

# Echoes of a Conspiracy: Birthers, Truthers, and the Cultivation of Extremism

Benjamin R. Warner & Ryan Neville-Shepard

*A significant number of Americans express sympathies for conspiracy theories about Barack Obama's birth and George Bush's role in the 9/11 attacks. This study sought to test the role of ideological media in perpetuating these beliefs. Specifically, experiments were conducted to determine if ideologically homogeneous media echo-chambers could cultivate belief in conspiracy theories and whether debunking information would reverse this belief. Results found that media echo-chambers increased belief in conspiracy theories though debunking information reversed or minimized this effect. Results confirm the role of ideological media in spreading extremist attitudes but also demonstrate the value of debunking efforts.*

*Keywords:* Conspiracy Theory; Fragmentation; Political Extremism; Selective Exposure

As many as 36% of Americans in 2006 believed that the Bush administration either assisted in the terrorist attacks of September 11th or knowingly allowed them to occur to create the pretense for war in the Middle East (Hargrove, 2006). A 2011 poll taken after Obama released his long-form birth certificate found that 25% of Americans still held serious doubts about his citizenship (Condon, 2011). These beliefs persist despite repeated attempts by the mainstream media to correct the record (e.g., Henderson, 2011; McGreal, 2011), and in the face of compelling refutations (Dunbar & Reagan, 2006; Jackson & Kiely, 2011). While conspiracy theories are hardly new and may never have been fully consigned to the “lunatic fringe” (e.g., Zarefsky, 1984), these conspiracy theories exist in a digital media environment that facilitates easy fact checking and information flow.

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Perhaps it is the nature of information dissemination in the digital age that allows conspiracies to continue to thrive. Bennett and Iyengar (2008) argued that the proliferation of media outlets would usher in a new era of selective exposure in which individuals would consume media that was largely consistent with their pre-existing attitudes. Sunstein (2007) has warned that this phenomenon may “polarize in a way that can breed extremism and even hatred and violence” because people will largely hear “echoes of their own voices” and “wall themselves off from others” (p. 44). While the tendency to select attitudinally consistent media does not also require people to wall themselves off from different perspectives (Holbert, Garrett, & Gleason, 2010), those who do choose only one-sided messages are more likely to experience polarization (Lee & Cappella, 2001). While digital media provide ample opportunity to check and debunk conspiracy theories, not all committed partisans will be motivated to do so.

This study presents two experiments that test the effects of media echo-chambers, or media environments in which multiple sources echo the same perspective, on belief in conspiracy theory. In addition, the experiments test the value of debunking messages on the effect of ideological media consumption. Finally, this study seeks to determine whether media influence is dictated by partisan attitudes. In what follows, we consider the existing literature on conspiracy theories, present the theoretical basis for an examination of partisan selective exposure, and present the findings of two experiments: one testing media influence on belief in the Obama birth conspiracy and one testing the influence of media on belief in the September 11th truth movement.

### **The Prevalence and Power of Conspiracy Theories in America**

Conspiracy theory in the tradition of Richard Hofstadter’s notion of paranoid style is a “fear of a nonexistent conspiracy” (Pipes, 1997, p. 21). Such theories are often “totalizing,” as Nimmo and Combs (1990) argued, because they are “a form of popular history based in a fantasy of hidden determination: that events are caused by the manipulations of hidden and powerful elites who control or influence the course of history to their own selfish advantage” (p. 204). Theories of this kind tend to “suffer from a lack of substantive proof, dizzying leaps of logic, and oversimplification of the political and economic structures of power” (Fenster, 1999, p. xvi). That does not mean that conspiracy theorists shun evidence. Noting the nature of their debunking, Hofstadter (1996) wrote, “The very fantastic character of [the conspiracy’s] conclusions leads to heroic strivings for ‘evidence’ to prove that the unbelievable is the only thing that can be believed” (p. 36).

