

## Classified or Coverup? The Effect of Redactions on Conspiracy Theory Beliefs

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### Abstract

Conspiracy theories are prevalent among the public. Governments frequently release official documents attempting to explain events that inspire these beliefs. However, these documents are often heavily redacted, a practice that lay epistemic theory suggests might be interpreted as evidence *for* a conspiracy. To investigate this possibility, we tested the effect of redactions on beliefs in a well-known conspiracy theory. Results from two preregistered experiments indicate that conspiracy beliefs were *higher* when people were exposed to seemingly redacted documents compared to when they were exposed to unredacted documents that were otherwise identical. In addition, unredacted documents consistently lowered conspiracy beliefs relative to controls while redacted documents had reduced or null effects, suggesting that lay epistemic interpretations of the redactions undermined the effect of information in the documents. Our findings, which do not vary by conspiracy predispositions, suggest policymakers should be more transparent when releasing documents to refute misinformation.

**Keywords:** Conspiracy theory, redaction, coverup, lay epistemics, correction

Conspiracy theories—the belief that covert, powerful forces are responsible for unexplained phenomena—are a widespread feature of politics, in part because they often focus on the government, especially in the U.S. (e.g., Hofstadter 2008; Uscinski et al. N.d.). These theories, which typically (though not always) lack strong evidentiary support, can have a range of pernicious consequences such as undermining trust in political institutions (e.g., Einstein and Glick 2015) and decreasing political efficacy and participation (e.g., Jolley and Douglas 2014b).

Other co-authors are or were undergraduate students at Dartmouth. We thank Adam Berinsky, Dan Cassino, Peter Knight, Greg Koger, Eric Oliver, Joanne Miller, Josh Pasek, and anonymous reviewers for valuable comments and the Dartmouth College Office of Undergraduate Research for generous funding support. Replication data and code will be made available upon publication at the *Journal of Experimental Political Science* website.

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The most prominent conspiracy theories often seek to explain unexpected events. These beliefs frequently enjoy widespread acceptance among the public and tend not to dissipate even after official investigations are conducted (Bowman and Rugg 2013; Oliver and Wood 2014). For instance, many Americans reject the conclusions of the Warren Commission about the cause of John F. Kennedy's assassination and the conclusions of the 9/11 Commission about the causes of the September 11 terrorist attacks (Bowman and Rugg 2013; Stempel et al. 2007).

Though previous research has identified several factors that may make people more likely to perceive conspiracies (e.g., Oliver and Wood 2014; Uscinski and Atkinson N.d.; Whitson and Galinsky 2008), little is known about how to reduce belief in conspiracy theories about events that are not supported by convincing evidence. Many of these efforts may be ineffective or even counterproductive (e.g., Nyhan and Reifler 2010, 2012).

In particular, while government disclosure of information may be intended to reduce misperceptions about the events that inspire conspiracy theories, lay epistemic theory (e.g., Kruglanski 1990) suggests that common bureaucratic practices may undermine the effects of these efforts among citizens (Harrison and Thomas 1997; Sunstein and Vermeule 2009). Specifically, the presence of redactions—which are often heavily used in documents released by the government, especially in recent years (e.g., Bridis and Gillum 2014; Kravets 2014; Bridis 2015)—may make readers more likely to interpret documents as *evidence* of a conspiracy or coverup and reduce or eliminate any conspiracy-reducing effect. For instance, the 9/11 commission report was intended to reduce misperceptions about the terrorist attacks, but the redaction of 28 pages pertaining to alleged ties between the Saudi government and the hijackers continues to fuel conspiracy theories (Clift 2015; Dilanian 2015).<sup>1</sup> Redactions have also been prominently featured in recent debates over conspiracy theories about the Sandy Hook massacre (Altimari 2014), the disappearance of flight MH370 (O'Neill 2014), the crash (apparently due to a surface-to-air missile) of flight MH17 (Associated Press 2015), and the Kennedy assassination (Shenon 2015).

We take a novel approach to the topic of conspiracy beliefs. To our knowledge, this study is the first to test how people react to corrective information about a conspiracy theory depending on the format in which it is provided<sup>2</sup> and to analyze how those reactions vary depending on people's predispositions toward conspiracy theories. It is also the first to evaluate the effect of redactions on belief in conspiracy theories, which we test using a new design in which we vary whether or not black boxes are inserted between words and sentences in a series of documents. These

<sup>1</sup>Of course, governments may sometimes use redactions to prevent disclosure of damaging information in cases like this (e.g., Serwer 2014). However, we focus below on cases in which there is no credible evidence of misconduct.

