and fears resulting from living in a modern society characterized by rapid social change, high levels of social and geographic mobility, a decline in individual autonomy, and an erosion of trust in the government (Aupers, 2012; Olmsted, 2009; Stempel et al., 2007). Although these findings may explain one's tendency to believe conspiracy theories (Goertzel, 1994; Stempel et al., 2007), they cannot fully explain the widespread belief in conspiracies because they do not tell us how people start to believe them.

To better understand the origin of belief in conspiracies among the public, it is necessary to consider the role of media. Until very recently in human history, it was extremely difficult for people to disseminate alternative views of important historical events (Olmsted, 2009). In 1918, for instance, Jacob Abrams—an anarchist and believer of a conspiracy behind U.S. intervention in the Russian revolution—had to publicize his view by urging his friends to toss antiwar leaflets from the third floor of a Manhattan building onto the street. But today, advances in communication technology (e.g., mass media and the Internet) have made it relatively easy for people to distribute conspiracy theories, which raises the question of whether media messages promoting conspiracy theories increase belief in such theories on the part of the audience. In answering this question, a group of scholars conducted randomized experiments and found a clear impact of exposure to messages conveying conspiracy theories on belief in such theories immediately after the exposure (Einstein & Glick, 2015; Jolley & Douglas, 2014a, 2014b; Mulligan & Habel, 2012; Swami et al., 2013). Following the findings of these experiments, we propose the following hypothesis:

H1: Compared to no exposure, exposure to a media message promoting a conspiracy theory will increase belief in the theory immediately after the exposure.

But the impact of exposure to media messages promoting conspiracy theories on belief in such theories may not be very troubling unless it persists over time. In other words, only when the impact is not fleeting will it be more likely to have real-world consequences (such as cultivating cynicism toward the government). Yet it is unclear whether the impact will last over an extended period of time, given that people have the opportunity to receive or seek further information about a conspiracy theory (which may or may not be consistent with it) after initial exposure to media messages about the theory. On the one hand, receiving information criticizing a conspiracy theory may attenuate belief in the theory (Swami et

involved in the conspiracy to cover up his role in the Watergate burglary (Clarke, 2002). Hence, conspiracy theories cannot be equated with misinformation. Rumors, on the other hand, are private hypotheses about how the world works and are used to seek a sense of control and closure in uncertain situations (Rosnow, 1988). Therefore, rumors are different from conspiracy theories in that the former often lack the key characteristics of the latter.

al., 2013). On the other hand, research has shown that it is difficult for people to resist the influence of the information that was first accepted as truth but later turned out to be false (see Lewandowsky, Oberauer, & Gignac, 2013, for an overview) or fabricated (Green & Donahue, 2011), which implies that the effect of media messages promoting a conspiracy theory on people's belief in the theory may persist even when they receive information criticizing the theory afterward. Given that no studies to our knowledge have examined whether the influence of a message supporting a conspiracy theory on people's belief will last over time, we ask the following research question:

RQ1: Will exposure to a media message promoting a conspiracy theory affect the audience's belief in the theory over a period of time?

Given that conspiracy theories often use melodramatic narratives to explain extraordinary events (Oliver & Wood, 2014), engagement with messages promoting these theories is expected to be a key mechanism underlying their persuasive effects (Bilandzic & Busselle, 2011; Busselle & Bilandzic, 2008; Green & Brock, 2000). Individuals are able to argue against information presented in media messages only when they have the motivation and cognitive resources to do so (Slater & Rounter, 2002). Engagement with narratives, however, depletes the cognitive resources necessary for arguing against the information provided in the stories and, therefore, makes people more susceptible to the its influence (Nabi, Moyer-Gusé, & Byrne, 2007; Slater, Rouner, & Long, 2006). Consistent with this reasoning, research has indicated that message engagement leads to message-consistent belief changes on the part of the audience (e.g., Green & Brock, 2000; Hall & Zwarun, 2012). Moreover, the perceived realism of films on conspiracy theories—an antecedent of message engagement (Bilandzic & Busselle, 2011)—was found to have a significant positive effect on belief in the theories (Mulligan & Habel, 2012). With all these factors in mind, we propose the following hypotheses:

H2a: Engagement with a media message promoting a conspiracy theory will be a positive predictor of belief in the theory immediately after exposure to the message.

H2b: To the extent that exposure to the message influences people's belief over a period of time, engagement with the message will be a positive predictor of the influence's persistence.