Most scholars agree that conspiracy theories emerge from a group’s feelings of social and political marginalization rather than a psychological imbalance that makes them “crazy.” Goldzwig (2002), for instance, suggested that such narratives are “a sign of political disenfranchisement and ennui” (p. 398). According to Hofstadter (1996), belief in conspiracy theory emerges as a result of a “confrontation of opposed interests which are totally irreconcilable, and thus by nature not susceptible to the normal political processes of bargain and compromise” (p. 39). Groups feeling that they have no access to the political process “find their original conception of the world of power

as omnipotent, sinister, and malicious fully confirmed” (p. 39). Advocates of these narratives are not necessarily sworn to their facticity, though. Fenster (1999) argued that conspiracy theory is a “populist expression of a democratic culture, that circulates deep skepticism about the truth of the current political order throughout contemporary culture” (p. xiii). As such, conspiracy theory is often perpetuated by all kinds of groups that feel ignored by political authority (Stempel, Hargrove, & Stempel, 2007).

Conspiracy theories in contemporary American culture warrant further critical examination precisely because they hold influence beyond the lunatic fringe. Noting this phenomenon almost thirty years ago, Zarefsky (1984) argued that while the public tends to regard conspiracy narratives “as fantasy in the minds of deluded advocates, the arguments are taken seriously [and] are advanced by moderates as well as extremists” (p. 63). Many other scholars have come to the same conclusion. Young, Launer, and Austin (1990) found, “In recent years, the locus of such rhetoric has moved from the extremist fringe and closer to the mainstream, becoming a staple of American political discourse” (p. 90). As the social acceptance of conspiracy rhetoric has been on the rise, conspiracy theories have been proliferated by various media outlets (Benoit & Nill, 1998; Birchall, 2001; Farhi, 2010; Kelley-Romano, 2008).

As a part of this trend, the United States has seen the rise of two widely publicized and commonly embraced political conspiracy theories since the turn of the 21st century. Since 2002, the 9/11 Truth Movement has spread versions of a conspiracy theory about the events of September 11, 2001, ultimately suggesting that the Bush administration was responsible for the deaths of nearly 3,000 Americans. Although variations of the conspiracy theory exist, many believers agree on basic talking points (Kay, 2011, pp. 6–7). According to the counter-narrative, the terrorist attacks were staged by Dick Cheney, Donald Rumsfeld, and Paul Wolfowitz as an excuse to invade the Middle East and seize foreign oil. Osama bin Laden was either a puppet of the U.S. government or had nothing to do with the attacks at all. The terrorists blamed for the attacks could not have flown the jetliners into the World Trade Center and the Pentagon, so the argument goes, because they were reportedly terrible pilots. In fact, many 9/11 “truthers” (as they are often called) argue that the terrorists were found alive just months later. The Pentagon was hit by a cruise missile, not an airplane. NORAD allowed the planes to hit their targets on 9/11, despite having advanced warning of the attack. Liquid metal found at the World Trade Center, in addition to puffs of air and dust seen in video footage, were clear proof that the twin towers were demolished by pre-arranged bombs rather than the flights alone. All of the above propositions are key tenets of the truther conspiracy.

Despite the extreme claims made by truthers, the conspiracy resonated with many Americans. According to a poll conducted in June 2006 by the Scripps Howard News Service, 36% of Americans believed that government officials “either assisted in the 9/11 attacks or took no action to stop the attacks because they wanted the United States to go to war in the Middle East” (Hargrove, 2006). Regarding the more extreme version of the narrative, 16% believed that secret explosives brought down the towers, and 12% believed that a cruise missile was fired into the Pentagon (Hargrove, 2006; Harper, 2006; Powell, 2006). Even after Bush left office, an Angus Reid Public Opinion poll from March 2010 discovered around 15% of Americans believed in some version

of the conspiracy theory (“Most Americans,” 2010). Many political commentators have been astonished by public support for the truther conspiracy. Harper (2006) concluded, “Not since the heyday of JFK assassination theories . . . have so many Americans believed their government is lying to them” (p. A15). Similarly, *Time* columnist Lev Grossman (2006) summarized, “[this] adds up to a lot of people. This is not a fringe phenomenon. It is a mainstream political reality.”