<sup>2</sup>Previous experimental studies have, for instance, tested corrective information about conspiracy theories (e.g., Jolley and Douglas 2014a; Nyhan et al. 2013; Swami et al. 2013) or the mindset with which people consider them (e.g., Banas and Miller 2013; Sullivan et al. 2010; Whitson and Galinsky 2008).

boxes appeared to be genuine redactions but did not actually obscure any text, allowing us to hold the information given to respondents constant.

We test two hypotheses. First, we predicted that individuals given seemingly redacted documents would be more likely to believe in a conspiracy theory than those given otherwise identical documents in which the redactions are omitted. As described below, we expect that respondents will infer from the redactions that the government must have something to hide and will therefore be more willing to question the official account and to endorse a conspiracy theory instead. We also predicted that the difference in conspiracy beliefs between the redacted and unredacted conditions would be greater among individuals with high conspiracy predispositions than those with low predispositions. Finally, we estimated how exposure to redacted or unredacted documents changed beliefs relative to controls—a research question of interest.<sup>3</sup>

Consistent with our first hypothesis, participants in an initial study and a replication who read seemingly redacted documents were more likely to believe in a conspiracy than those who read otherwise identical unredacted documents. We did not find support for our second hypothesis—the effects of exposure to redactions did not differ by predispositions toward conspiracy belief in either study. Finally, participants who read unredacted documents had significantly lower conspiracy theory beliefs than controls, but this effect was diminished if redactions were included. The presence of redactions thus appears to undermine the information effect observed in the unredacted condition, preventing evidence in the documents from reducing conspiracy beliefs as effectively. As we show below, this result does not appear to be attributable to a lack of respondent attention or engagement or the absence of a specific rationale for the redactions.

## THEORY

We proposed two hypotheses that were preregistered before data from our first study had been fully collected or analyzed.<sup>4</sup> Our first hypothesis predicted that participants assigned to read redacted documents would believe in conspiracy theories more than those assigned to read otherwise identical unredacted documents (H1).<sup>5</sup> It has been proposed that selective governmental disclosures such as redacted documents may be construed as “deliberate attempts to suppress information and mislead the public” (Harrison and Thomas 1997, 120, 123). A plausible mechanism for this

<sup>3</sup>As we discuss below, the stimulus in the redaction condition differs from controls in *two* respects—the information in the documents *and* the presence of redactions. The comparison between these conditions thus measures the *joint* effect of *both* factors.

<sup>4</sup>The preregistration for Study 1 is available at <http://egap.org/registration/668>.

<sup>5</sup>We focused on direct exposure to redactions rather than media accounts so that we could estimate the effects of redactions without having to also account for differences in how people interpret news stories. As we discuss in the conclusion, however, the effects of coverage of redactions is an important topic for future research.

response comes from previous research on lay epistemics, which suggests that people try to explain what they observe by generating and evaluating subjective “if-then” hypotheses about the causes of events (Kruglanski 1989, 1990; Kruglanski et al. 2009). Members of the public who observe a redacted document may thus make the inference “If a document is redacted, then the government must have something to hide,” which would cause them to attribute redactions to the presence of a coverup or conspiracy. Conspiracy perceptions should thus be higher in the redacted documents condition than in the unredacted condition even if the information in the documents is otherwise identical.

We also expected that participants with high predispositions toward conspiracy belief would be especially likely to interpret redactions as evidence of a potential government coverup or secret plot (Oliver and Wood 2014; see also, e.g., Goertzel 1994 and Swami et al. 2011). Redactions are especially consistent with the epistemology of conspiracy theories—which often attribute observed behavior to hidden patterns of wrongdoing—and are thus likely to be perceived as suspicious by these individuals (e.g., Barkun 2013). Our second hypothesis therefore predicted a greater difference in conspiracy beliefs between the redacted and unredacted document conditions among respondents with high conspiracy predispositions than among those with low conspiracy predispositions (H2).