Belief in Conspiracy Theories and Distrust in the Government

Belief in conspiracy theories has been linked to both positive and negative consequences. On the positive side, belief in such theories may motivate the public to challenge the social hierarchy and demand greater transparency from the government (e.g., Butler et al., 1995; Knight, 2007; Lardner, 1992; Swami & Coles, 2010). On the negative side, such belief may lead to a rejection of science (Lewandowsky et al., 2013); feelings of (political) powerlessness, uncertainty, and disillusionment (Jolley & Douglas, 2014a; 2014b); negative attitudes toward authority (Jolley & Douglas, 2014a; Swami et al., 2010, 2011); political

disengagement (Butler et al., 1995; Jolley & Douglas, 2014b); and distrust in the government (Einstein & Glick, 2015; Jolley & Douglas, 2014a; Swami et al., 2010, 2011).³

The link between belief in government conspiracy theories and distrust in the government is the focus of the current study because the government is clearly implicated in such theories. A common type of conspiracy theory, government conspiracy theories (e.g., those related to the Moon landings, the 9/11 attacks, and the death of Diana, Princess of Wales) are deeply rooted in distrust in the government (Keeley, 1999; Knight, 2008). These theories suggest that the government is the conspirator and argue that government officials have intentionally disserved public interests, lied, and covered up the truth. Given that people tend to accept information and views consistent with their preexisting attitudes and beliefs (e.g., Slater, 2007; Stroud, 2007), it is not surprising that individuals who distrust the government are inclined to believe government conspiracies (Crocker et al., 1999; Goertzel, 1994). However, it is unclear whether distrust in the government causes belief in government conspiracies, or vice versa.

Nonetheless, it stands to reason that belief in government conspiracies, as a result of exposure to media messages promoting them, will lead to distrust in the government. This reasoning is indirectly supported by research on the effect of strategic news. Strategic news cultivates a cynical view toward politicians through highlighting the self-interested motives of political actors (e.g., winning an election; see Cappella & Jamieson, 1997; de Vreese & Elenbaas, 2008). Making salient the self-interested motives of politicians invites labeling them with negative attributions such as dishonesty, deceitfulness, manipulativeness, and self-centeredness (Cappella & Jamieson, 1997). These attributions, in turn, elicit cynicism toward political actors. Applying the findings about the effect of strategic news in the context of this study suggests that belief in government conspiracy theories (as a result of exposure to media messages promoting them) will compel the audience to make negative attributions about the government and, thus, distrust it because these theories claim that the government has intentionally acted against public interests and lied to the public. In line with this reasoning, a recent study (Einstein & Glick, 2015) found that reading about a government conspiracy theory lowered participants' trust in the government even though the study did not directly demonstrate the role of belief in the theory in the influence process. Nonetheless, we make the following prediction:

H3: Compared to no exposure, exposure to a media message promoting a government conspiracy theory will increase distrust in the government via inducing belief in the theory.

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³ Although some analysts may consider distrust in the government to be a lack of trust in the institution (Dyck, 2010; Schyns & Koop, 2010), distrust does not equal a lack of trust (Cook & Gronke, 2005). Trust in the government refers to the belief that the government is responsive and does its best to represent public interests, even in the absence of constant scrutiny (Hetherington, 2005; Keele, 2007; Levi & Stoker, 2000). By contrast, distrust in the government is defined as the belief that the government deliberately acts against what is good for the public (Ullmann-Margalit, 2004). Although people cannot trust and distrust the government at the same time, they can be agonistic in terms of trust—that is, neither they may neither trust nor distrust the institution. For this reason, trust and distrust in the government do not complement each other.

Finally, engagement with media messages about government conspiracy theories may help explain the indirect effect of the messages on distrust in the government via belief. Message engagement is expected to have a positive effect on belief in the conspiracies; an increase in the belief, in turn, may translate into distrust in the government. Thus, we propose the following hypothesis:

H4: Engagement with a media message promoting a government conspiracy theory will increase distrust in the government via affecting belief in the theory.

Method

A two-stage randomized online experiment was conducted to test the proposed hypotheses and answer our research question. The experiment had a 2 (exposure to a message promoting a government conspiracy theory: yes versus no) \times 2 (delay of belief assessment: short versus long) mixed design, with the first factor as a between-subjects factor and the second as a within-subjects factor.