In addition to the 9/11 conspiracy theory, many Americans have come to believe that Barack Obama’s birth certificate has been forged, he was born outside the United States, and that he is therefore ineligible to be president. Although rumors spread during Obama’s earlier campaigns, the “birther” conspiracy theory formally began when supporters of Hillary Clinton circulated an anonymous email in the final months of the 2008 Democratic primary suggesting that Obama was born in Kenya. By June 2008, other versions of the narrative suggested that Obama was born in the United States but ineligible for automatic citizenship due to strict immigration laws at the time, or that he accidentally forfeited his U.S. citizenship when his family moved to Indonesia while he was a young boy (Smith & Tau, 2011). Although the Obama campaign publically released an electronic copy of his short-form birth certificate in 2008, his conservative critics multiplied. According to a July 2009 poll conducted by Research 2000, more than 20% of Americans were either unsure where Obama was born or believed he was born outside the United States. That number was much higher for Republicans, as 58% of individuals polled expressed doubt that the president was a natural born citizen (Memoli, 2009). Despite Obama releasing his long-form birth certificate in 2011, the number of believers in the conspiracy theory actually grew. According to a CBS News/*New York Times* poll from April 2011, 25% of Americans thought that Obama was born outside the United States, and 18% claimed that they did not know where he was born (Condon, 2011). Moreover, 45% of Republicans from the same poll reported that Obama was born in another country (Condon, 2011).

The significant number of Americans who are sympathetic to one or both of these conspiracies is staggering. While the literature suggests that belief in conspiracy theory emerges from political marginalization that fosters a paranoid worldview, there is clearly a segment of Americans outside of the lunatic fringe of conspiracy activists who are nevertheless sympathetic to these conspiracies. This study seeks to test some of the media phenomena that may cultivate this sympathy among a more mainstream population. Specifically, this study extends previous research testing the polarizing influence of the increasingly ideological and fragmented media.

### **Selective Exposure and Belief in Conspiracy Theory**

If media do influence belief in conspiracy theory, it is likely that either selective exposure or partisan filtering explain why conspiracy theories persist in the face of debunking information. Either believers are not exposed to evidence that refutes the conspiracy or they dismiss contrary information and only accept messages that reinforce their belief. In the following section, selective exposure and partisan filtering will be considered as possible explanations for the broad persistence of conspiracy theories.

The proliferation of media outlets has yielded a great deal of choice to individuals about where to receive their news or whether to receive news at all (Prior, 2007). This high choice environment allows users to select attitude-affirming media and avoid or discount dissenting perspectives (Sunstein, 2007). This tendency conforms to the selective exposure thesis: people will seek content that is consistent with their pre-existing positions (Festinger, 1957; Frey, 1986). Selective exposure was initially presented as evidence of minimal media effects: If people avoid dissonant perspectives then media have little opportunity to persuade. Because the digital media environment allows selective exposure with little effort, scholars have begun debating whether we are in a new era of minimal effects (Bennett & Iyengar, 2008; Holbert et al., 2010). However, media fragmentation is not universally viewed as a minimal effects phenomenon. If individuals use digital affordances to avoid political disagreement, they may be less tolerant of difference, less able to identify with people of different perspectives, and ultimately more extremist (Sunstein, 2007). Under these circumstances, the media may act as a catalyst for political extremism. Perhaps people continue to believe in conspiracy theories because the media they encounter repeatedly reinforce conspiratorial attitudes.

The extent to which polarizing selective exposure actually happens is unclear. While people do tend to personalize news content to suit their preferences (Iyengar & Hahn, 2009; Tewksbury, 2005) and seek information that reinforces existing attitudes (Holbert et al., 2010), a majority of Americans do not necessarily avoid alternative perspectives (Brundidge, 2010; Garrett, 2009; Holbert et al., 2010; Kaye & Johnson, 2006). Thus, it does not appear to be the case that all citizens will wall themselves off from difference by creating ideologically homogenous media cocoons. Of course, a majority of Americans also do not believe in conspiracy theories. It may be the case that conspiracy believers are among the minority of Americans that live in echo-chambers and are influenced by heavily one-sided messages (e.g., Lee & Cappella, 2001).