However, we did not propose a hypothesis about the effect of exposure to redacted or unredacted government documents relative to the control group. The evidence in the unredacted documents might either reduce misperceptions or increase them relative to controls—previous research has found differing effects of corrective information exposure (see, e.g., Nyhan and Reifler 2010, 2012; Nyhan et al. 2013). The situation is even more uncertain for respondents in the redacted documents condition, who differ in two ways from controls—they see the evidence presented in the documents (which is identical to the unredacted condition) but also see redactions that might seem to suggest the presence of a coverup or conspiracy. The comparison between the redacted condition and controls thus does not identify the causal effect of the redactions alone (the focus of our first hypothesis) but instead the *joint* effect of exposure to corrective information *and* redactions. As a result, the effect of exposure to the documents relative to controls was instead designated as a research question of interest.

Finally, it is important to clarify how these hypotheses are tested. The most appropriate test of the redaction effect holds respondent information constant. We isolate this effect by comparing conspiracy beliefs among respondents given the same information in the redacted and unredacted conditions. Likewise, we isolate the effect of information by comparing conspiracy beliefs between the unredacted documents condition and controls. Third, we estimate the net effect of redacted documents relative to controls. However, we emphasize that the comparison between the redacted and control conditions estimates the *joint* effect of *two* treatments: the information in the documents *and* the redactions. As we show, the response generated by redactions can reduce or eliminate the conspiracy-reducing effect of information.

## STUDY 1

### Subject Matter

We examine beliefs about the crash of TWA Flight 800, which exploded soon after takeoff from Kennedy International Airport on July 17, 1996, killing all 230 people on board. While official accounts concluded that the accident resulted from the ignition of a flammable fuel/air mixture in the fuel tank (National Transportation Safety Board 2000), conspiracy theorists claim it was the result of an accidental U.S. Navy missile strike that is being covered up (e.g., Purdy 1997). This claim, which grew out of testimony by eyewitnesses who claimed to have seen streaks of light before the crash, has fueled a persistent conspiracy narrative that was featured in a recent documentary (Genzlinger 2013). As with many such beliefs, these theories seek to explain a shocking or unexpected event as a result of secret actions based on seeming inconsistencies between the official explanation and various details and eyewitness accounts.

We chose to study beliefs about Flight 800 for several reasons. First, conspiracy theories about its explosion are generally non-partisan. As a result, treatment effects are less likely to differ between political groups than other prominent conspiracy theories (see, e.g., Oliver and Wood 2014). In addition, we wanted a topic that is old enough for a settled conspiracy theory to be established (unlike the disappearance of Malaysia Airlines Flight 370) without being antiquated (such as the J.F.K. assassination). Third, Flight 800 conspiracies are widely known and seemingly plausible (e.g., Bowman and Rugg 2013) but not so famous that respondents have relatively fixed beliefs (as they might on, say, Kennedy). Finally, the topic was relevant to Flight 370 conspiracy theories that were circulating when our data was collected (e.g., Frizell 2014; Sanchez 2014; The Week 2014).

### Participants, Design, and Procedure

Participants from Amazon Mechanical Turk, a crowdsourcing website, completed the study on the Qualtrics online survey platform from April 30–May 7, 2014.<sup>6</sup> Of the 2,524 participants (the maximum allowed by the study budget), 48% were male; 80% were white; the median age group was 30–39; and half had at least a bachelor's degree. Politically, 41% identified as Democrats, 18% as Republicans, and 42% as independents or something else. (See Table A1 in the appendix for more information on respondent demographics and Table A5 for further details on the procedures used in both studies.)

After providing informed consent, participants completed a series of demographic and attitudinal questions, including evaluating two statements that have been shown

<sup>6</sup>While Mechanical Turk participants are not representative of the U.S. population, they are more diverse in many respects than undergraduate samples and have been shown to provide valid experimental results in a number of disciplines (e.g., Horton et al. 2011; Buhrmester et al. 2011; Berinsky et al. 2012).

to correlate with conspiracy beliefs (Oliver and Wood 2014): “Much of what happens in the world today is decided by a small and secretive group of individuals” and “Politics is ultimately a struggle between good and evil” (six-point scale: strongly disagree=1, strongly agree=6). Participants with an average answer above three were categorized as having high conspiracy predispositions in a median split; others were categorized as having low predispositions.<sup>7</sup> After finishing these questions, participants completed a word search task to clear working memory.