Stimuli

A video on the Moon landing conspiracy theory was created from a documentary—entitled Conspiracy Theory: Did We Land on the Moon?—that was originally aired in February 2001 on the FOX network. In the documentary, a number of conspiracy theorists claim that the Apollo Moon landings were staged by the National Aeronautics and Space Administration (NASA) and the federal government to win the space race against the Soviet Union. We shortened the film to a 15-minute clip that focuses mainly on the Moon landing conspiracy theory and supporting evidence.

The clip served the purposes of this study well for a number of reasons. First, given the central role played by the federal government in the conspiracy theory (Lewandowsky et al., 2013), the video allowed us to test how media messages promoting government conspiracies may influence distrust in the government through affecting people's belief in the conspiracies. Moreover, only a small percentage of Americans (about 7%) believe the Moon landing conspiracy (Public Policy Polling, 2013), so a video on this conspiracy would better enable us to test how a media message may induce the public to begin believing a conspiracy theory than would a video on other, more widely believed, government conspiracy theories (e.g., those about the 9/11 attacks). Admittedly, using a fake government conspiracy theory would allow us to rule out the influence of preexisting belief in the theory on participants' reactions. Nonetheless, we decided to use an actual conspiracy theory to increase the external validity of our findings.

A video unrelated to the Moon landing conspiracy theory was shown in the control condition. This 15-minute video—from the film *Finding Atlantis*, produced by the National Geographic Channel (Ball, 2011)—documented the journey of a team of scientists who were pursuing the well-known legend of the vanished city of Atlantis. Given that no conspiracy theories were promoted in the video and the government played no role in the legend, the video served well as a control.⁴

⁴ Some may suspect that the control video would indirectly promote belief in conspiracy theories because the video was about a legendary, mysterious, and lost city and magical ideation is strongly associated with

Participants and Procedure

A convenience sample of undergraduates (N=145) at a large American public university participated in this two-stage study for extra credit. The retention rate was 97% (Stage 1, N=149). Six participants who had watched the conspiracy theory video prior to the study were excluded from data analyses. The remaining 139 participants had a mean age of 20.54 (SD=2.75). Forty percent of them were male, and the majority were White Americans (70%). To recruit subjects, an invitation email was sent to potential participants. Those who gave informed consent completed a pre-exposure questionnaire that measured distrust in the government (i.e., pre-exposure distrust), before being randomly assigned to either the experimental or the control conditions. Upon finishing watching their video, all subjects answered a post-exposure survey that captured their belief in the Moon landing conspiracy theory (i.e., Time 1 belief), message engagement, political ideology (on a 5-point scale with 1 = "very conservative" and 5 = "very liberal"; M=3.18, SD=.85), and demographics including age, race, gender, and income (on an 8-point scale with 1 = "less than \$10,000" and 8 = "more than \$120,000"; M=3.93; SD=2.19).

Participants who had completed the first stage of the study received an invitation email for the second stage of the study two weeks later. To be clear, allowing a two-week interval between immediate and delayed measures of outcome variables is a common practice for assessing the persistence of message effects (Kumkale & Albarracin, 2004). At the second stage, the same questions (used to measure distrust in the government and belief in the Moon landing conspiracy theory at the first stage) were asked of all subjects to assess their distrust in the government (i.e., Time 2 distrust) and belief in the Moon landing conspiracy theory (i.e., Time 2 belief). After this, all participants answered the questions about whether they had sought additional information about the Moon landing conspiracy theory since they completed the first stage of the study (see Appendix for question wording).

Measures of Key Variables

Belief in the Moon landing conspiracy theory was measured by asking participants to rate, on a 7-point agreement scale (1 = ``strongly disagree'' and 7 = ``strongly agree'') immediately after the video viewing (Time 1) and 2 weeks later (Time 2), each of the following two statements: "I think that Neil Armstrong, the captain of Apollo 11, did not actually land on the Moon," and "I think that the government staged or faked the Apollo 11 Moon landing." The scores of each participant on the two items were

conspiracy belief. To avoid this influence, we put the impact of the selected conspiracy video into a more stringent test by comparing it with the influence of a video that might also positively affect the outcome variables under study (e.g., belief in conspiracies).