Conversely, it may be the case that conspiracy theorists, like most Americans, do not avoid debunking information but reject it nonetheless. This may be due to a partisan filtering process that has been observed in broader political communication contexts. Individuals tend to filter attitude-discrepant information through a partisan lens (Baum & Groeling, 2008) and even counter-argue when exposed to information that contradicts their position (Taber & Lodge, 2006). This partisan filtering frames the evaluation of news content such that "hostile" news is evaluated as less accurate and useful than attitudinally consistent information (Coe et al., 2008). Thus, people may be exposed to diverse messages and yet continue to experience attitude reinforcement because they dismiss incongruent information. This filtering may be exacerbated by the use of ideological media. Ideological media are more extremist in tone than traditional media (Baum & Groeling, 2008; Sobieraj & Berry, 2011) and are associated with greater political extremism among users (Lin, 2009; Stroud, 2010; Warner, 2010). Furthermore, the persuasive effect of partisan media may occur regardless of an individual's political predispositions (Feldman, 2011; Warner, 2010). Thus, ideological media may induce more extreme beliefs regardless of the predispositions of the audience or the diversity of exposure.

This study sought to test whether there is a media effect on belief in conspiracy theories. Can a media echo-chamber generate belief where little or none existed beforehand? Past media effects observed in ideological media suggest there will be a direct effect (e.g., Lin, 2009; Stroud, 2010; Warner, 2010). Nevertheless, conspiracy theories require a more dramatic shift in opinion; the birther conspiracy suggests that the president of the United States is unlawfully holding the office, and the truther conspiracy accuses the president of complicity in the death of thousands of innocent Americans. If media can move the needle on these attitudes, it would provide strong support for previous findings about the significance of ideological media. To determine if the media effect would hold in context of these conspiracies it was hypothesized:

*H: Exposure to one-sided conspiracy messages will increase belief in both the birther and truther conspiracy theories.*

If there is a media effect, it remains to be seen whether it is due to selective exposure or partisan filtering. While media echo-chambers are thought to polarize attitudes and reinforce beliefs (Jamieson & Cappella, 2008; Stroud, 2010; Sunstein 2007), most Americans are exposed to multiple perspectives (Garrett, 2009; Holbert et al., 2010; Kaye & Johnson, 2006). Individuals are thus afforded the information necessary to counter-argue attitude-discrepant information and reject positions that are inconsistent with their pre-existing beliefs. If selective exposure best explains belief in conspiracy theory, people would be expected to hold the beliefs only if they were not exposed to debunking evidence. If, however, partisan filtering best accounts for the persistence of these conspiracy theories, the presence of debunking information would not alter the media effect—people who are inclined to believe the conspiracy will be influenced by the ideological messages and people who find the conspiracy incongruent with their attitudes will accept the debunking evidence. To determine whether belief is a result of media echo-chambers (e.g., Sunstein, 2007) or partisan filtering (e.g., Coe et al., 2008; Taber & Lodge, 2006), the following research question was asked:

*RQ 1: Will exposure to a mix of conspiracy and debunking messages influence belief in conspiracy theories?*

While the tendency to counter-argue attitude-incongruent information implies that Democrats should be less influenced by the birther conspiracy messages and, conversely, Republicans should find the truther conspiracy less plausible, some research suggests that the media effect occurs regardless of the partisanship of the user (Feldman, 2011; Warner, 2010). Thus a second research question was posed:

*RQ 2: Will the media effect be moderated by political party identification?*

## **Method**

Two separate experiments were conducted, one to evaluate the effect of media on sympathy toward the 9/11 truth conspiracy and one to evaluate the influence of media on belief in the birther conspiracy. In both experiments, participants were instructed to visit a computer lab where they completed an online pretest, were



exposed to media stimulus, and immediately completed an online posttest. Data for the birther experiment was collected in the fall academic semester of 2011 after President Obama had released his long-form birth certificate. The truther experiment was conducted in the spring academic term of 2011. Osama bin Laden was killed during data collection for the truther experiment so a dummy variable was created to test for any significant bias introduced by this news. Individuals who participated in the experiment before bin Laden's death did not significantly differ in pre-test belief in the conspiracy relative to those who participated after news of his death,  $t(192) = -0.204, p = 0.838$ .