All participants were then instructed to read a paragraph describing both the official story of the TWA Flight 800 explosion and the conspiracy theory in a balanced manner, which is a common practice in news coverage of factual disputes (e.g., Cunningham 2003; Fritz et al. 2004). The article was accompanied by a picture of the reconstructed plane to make the experiment more vivid (see appendix for text and image).

Both treatment groups were then asked to read three government documents that provided evidence supporting the official account of the crash:

- A transcript of radio correspondence at the time of the crash (Tauss N.d.);
- A summary of radar evidence from the official report (National Transportation Safety Board 2000);
- The report’s conclusion that the crash was the result of an explosion in the fuel tank (National Transportation Safety Board 2000).

The documents given to the two redacted and unredacted treatment groups included the same visible text, but the redacted documents were manipulated by adding black boxes over blank space, creating the appearance that information was being withheld (see appendix). Controls were instead asked to read three recipes, a realistic real world task (reading the news and then a cookbook) which ensured that respondents in all conditions were exposed to documents of approximately equal length and density before the outcome measures.

After the experimental manipulation, we asked respondents to evaluate the likelihood of a series of statements about the causes of the incident and the validity of the government investigation on a six-point scale:

- A mechanical failure caused the explosion of TWA Flight 800.
- The U.S. government was involved in the explosion of TWA Flight 800.
- TWA Flight 800 was shot down by a missile fired by the U.S. military.
- The government thoroughly investigated the crash of Flight 800 and determined its true cause.

<sup>7</sup>Results are identical if we instead use a continuous measure of average predispositions on these questions, which was the preregistered measure; we present a dichotomous variable for expositional clarity (results available upon request).

- The government is covering up the true cause of the explosion of TWA Flight 800 from the public.

The direction of these items, which serve as our dependent variables and were based in part on past polling (Bowman and Rugg 2013), varied between the official explanation of the explosion and conspiracy theories about its causes. Answers were coded so that higher values represented greater conspiracy belief. We also created a composite belief measure using the mean response after recoding.<sup>8</sup>

## Results

### *Redaction effects*

To assess the results of the experiment, we first compared the average conspiracy belief measure between redacted and unredacted conditions. As noted above, this comparison holds the information provided to respondents constant and is therefore the clearest test of the effect of redactions on conspiracy beliefs. Confirming our hypothesis, respondents exposed to redacted documents (mean=2.52, 95% CI: 2.43–2.61) reported stronger conspiracy beliefs than those who saw unredacted documents (mean=2.32, 95% CI: 2.24–2.41;  $t = 3.16$ ,  $p < 0.01$ )—an increase of 0.15 standard deviations on the average belief measure.<sup>9</sup> We also estimated the effect of exposure to corrective information by comparing respondents who saw unredacted documents with the control group. Results indicated that providing corrective information in unredacted form decreased average conspiracy beliefs relative to controls (mean=2.60, 95% CI: 2.51–2.68;  $t = -4.47$ ,  $p < 0.01$ ). However, the joint effect of the redactions (which led to *higher* conspiracy beliefs than among people who saw otherwise identical unredacted documents) and the information in the documents (which led to *lower* levels of belief among people who saw unredacted documents versus controls) was null—redacted documents did not have a significant effect versus controls ( $t = -1.22$ ,  $p < 0.23$ ), suggesting that redactions offset or undermined the effects of the corrective information. (We discuss our interpretation of this effect below.)

Table 1 evaluates these findings more systematically by providing regression results for each of the dependent variables and the composite belief measure. The coefficient estimates for the redacted and unredacted document conditions represent effects relative to the control group, which is the omitted category in the

<sup>8</sup>A sixth outcome measure asked about the “ignition of flammable fuel/air vapors in the fuel tank,” which is part of the official account. However, conspiracy beliefs among controls for this item were much higher than other outcome measures, suggesting that respondents did not appear to recognize the connection to the “electrical malfunction” described in the introductory article. Due to this confusion, we omit the item (a deviation from our preregistration), though our estimates of the effect of redactions versus unredacted documents are identical if it is included (available upon request).

<sup>9</sup>As described above, each outcome measure was recorded on a 1–6 scale with higher values indicating greater conspiracy beliefs. These responses were then averaged. Overall, the mean was 2.48 with a standard deviation of 1.26.