⁵ Due to random assignment, participants in the experimental and the control conditions should have had similar levels of belief in the Moon landing conspiracy before watching their video. Therefore, participants' prior belief in the conspiracy should not have biased the findings of this study. Moreover, measuring belief in the conspiracy prior to exposing half the participants to a video on the conspiracy might have sensitized these participants to the purpose of this study and, therefore, biased their responses. Hence, we decided not to measure belief in the conspiracy in the pre-exposure survey.

averaged separately for Time 1 (M = 3.21; SD = 1.71; r = .94; p < .01) and Time 2 (M = 3.19; SD = 1.59; r = .90; p < .01).

Message engagement was assessed via items adapted from an established measure (Busselle & Bilandzic, 2009). Specifically, participants rated, on a 7-point agreement scale, statements including, "During the clip, I lost track of time," "The clip did not hold my attention" (reverse-worded), "When the clip ended, I was surprised that it was over so quickly," "During the clip, I completely forgot that I was in the middle of a survey," "I forgot my own problems and concerns during the clip," "While watching, I found myself thinking about what I had done before the survey or what I would do after it" (reverse-worded), and "The clip seemed to drag" (reverse-worded; M = 4.5; SD = 1.02; a = .74). An independent t test showed that message engagement did not differ across study conditions (control, M = 4.43, SE = .12; experiment, M = 4.50; SE = .12; t = .12; t = .14, t = .14,

Distrust in the government was captured by five items adapted from a study conducted by Guggenheim, Kwak, and Campbell (2011). These items were directed toward government officials because the public uses the behavior of people working in the government as a reference point for gauging the trustworthiness of the institution as a whole (Kramer, 1999; Ullmann-Margalit, 2004). Specifically, they asked participants to rate, on a 7-point agreement scale, statements including, "Most government officials are corrupt," "Our government officials don't have very good personalities," "Government officials don't realize how badly they come across," "Government officials don't tell us what they really think," and "Most government officials can be trusted" (reverse-worded). These five items were used to assess pre-exposure (M = 4.63; SD = .89; a = .70) and Time 2 (M = 4.49; SD = .94; a = .74) distrust in the government.

Analytical Strategy

Given that distrust in the government is positively associated with belief in government conspiracies (Swami et al., 2011), pre-exposure distrust was included as a control variable in all our analyses. To test the effects of exposure to the conspiracy video on participants' belief at Time 1 and Time 2 respectively, a series of analyses of covariance (ANCOVAs)—with exposure to the conspiracy video as a between-subjects factor—were conducted. After this, a mixed-design ANCOVA—with exposure to the conspiracy video as a between-subjects factor and delay of belief assessment as a within-subjects factor—was used to examine the impact of the conspiracy video on participants' belief over a period of time (i.e., two weeks in the case of this study). Additional analyses including demographics (i.e., age, gender, income, and race), political ideology, and pre-exposure distrust as covariates were also conducted and provided essentially the same results as those presented in the Results section.

Given that only participants in the experimental condition were exposed to the video about the Moon landing conspiracy theory, our predictions of significant positive associations between message engagement, on the one hand, and Time 1 and Time 2 belief in the Moon landing conspiracy, on the other hand (H2a and H2b), should only apply to participants in the experimental condition. For this reason, our hypotheses about the relationship between message engagement and Time 1 and Time 2 beliefs in the conspiracy were first tested using participants in the experimental condition only (N = 69). Specifically, two ordinary least squares (OLS) regression models were estimated, with one predicting Time 1 belief and

the other, Time 2 belief. In addition to the independent variable, message engagement, each belief model also included demographics—that is age, gender (male = 0 and female =1), race (White = 0 and non-White = 1), and income—along with political ideology and pre-exposure distrust, as control variables.

To test our argument that message engagement should only be related to belief in the conspiracy among participants in the experimental condition, and not among participants in the control condition, we also tested the conditional effects of message engagement on Time 1 and Time 2 belief using participants from both conditions. Besides having all the predictors in the previously mentioned models that tested the relationships between message engagement and Time 1 and Time 2 beliefs, each belief model used to assess the conditional effect of message engagement also included exposure to the conspiracy theory video (yes = 1; no = 0) as a moderator and the interaction term between the exposure and engagement.