### *Participants*

Participants for this study were recruited from two major midwestern universities. Participants in the birther study ( $N=148$ ) ranged in age from 17–30 ( $M=19.32, SD=1.57$ ), were 62% ( $n=92$ ) female, and held party allegiances such that 42.6% ( $n=63$ ) were Republican, 32.4% ( $n=48$ ) Democrat, and 25% ( $n=36$ ) independent or affiliated with another party. Participants in the truther study ( $N=194$ ) ranged in age from 18–46 ( $M=20.97, SD=2.9$ ), were 50.8% female ( $n=99$ ), and held party allegiances such that 32.3% ( $n=63$ ) were Republican, 37.4% ( $n=73$ ) Democrat, and 29.7% ( $n=58$ ) independent or affiliated with another party.

### *Measures*

Belief in the 9/11 truth conspiracy was measured with six items ( $\alpha=0.904$  pretest,  $\alpha=0.908$  posttest): Bush intentionally allowed the 9/11 attacks to take place because he wanted the United States to go to war in the Middle East; The Pentagon was not struck by an airliner captured by terrorists but instead was hit by a cruise missile fired by the U.S. military; September 11th was an inside job (e.g., it was perpetrated by the U.S. government); The collapse of the twin towers in New York was aided by explosives secretly planted in the two buildings; President Bush had nothing to do with the events of September 11th, 2001, it was a terrorist attack and nothing more (Reversed); The federal government is covering up the truth about what really happened on September 11th, 2001.

Belief in the Obama birth certificate conspiracy was measured with three items ( $\alpha=0.884$  pretest,  $\alpha=0.959$  posttest): President Barack Obama was born inside the United States (Reversed); Obama's birth records were faked to cover up his Kenyan birth; Obama is not constitutionally eligible to be president because of his birth status. Items for both measures were selected based on past public polling and a review of the major tenants of the conspiracies.

### *Stimulus*

Participants were randomly assigned to one of three media conditions. In each condition participants were exposed to an article of about average magazine length, a video that lasted approximately seven minutes, and a blog conversation. The first condition (conspiracy) contained information exclusively reinforcing the tenets of the

conspiracy theory. The second condition (debunking) contained one element of the conspiracy condition as well as an element refuting the conspiracy and a blog conversation with discussion on both sides of the issue. The final condition was a control and contained no information about either conspiracy theory.

*Birthers.* The conspiracy condition in the birther experiment asked participants to watch a video posted by Alex Jones on his *Infowars* channel on *YouTube* (Jones, 2011), an article from *World Net Daily* (“Democrat: Obama’s,” 2008), and a section of comments from the *Atlasshrugs2000* blog (Geller, 2008). The video features Alex Jones discussing Obama’s long-form birth certificate with a man who is identified as a Photoshop expert. Jones hosts a controversial syndicated AM talk radio show. The conversation in the video discusses “layers” in the birth certificate file released by the White House, a common element of the current birther conspiracy. The article discusses an appearance on Michael Savage’s radio program by someone who sued Obama over the citizenship issue. The subject of the article is this man’s claim that he had a tape recording of Obama’s grandmother confirming a Kenyan birth. *World Net Daily* is a high-traffic conservative website and has been a leading outlet for the birther conspiracy. The *Atlasshrugs2000* blog is run by Pamela Geller, a prominent conservative author who has resisted the birther conspiracy but was vociferous in calling for Obama to release his certificate of live birth. The comments used in the stimulus come from a blog post she made questioning the authenticity of Obama’s birth announcement in a Hawaiian newspaper. Participants discuss various elements of the conspiracy and are unanimously supportive.

The debunking condition included the same *World Net Daily* article as the conspiracy condition but replaced the Jones video with one of Rick Sanchez on *CNN* in which he presented evidence demonstrating Obama’s citizenship and debunked many birther arguments (PoliticsNewsPolitics, 2009). The blog conversation was from the comments section of *The Wall Street Journal* and discussed an article regarding statements made by Donald Trump about Obama’s citizenship (O’Connor, 2011). The comments included people arguing both for and against the birther conspiracy. The control condition contained an article from *Newsweek* about an incident involving the pop-star Rihanna, a video of Jon Stewart debating Bill O’Reilly on O’Reilly’s *Fox News* show about the rapper Common’s White House visit, and a blog conversation from Paul Krugman’s *New York Times* blog about the European debt crisis.