Table 1  
Redaction Effects on TWA Flight 800 Conspiracy Beliefs

	Mech. failure	Govt. involved	Shot down	Thorough investigation	Govt. coverup	Average beliefs
Redacted documents	0.00 (0.07)	-0.12* (0.07)	-0.17† (0.07)	0.00 (0.07)	-0.08 (0.08)	-0.08 (0.06)
Unredacted documents	-0.16† (0.07)	-0.38‡ (0.07)	-0.40‡ (0.07)	-0.13* (0.07)	-0.35‡ (0.08)	-0.27‡ (0.06)
Control mean	2.51‡ (0.05)	2.65‡ (0.05)	2.50‡ (0.05)	2.57‡ (0.05)	2.79‡ (0.05)	2.60‡ (0.04)
<i>Redaction effect (H1):</i>						
Redacted – unredacted	0.16† (0.07)	0.26‡ (0.07)	0.23‡ (0.07)	0.13* (0.07)	0.27‡ (0.08)	0.19‡ (0.06)
N	2521	2521	2519	2511	2509	2490

\* $p < 0.10$ , † $p < 0.05$ , ‡ $p < 0.01$ . OLS estimates with robust standard errors.

regression. The direct effect of the redaction among respondents exposed to the government documents is computed as the difference between the redacted and unredacted coefficient estimates and presented separately in the table. As predicted, participants receiving redacted documents reported significantly higher levels of conspiracy beliefs than those receiving unredacted documents for all dependent variables ( $p < 0.05$  except for beliefs that the government investigation determined the true cause of the crash, which was  $p < 0.052$ ). In addition, the redacted treatment only reduced conspiracy beliefs relative to the control condition for one dependent variable at the  $p < 0.05$  level (belief that TWA Flight 800 was shot down by missiles). In contrast, almost all dependent variables recorded significant differences between the unredacted and control treatments at the  $p < 0.05$  level except for beliefs that the government investigation determined the true cause of the crash ( $p < 0.06$ ). Although the conditions displayed identical text, reading the redacted documents had little to no effect versus controls, whereas reading the unredacted documents decreased conspiracy belief significantly. Again, redactions appear to have offset or undermined the conspiracy-reducing effects of the information in the documents that are observed when we compare the unredacted condition with controls directly.<sup>10</sup>

To illustrate the magnitude of these effects using a more intuitive outcome measure, Figure 1 presents differences in a binary indicator of conspiracy belief between conditions. We identify as conspiracy adherents those respondents who were above the midpoint of our six-point scale of average conspiracy beliefs, indicating that on average they thought that the claims that the government was involved in the crash, the flight was shot down by a missile, and the government is covering up the true cause of the crash were more likely than

<sup>10</sup>These results and those in the appendix are unchanged if we control for the respondent demographic characteristics described above (available upon request).