Finally, indirect (mediated) effect analyses were conducted—using PROCESS, an SPSS macro (Hayes, 2013)—to test whether exposure to the conspiracy video and engagement with the video increased Time 2 distrust in the government via affecting Time 1 belief in the conspiracy. The macro not only estimated each model (predicting Time 1 belief and Time 2 distrust) using an OLS regression but also adopted a bootstrapping approach to assess indirect effects, which resulted in more precise estimates of the effects. A significant indirect effect was indicated by a 95% bias-corrected confidence interval (BcCI) excluding zero. To be clear, although the predicted indirect effect of exposure to the conspiracy video on Time 2 distrust via Time 1 belief was tested using all participants, the hypothesized indirect effect of message engagement on Time 2 distrust via Time 1 belief should only be observed among participants in the experimental condition because only participants in the experimental condition watched the conspiracy theory video. For this reason, to test the indirect effect of message engagement on Time 2 distrust via Time 1 belief, the indirect effect was first assessed using participants in the experimental condition only (N = 69). After this, the conditional indirect effect of message engagement on Time 2 distrust via Time 1 belief with exposure to the conspiracy video as a moderator was tested using all participants. The analysis examined whether only engagement with the conspiracy video would have an indirect effect on Time 2 distrust via Time 1 belief.

Results

Effects of Exposure to the Conspiracy Video on Belief in the Moon Landing Conspiracy

Not surprisingly, pre-exposure distrust in the government had significant positive effects on Time 1 (F[1, 136] = 9.95; p < .01; partial q^2 = .07) and Time 2 (F[1, 136] = 8.91; p < .01; partial q^2 = .06) belief in the Moon landing conspiracy theory. Moreover, participants who watched the conspiracy video (Time 1, M = 3.98; SE = .17; Time 2, M = 3.70; SE = .18) were more likely than those exposed to the Atlantis video (Time 1, M = 2.44; SE = .19; Time 2, M = 2.68; SE = .18) to believe the conspiracy both immediately after the exposure (F[1, 136] = 33.64; p < .01; partial q^2 = .20) and two weeks later (F[1, 136] = 15.32; p < .01; partial q^2 = .10). These findings supported the hypothesis that, compared to no exposure, exposure to a media message promoting a conspiracy theory would increase belief in the theory immediately after the exposure (H1).

As for the effect of exposure to the conspiracy video on participants' belief over time, the analysis found no significant main effect of the delay of belief assessment, which suggests that the strength of participants' belief in the conspiracy did not change significantly between Time 1 (i.e., immediately after the video exposure) and Time 2 (two weeks later). However, the analysis found a significant main effect of the exposure (F[1, 136] = 26.36; p < .01; partial $\eta^2 = .16$) that was qualified by a significant interaction effect between the exposure and the delay of belief assessment (F[1, 136] = 9.90; p < .01; partial $\eta^2 = .07$). The observed interaction effect indicated that the effect of the exposure on the belief remained statistically significant two weeks after the exposure even though the size of the effect diminished as time went by (RQ1; see Figure 1). Moreover, pairwise comparisons with Bonfferoni correction showed that the mean difference in the belief between the experimental and the control conditions was statistically significant both at Time 1 (the experimental condition, M = 3.98; SE = .19; the control condition, M = 2.44, SE = .19; F[1, 136] = 33.65; p < .01) and at Time 2 (the experimental condition, M = 3.70, SE = .18; the control condition, M = 2.68; SE = .18, F[1, 136] = 15.32; p < .01).

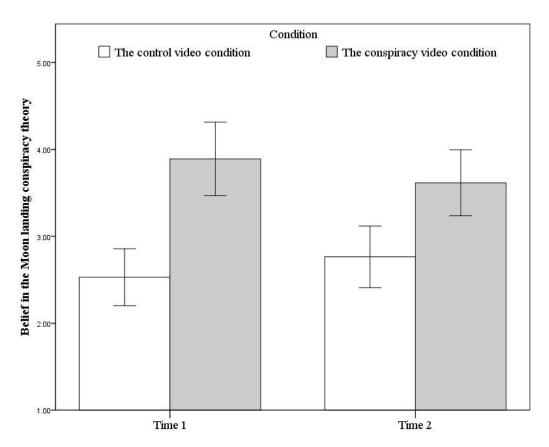


Figure 1. The interaction effect of exposure to the conspiracy video and the delay of belief assessment on belief in the Moon landing conspiracy theory.