*Truthers.* The conspiracy condition in the truther experiment included a clip from the movie *Zero: An Investigation Into 9/11* (Dansaraseaside, 2010), an article from *911Truth.org* (“The top 40,” 2006), and a blog conversation from *9/11Blogger.com* (“Evidence against,” 2011). The video is an extended interview with Steven Jones, a former professor at Brigham Young University who left the school following his involvement in the truther conspiracy. In the video, he is identified as a professor of physics and his explanations are interspersed with videos and pictures from the events of September 11th. A narrator also explains certain elements of the conspiracy. The article is an excerpt from a summary document that lists 40 pieces of evidence in support of the conspiracy. To keep the length of the experiment consistent with the other conditions,



only the top 10 were selected and presented in the stimulus. *911Truth.org* is perhaps the most prominent website hosted by those forwarding the truther conspiracy. The blog conversation followed an article posted by *9/11Blogger.com* about the legal case against the conspirators on trial for the September 11th attacks. The conversation was entirely populated by believers in the conspiracy and the discussion focused on the evidence of a conspiracy.

The debunking condition included the video from the conspiracy condition as well as an article from *Popular Mechanics* ("Debunking the 9/11," 2005), a well-known science and technology magazine, and a blog conversation from the 9/11 Scholars Forum (Fetzer, 2010), a website that posts information in support of the conspiracy theory. The article was drafted by the editors of *Popular Mechanics* and was written to provide a thorough rebuttal, based on the best available science, to all of the major claims of the truther conspiracy theory. The blog conversation was an excerpt from the discussion following a post about the 9/11 Commission report. The blog discussion included in the stimulus features a few individuals who present and defend evidence of a conspiracy and a few who refute the conspiracy claims that are presented and provide evidence against the conspiracy. The control condition included video of news coverage of Watson, the computer that competed in the game show *Jeopardy*, an article about the upcoming NCAA men's basketball tournament in *The Atlantic*, and a blog conversation about the inconvenience of flying with new TSA requirements.

## Results

This study sought to test the effect of media on belief in conspiracy theories. This study further sought to determine whether there was a direct media effect on belief, whether this effect was subject to selective exposure (e.g., media-echo chambers) or partisan filtering (e.g., counter-arguing attitude-discrepant information). The first hypothesis predicted that exposure to one-sided media messages arguing for the conspiracy would increase belief in the conspiracy. The study then tested whether those exposed to both conspiracy and debunking messages would experience a change in attitude or whether they would select information that reinforced their prior beliefs. Finally, given the possibility of partisan counter-arguing, a test was conducted to determine whether party affiliation moderated the effect of media exposure.

To test the hypothesis and research questions, an omnibus repeated-measure analysis of variance (ANOVA) was conducted with change in belief from pretest to posttest as the within subjects factor and political party (Democrat, Republican, independent/other) and experimental condition (Conspiracy, Debunking, Control) as between subjects factors. There was a significant interaction effect for experimental condition and the main effect of the media stimulus for both the birther experiment,  $F(2, 139) = 17.45$ ,  $p < 0.001$ ,  $\eta^2 = 0.201$ , and the truther experiment,  $F(2, 185) = 13.18$ ,  $p < 0.001$ ,  $\eta^2 = 0.125$ . The interaction was such that the main effect of media stimulus on belief in a conspiracy was moderated by the experimental condition. There was no interaction effect for political party on the main effect of the media stimulus, nor was there a significant three-way interaction for party by condition by media effect.