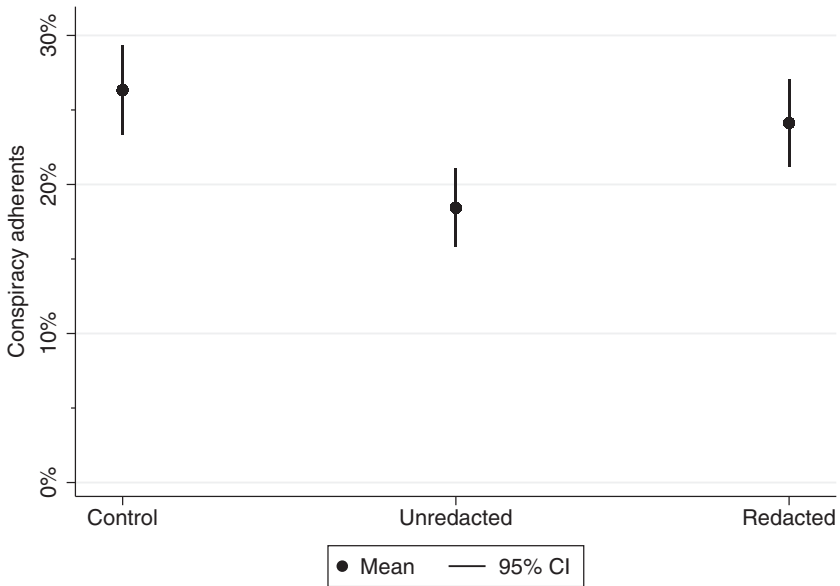


Figure 1

### TWA Flight 800 Conspiracy Adherence by Condition

unlikely and were similarly doubtful about the official explanation. We find that the proportion of conspiracy adherents was six percentage points higher in the redaction condition (24%, 95% CI: 21–27%) than the unredacted condition (18%, 95% CI: 16–21%)—a relative increase in prevalence of 31% ( $p < 0.01$ ). Conspiracy adherence was significantly less common among respondents in the unredacted condition than the control group (26%, 95% CI: 23–29%;  $p < 0.01$ ), but the redacted condition was again not significantly different from controls. These results suggest that the presence of redactions has meaningful effects on the prevalence of conspiracy beliefs and is not limited to small effects on levels of disbelief among skeptics.

The null effect of the redacted condition relative to controls does not appear to be the result of respondents dismissing or ignoring the stimulus.<sup>11</sup> As we demonstrate in Table A2 in the appendix, respondents spent almost exactly as long reading the redacted documents ( $m = 285$  seconds) as the unredacted documents ( $m = 287$  seconds;  $t = -0.23$ ,  $p < 0.82$ ) and the average response times for the outcome variables were almost identical ( $m = 7.47$  seconds for redacted versus 7.36 seconds for unredacted,  $t = 0.56$ ,  $p < 0.58$ ).<sup>12</sup> In addition, respondents in the redacted condition were *more* likely to mention the content of the study in a general open text

<sup>11</sup>The analysis in this paragraph was conducted in response to comments after the study was completed; it was not preregistered.

<sup>12</sup>Due to extreme outliers (a few respondents who left surveys open for very long periods), response times were trimmed to the 99th percentile of the distribution by question.

Table 2  
Redaction Effects on Conspiracy Belief by Respondent Predispositions

	Mech. failure	Govt. involved	Shot down	Thorough investigation	Govt. coverup	Average beliefs
Redacted documents	0.07 (0.10)	-0.09 (0.09)	-0.14 (0.09)	-0.06 (0.09)	-0.14 (0.10)	-0.07 (0.08)
Unredacted documents	-0.15* (0.09)	-0.44‡ (0.08)	-0.45‡ (0.08)	-0.31‡ (0.09)	-0.44‡ (0.09)	-0.35‡ (0.07)
High conspiracy predisp.	0.44‡ (0.10)	0.84‡ (0.10)	0.81‡ (0.10)	0.44‡ (0.10)	0.85‡ (0.11)	0.67‡ (0.08)
Redacted × high consp.	-0.14 (0.14)	-0.06 (0.14)	-0.04 (0.14)	0.14 (0.14)	0.16 (0.15)	0.01 (0.12)
Unredacted × high consp.	-0.01 (0.14)	0.11 (0.13)	0.11 (0.13)	0.37‡ (0.13)	0.19 (0.14)	0.15 (0.12)
Control mean	2.29‡ (0.07)	2.24‡ (0.06)	2.10‡ (0.06)	2.35‡ (0.07)	2.37‡ (0.07)	2.27‡ (0.06)
<i>Difference in redaction effects (H2):</i>						
Redacted × high consp. – unredacted × high consp.	-0.13 (0.14)	-0.16 (0.13)	-0.14 (0.13)	-0.23* (0.13)	-0.03 (0.14)	-0.15 (0.12)
N	2517	2517 or	2515	2508	2508	2487
N		undermined				

\* $p < 0.10$ , † $p < 0.05$ , ‡ $p < 0.01$ . OLS estimates with robust standard errors.

question asking if they had any comments on the survey than those in the unredacted condition—3.2% of those in the redacted condition included the words “TWA,” “800,” “plane,” “crash,” or “flight” compared with only 1.4% in the unredacted condition ( $t = 2.48$ ,  $p < 0.05$ ). The evidence we observe is thus inconsistent with the interpretation that redacted documents had no effect on conspiracy beliefs relative to controls due to a lack of respondent attention or engagement. The effects of the redactions seem instead to have offset or undermined the reduction in conspiracy beliefs observed in the unredacted condition. (This issue is discussed further in the conclusion.)