Effects of Message Engagement on Belief in the Moon Landing Conspiracy

Consistent with our prediction, engagement with the conspiracy video was a significant positive predictor of Time 1 (b=.72; p<.01) and Time 2 (b=.60; p<.01) belief in the conspiracy among participants in the experimental condition. As for whether the observed associations between message engagement and Time 1 and Time 2 belief only existed in the experimental condition, the conditional effect analyses showed significant interaction effects between message engagement and exposure to the conspiracy video on Time 1 (b=.65; p<.01; see Column 3 of Table 1) and Time 2 belief (b=.51; p<.01; see Column 4 of Table 1). Further analyses confirmed that the significant positive associations between message engagement and Time 1 and Time 2 beliefs were only found in the experimental condition. These findings lent strong support to the hypotheses that engagement with a message promoting a conspiracy theory would be a positive predictor of belief in the theory immediately after exposure to the message (H2a) and the belief persistence (H2b).

Indirect Effects of Exposure to the Conspiracy Video and Message Engagement on Time 2 Distrust in the Government

Beginning with the indirect effect of the video exposure, regression analyses showed that both pre-exposure distrust in the government (b=.46; p<.01) and exposure to the conspiracy video (b=1.52; p<.01) had significant positive impacts on Time 1 belief in the conspiracy (see Column 1 of Table 1). Time 1 belief in the conspiracy was a significant positive predictor of Time 2 distrust in the government (b=.09; p<.01), even after controlling pre-exposure distrust (b=.76, p<.01; see Column 2 of Table 1). More importantly, indirect (mediated) effect analysis found that exposure to the conspiracy video had a significant indirect effect on Time 2 distrust via Time 1 belief (the size of the indirect effect = .14; 95% BcCI [.03, .27]). The findings were consistent with our prediction that, compared to no exposure, exposure to a media message promoting a government conspiracy theory would increase distrust in the government via inducing belief in the theory (H3).

When it comes to the indirect effect of message engagement on Time 2 distrust via Time 1 belief, the OLS regression analysis using participants in the experimental condition only showed that engagement with the conspiracy video was a significant positive predictor of Time 1 belief in the conspiracy (b=.72, p<.01). Time 1 belief was a significant positive predictor of Time 2 distrust in the government (b=.14, p<.01), even after controlling pre-exposure distrust (b=.82, p<.01). The indirect (mediated) effect estimate indicated that engagement with the video had a significant indirect effect on Time 2 distrust via Time 1 belief (the size of the indirect effect = .10; 95% BcCI [.02, .21]). In terms of whether the observed indirect impact of message engagement on Time 2 distrust via Time 1 belief was only limited to the experimental condition, the analyses using all participants found that message engagement interacted with exposure to the conspiracy video to influence Time 1 belief in the conspiracy (b=.65, p<.01; see Column 3 of Table 1). Time 1 belief was a significant positive predictor of Time 2 distrust in the government (b=.09 p<.05), even after controlling pre-exposure distrust (b=.77 p<.01; see Column 5 of Table 1). Moreover, the indirect (mediated) effect estimate indicated that the significant indirect effect of message engagement on Time 2 distrust via Time 1 belief only existed in the experimental condition. These findings supported the prediction that engagement with a media message promoting a

government conspiracy theory would increase distrust in the government via affecting belief in the theory (H4).

Table 1. The Effects of Exposure to the Moon Landing Conspiracy Theory Video and Message Engagement on Belief in the Theory and Time 2 Distrust in the Government.

	Column 1	Column 2	Column 3	Column 4	Column 5
	Belief	Distrust	Belief	Belief	Distrust
	(Time 1)	(Time 2)	(Time 1)	(Time 2)	(Time 2)
	b(SE)	b(SE)	b(SE)	b(SE)	b(SE)
Constant	-2.5(1.57)	1.1(.63)	-2.24(1.68)	-1.28(1.67)	1.62*(.72)
Age	.09(.05)	02(.02)	.08(.05)	.06(.05)	02(.02)
Gender	.13(.27)	.02(.11)	08(.26)	34(.26)	.03(.11)
Income	.07(.07)	04(.03)	.06(.06)	.10(.06)	04(.03)
Race	.28(.30)	05(.12)	.28(.28)	.25(.28)	05(.12)
Political ideology	.17(.16)	.04(.07)	.28(.16)	.30(.15)	.04(.06)
ΔR^2 (%)	4.4	5.7	4.4	5.4	5.7
Distrust in the government (Time 1)	.46**(.16)	.76**(.07)	.35* (.15)	.30*(.15)	.77**(.06)
Exposure to the conspiracy video	1.52**(.27)	09(.12)	1.43** (.26)	.91**(.25)	01(.12)
Message engagement	-	-	.10(.17)	.11(.17)	11(.07)
Message engagement × Exposure	-	-	.65**(.25)	.51*(.25)	.11(.12)
ΔR^2	20.4	52.0	29.6	18.8	52.9
Belief in the Moon landing conspiracy theory (Time 1)	-	.09**(.04)	-	-	.09*(.04)
Δ R ² (%)	-	2.2	-	-	2.0
Total Adj. R ² (%)	20.8	57.4	29.4	18.9	57.5
N	139	139	139	139	139