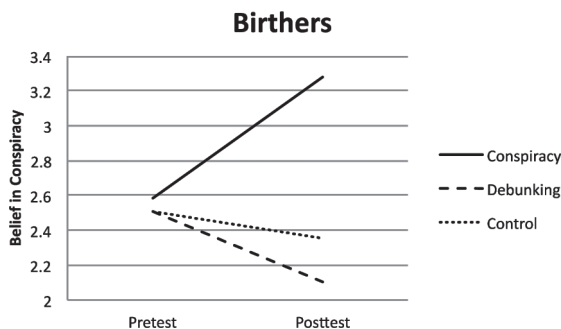
**Table 1** Effect of Experimental Stimulus on Belief in Conspiracy Theory

Condition	N	Pretest	Posttest	Change
		M (SD)	M (SD)	
<b>Birthers</b>				
Conspiracy	53	2.58 (1.74)	3.28 (1.88)	0.6981***
Debunking	48	2.51 (1.53)	2.10 (1.36)	-0.4027*
Control	47	2.50 (1.74)	2.35 (1.63)	-0.1489
<b>Truthers</b>				
Conspiracy	65	1.95 (1.47)	2.90 (1.45)	0.9564***
Debunking	67	2.30 (1.48)	2.80 (1.59)	0.5025***
Control	62	2.22 (1.47)	2.40 (1.45)	0.1801*

\*= $p < 0.05$ ; \*\*= $p < 0.01$ ; \*\*\*= $p < 0.001$ .

To test whether exposure to conspiracy messages in the experimental echo-chamber would increase belief in the conspiracy theory (H1), follow-up paired sample  $t$ -tests were conducted. Descriptive statistics for change in belief are presented in Table 1. As can be seen, those in the conspiracy condition experienced a significant increase in belief in both birther  $t(52) = -5.55, p < 0.001$  and truther  $t(64) = -7.75, p < 0.001$  conditions. Hypothesis one was confirmed.

To answer the first research question, follow-up analyses were also conducted to determine whether the presence of debunking information changed the nature of the media effect. There was a significant change in both the birther condition  $t(47) = 2.56, p < 0.05$  and truther condition  $t(64) = -4.88, p < 0.001$ . The nature of the change was not consistent across the two experiments. As can be seen in Figure 1, while belief in the birther conspiracy increased in the conspiracy condition, it decreased in the debunking condition and remained stable in the control. However, as can be seen in Figure 2, all three conditions saw an increase in belief in the truther condition. While the increase in the control condition was very minor, it was statistically significant. The magnitude of increase in the conspiracy condition is much greater than in the debunking condition



**Figure 1** Change in belief in the birther conspiracy after exposure to experimental stimulus.

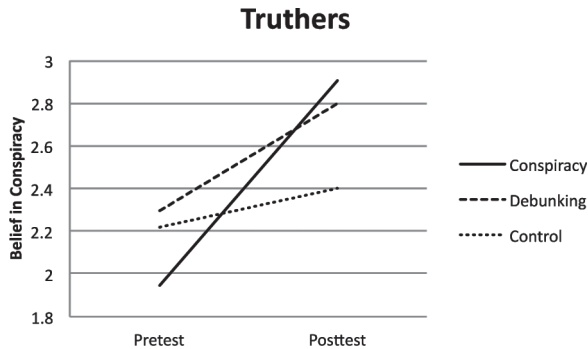


Figure 2 Change in belief in the truther conspiracy after exposure to experimental stimulus.

but both conditions generated more belief in the truther conspiracy. The presence of debunking information did alter the nature of the media effect in both experiments.

The results from the ANOVA answer the second research question. There was no significant interaction between partisan identification and the main effect of media stimulus on belief in conspiracy. In other words, the stimulus influenced belief in conspiracy regardless of party affiliation. Democrats were as likely to believe the birther conspiracy after exposure to the media echo-chamber as Republicans. Similarly, Republicans were as persuaded by the truther media as Democrats. When presented with evidence against the conspiracies, Republicans were no more likely to dismiss the truther conspiracy than were Democrats, and members of both parties were equally likely to reject the birther conspiracy in light of debunking information.