### *Differences by conspiracy predispositions*

Table 2 presents OLS results for the redacted and unredacted conditions and their interaction with the high conspiracy predisposition indicator for each dependent variable.<sup>13</sup> Again, the coefficients for the redacted and unredacted conditions and their associated interaction terms are estimated relative to controls; the key term for testing the second hypothesis is the auxiliary quantity reported below the main coefficient estimates, which represents the difference in the redaction effect (relative

<sup>13</sup>As noted above, results are identical (and available upon request) if we instead use a continuous measure of average conspiracy predispositions, which was the preregistered specification; we present a dichotomous variable here for expositional clarity.

to the unredacted condition) between the low and high conspiracy predisposition groups.<sup>14</sup>

Contrary to our hypothesis, the redaction effect did not consistently differ between groups (except for one marginally significant effect in the opposite direction from expectations). Instead, we found that individuals who are predisposed to believe conspiracy theories were more likely to believe in a Flight 800 conspiracy regardless of the available information (the difference between redacted and unredacted was not significant), whereas respondents who lacked these predispositions had higher conspiracy beliefs in the redacted condition than in the unredacted condition ( $p < 0.01$  for average beliefs).

## STUDY 2

One possible concern about Study 1 is that no reason was provided for the presence of redactions, which might make respondents more suspicious and inclined to believe conspiracy theories. We therefore conducted a second study to verify that our findings were robust to the inclusion of a substantively plausible rationale for withholding information (protecting aviation safety and national security). As we show in the appendix, which describes the design and results in more detail, conspiracy beliefs were again higher in the redacted than in the unredacted condition despite the inclusion of a realistic rationale, though in this case both treatments reduced conspiracy beliefs relative to controls.<sup>15</sup>

## DISCUSSION

Confirming our first hypothesis, people who read redacted documents about the TWA Flight 800 accident were more likely to believe conspiracy theories than those who read otherwise identical unredacted documents in two studies. In addition, while participants who read unredacted documents were significantly less likely to believe in the conspiracy theory than controls, redacted documents (which represent the joint effect of redactions and information) reduced or eliminated the effect of exposure to the information in the documents relative to controls—a result that does not seem to be attributable to a lack of respondent attention or engagement. These findings confirm the expectation from lay epistemic theory that redactions are often seen as evidence that government has something to hide and can thereby contribute to conspiracy beliefs. However, the effect of redactions on conspiracy

<sup>14</sup>The quantity reported (the difference between the redacted  $\times$  high predisposition and unredacted  $\times$  high predisposition interaction terms) is in this sense a difference-in-differences estimate. See the appendix for a derivation of how this quantity is the estimand of interest for testing H2.

<sup>15</sup>The preregistration for Study 2, which is virtually identical to the preregistration for Study 1, is available at <http://egap.org/registration/1260>.

beliefs did not differ based on people's conspiracy predispositions, contradicting our second hypothesis.

Our study suggests several directions for future research. First, our design used artificial redactions that did not withhold any information. We believe this approach best isolates the effect of redactions alone and is likely to be a lower bound of real world effects. However, future research should evaluate the external validity of our findings by testing if the results strengthen (as we expect) when redactions obscure text that is present in an unredacted condition, which is the situation observed in practice. Second, scholars might wish to examine the effect of redactions in media accounts;<sup>16</sup> to test alternate conspiracy belief and/or predisposition measures (e.g., Darwin et al. 2011; Swami et al. 2011; Lewandowsky et al. 2013); and to consider other possible moderators such as trust in government. Third, researchers should investigate whether these effects vary depending on the type of document or the frequency or position of redactions within it. Fourth, scholars might consider varying the rationale provided for redactions to test if those that seem less justified or proportional to the volume or importance of the information withheld are especially likely to increase conspiracy beliefs. Finally, though establishing the mechanism for a causal effect is very difficult (Bullock et al. 2010), it would be worthwhile to further investigate the process by which people react to redactions, which could provide additional insight into why their effect relative to controls was reduced or eliminated.

Despite these limitations, our study makes a valuable contribution to both the study of conspiracy theories and the practice of government. Even the appearance of having something to hide can seemingly cause suspicions about government intentions and doubts in official accounts to grow. These findings suggest that governments should seek greater transparency when releasing documents to dispel conspiracy beliefs.

## SUPPLEMENTARY MATERIALS

The appendix is available online as supplementary material at <http://dx.doi.org/10.1017/XPS.2015.21>

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