Note. *p < .05, ** p < .01. Table entries are unstandardized regression coefficients with standard errors in the parentheses. For exposure to the conspiracy video, yes = 1 and no = 0. For gender, male = 0 and female =1. For race, White = 1 and non-White = 0. For political ideology, very liberal = 5 and very conservative = 1.

Additional Analyses

In addition, to test the proposed hypotheses and answer our research question, we also examined whether engagement with the control video about the legend of Atlantis also increased distrust in the government via inducing belief in the legend (see Appendix for measures of belief in the legend).

The analyses found that engagement with the video increased Time 1 belief in the legend (b = .24; p < .05), but Time 1 belief in the legend did not translate into Time 2 distrust in the government, which suggested that engagement with the video about the legend of Atlantis increased belief in the legend without inducing distrust in the government.

Finally, we tested whether exposure to the Moon landing conspiracy theory video at the first stage of this study made participants in the experimental condition more likely than those in the control condition to seek additional information about the theory in between of the two stages of the study. Chisquare analyses revealed no significant differences in information seeking behavior across study conditions (for reading a book about the conspiracy, $\chi^2 = .099$, df = 1, N = 139, p > .05; reading a blog about the conspiracy, $\chi^2 = .563$, df = 1, N = 139, p > .05).

Discussion

Given that most people do not have direct information about the causes of important historical and social events, they rely on media to help them understand the truth behind these events, which raises the questions about the short- and long-term effects of exposure to media content promoting government conspiracy theories on the public. To answer these questions, a two-stage randomized online experiment was conducted to examine the short- and long-term effects of exposure to a video promoting a government conspiracy theory on participants' belief in the theory, as well as the indirect effect of such exposure on distrust in the government via belief. Moreover, the study explored the role of message engagement in explaining the effects of the exposure on the belief and distrust.

The findings of the study confirmed and extended earlier research (e.g., Butler et al., 1995; Koopman et al., 2006; Mulligan & Habel, 2012; Swami et al., 2013) in that they showed that exposure to a video about a government conspiracy theory had, not only a short-term effect, but also a long-term effect, on belief in the conspiracy. More important, the study found that exposure to the video indirectly increased distrust in the government (measured two weeks after the exposure) through inducing belief in the conspiracy, even after controlling for pre-exposure distrust. Beyond this, engagement with the conspiracy video was found to have an indirect positive effect on distrust in the government via belief in the conspiracy; the finding is consistent with the notion that video engagement may have explained the observed indirect effect of the conspiracy video on the distrust via the belief.

Like many studies, this study has both strengths and limitations. Beginning with its strengths, the use of a two-stage randomized experimental design increased our confidence that the increase in belief in the conspiracy theory occurred before the increase in distrust in the government. In other words, the

⁶ Asking participants about their belief in a conspiracy claim after showing them a message promoting the claim may have mitigated the effects of the message on belief and trust in the government (Einstein & Glick, 2015). To compensate for this possibility, we conducted a more stringent test of the effects of the conspiracy video by asking participants about their belief in the Moon landing conspiracy theory after the video viewing.

study design lent strong support to the causal chain under study by demonstrating that exposure to the conspiracy video influenced the distrust measured two weeks later through affecting participants' belief measured immediately after the exposure.

As for its limitations, this study used a convenience sample of American college students, which raised concerns about the generalizability of its findings to the American adult population as a whole and to people in other countries. Future research should consider testing the effects of media messages promoting conspiracy theories using a more representative sample of American adults or people from other countries. Given that only participants in the experimental condition were exposed to a video on a conspiracy theory, we were unable to directly test to what extent engagement with conspiracy videos helps explain the impacts of watching such videos on belief in conspiracies and distrust in the government. Future research could use messages that are about the same conspiracy theory but vary in their ability to engage the audience to directly test the mediating role of message engagement. Although government conspiracy theories are a popular topic of both fiction and nonfiction media content (Olmsted, 2009), they are not the only type of conspiracy theories promoted by media. For example, The Da Vinci Code—a fictional film—unveils the secret relationship between a painted masterpiece of Leonardo Da Vinci and a covert organization called the Illuminati. Hence, future research may explore how media content disseminating other types of conspiracies, and even entirely fictitious conspiracy theories, may influence public belief in government conspiracy theories and distrust in the government, given that people who believe one conspiracy theory also tend to believe other conspiracy theories and distrust authority (e.g., Goertzel, 1994; Swami et al., 2011). These studies can also directly test the indirect effects of exposure to media messages promoting conspiracies on other outcome variables (e.g., political engagement) via belief. Finally, the video used in this study focused mainly on the claims of a conspiracy theory and its supporting evidence, a limitation that may be addressed by future research.

Despite these limitations, the findings of this study have a number of implications. First, our findings suggest that media messages promoting conspiracy theories can induce the public to start believing the theories and that the influence of such messages on the public does not dissipate immediately. Moreover, by showing the indirect effect of message engagement on distrust in the government via belief in the conspiracy, our findings, not only indirectly corroborate the notion that message engagement is a key mechanism of narrative persuasion, but also shed light on the underlying mechanism that might explain why media messages promoting conspiracy theories influence belief in the theories and distrust in the government.

Beyond this, the finding that exposure to the conspiracy video increased distrust in the government via affecting participants' beliefs supports the argument that government conspiracies compel their believers to make negative attributions about, and distrust, the government. The fact that the exposure had an effect on the distrust measured two weeks after the exposure also suggests that media messages promoting government conspiracies may induce long-lasting cynicism toward the government.

The observations that pre-exposure distrust in the government was a strong positive predictor of belief in the Moon landing conspiracy theory and that belief in the theory (as a result of exposure to the conspiracy video) led to post-exposure distrust indicate that media content supporting government

conspiracies may have the potential to set in motion a spiral of distrust; that is, exposure to the content leads to belief in conspiracies that causes heightened distrust, and the heightened distrust, in turn, makes people more susceptible to the influence of the content, which further increases distrust.

The potential of media messages promoting government conspiracy theories to start such a spiral of distrust may have been augmented by recent developments in technologies such as digital editing and the Internet because these technologies make it easier to produce and distribute messages favoring conspiracy theories. Indeed, research has shown that frequent exposure to nontraditional media (e.g., blogs) is a positive predictor of belief in conspiracies, presumably because such media distribute more content promoting conspiracy theories than do traditional media (Stempel et al., 2007). Hence, future research may explore how proliferation of media content promoting government conspiracies (as a result of technological developments) may have contributed to the decline of trust in the government in the last decade (Jones, 2013).

Our finding of the (potentially long-lasting) indirect effect of exposure to media content promoting government conspiracies on distrust in the government is troublesome because trust in the government is considered to be the oil of democratic machinery (Hetherington, 2005; Mara, 2001). Due to the representative nature of most democratic systems, their functioning depends heavily on public trust in individual representatives and the government they run. When people distrust those who are running their government, they are less likely to follow the governmental rules or laws (Hetherington, 2005; Scholz & Lubell, 1998). Such distrust also undermines institutional legitimacy and support (Hetherington, 1998; Neustadt, 1990; Rivers & Rose, 1985), which makes it more difficult for power holders to marshal resources to solve problems. As a result, they solve fewer problems, which further increases distrust. Given the negative consequences associated with distrust in the government, our finding of the effect of media messages promoting government conspiracy theories on political distrust calls for further investigation of the political ramifications of these messages.

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Appendix:

Measures of Belief in the Legend of Atlantis and Consumption of Media Content About the Moon Landing Conspiracy Theory

Belief in the legend of Atlantis (M = 4.64; SD = 1.06; r = .63; p < .01)

To what extent do you agree or disagree with each of the following statements (strongly disagree = 1 and strongly agree = 7)?

- 1. I think that Atlantis actually existed before.
- 2. I think that Atlantis was located at the strait of Gibraltar in southern Spain.

Consumption of media content about the Moon landing conspiracy

Have you engaged each of the following activities since you participated in the first wave of the study?

- 1. I read a book about the Moon landing conspiracy (Yes: N = 6, 4.3% of the participants)
- 2. I read a blog about the Moon landing conspiracy (Yes: N = 12, 8.6%)
- 3. I tried to find more information about the Moon landing conspiracy (Yes: N = 30, 21.6%)