## Discussion

In spite of compelling evidence to the contrary, a sizable portion of Americans question whether Barack Obama was born in the United States and wonder whether George W. Bush played an active role in the attacks on September 11th. This study sought to determine whether ideological media influence belief in these conspiracies. Furthermore, upon finding a media effect on belief in these conspiracies, the study tested whether exposure to debunking information could reduce this effect. Selective exposure suggests that it is failure to encounter different perspectives that drive attitudes to the extreme (i.e., Sunstein, 2007). However, because a majority of Americans tend to encounter attitude-discrepant information regardless of selective exposure (Garrett, 2009; Holbert et al., 2010; Kaye & Johnson, 2006), it is unclear whether belief results from partisan filtering (Coe et al., 2008; Taber & Lodge, 2006) or is caused by selective exposure among the minority of Americans who do exist in media echo-chambers. This study found that, regardless of prior belief, media echo-chambers can increase belief in conspiracies. This study further found that, again regardless of prior-belief, the presence of debunking information minimizes this media effect, though the value of debunking information was not consistent across experiments. Finally, partisan identification did not dictate the nature of the media effect in either stimulus.

Partisans were no more likely to reject inconsistent conspiracies and were no more likely to accept friendly evidence. The implications of each of these three findings will be discussed below.

As hypothesized, there was a direct effect of media echo-chambers on belief in both the birther and truther conspiracy. Those exposed to three sources of birther messages saw their belief in the conspiracy increase almost 27% (up almost 0.7 from a pretest baseline of 2.58 on a 7-point metric). Meanwhile, those in the truther experiment rated the probability of the conspiracy almost a full point higher after exposure to the conspiracy stimulus (almost a 50% increase from the pretest baseline of 1.95). This is consistent with past findings that ideologically consistent media echo-chambers influence the direction and strength of attitudes (Jamieson & Cappella, 2008; Lin, 2009; Warner, 2010). However, the context of this experiment was designed to provide a more stringent test of this media effect. People should be more reticent to accept that their president is either holding the office illegally (birthers) or responsible for mass murder (truthers). While belief was low in all cases (pre and post), the ability of the media to move attitudes in extreme instances like these suggests that, for those selecting only ideologically consistent media, there is likely to be a significant polarizing effect. Ironically, this simultaneously supports Bennett and Iyengar's (2008) reassertion of selective exposure but undermines their argument for a new era of minimal effects, instead supporting those who argue that polarization is itself a media effect worth studying (e.g., Holbert et al., 2010, Sunstein, 2007).

Although selective exposure best explained the media effect in this study, it is important to remember that many Americans prefer heterogeneous media diets (Brundidge, 2010; Garrett, 2009; Kaye & Johnson, 2006). These findings suggest that conspiracy theories will remain strongest among the segment of committed ideologues that prefers attitude-consistent information to media diversity. Conversely, those who are exposed to debunking information will likely either reject the conspiracy outright, as with the birther experiment, or experience a much smaller media effect, as with the truther experiment. The inconsistent effect of the debunking information is somewhat perplexing. While the debunking condition in the birther experiment significantly reduced belief in the conspiracy relative to already low pretest levels, those in the debunking condition of the truther experiment rated the conspiracy more plausible after being exposed to both sides of the argument. This discrepancy may reflect something unique about the truther conspiracy, as most of the premises are coded in the language of science and academic rigor. Perhaps the messages in the conspiracy video held enduring influence even in the face of debunking responses. It is also possible that the form of refutation contributed to this finding. While we believe the evidence in *Popular Mechanics* presents a thorough refutation of the truther conspiracy, it may be too complex and dense given the nature of our sample and the conditions of the experiment. Perhaps a more sophisticated audience taking more time to carefully consider the evidence would have found the debunking evidence more persuasive. The video used to debunk the birther conspiracy, by contrast, was simple and direct. Unfortunately, the experiment does not provide sufficient control to infer the cause of

this discrepancy. It is left to future research to determine the most effective strategies for debunking conspiracies.

This study does, however, find that efforts to debunk conspiracies are not without merit. The effects of conspiracy messages were either completely reversed or, at minimum, cut in half after exposure to contrary evidence. While belief in the birther conspiracy was low in our sample to begin with (in all three conditions, belief was roughly 2.5 on a 7-point metric), after exposure to both conspiracy and debunking messages, overall belief declined by nearly half a point. This is almost a 20% decline in belief relative to the pretest baseline. Furthermore, while belief in the truther conspiracy increased in both the conspiracy and debunking conditions, the presence of debunking messages reduced the persuasive influence of the conspiracy rhetoric by nearly 50% (the conspiracy condition saw almost a full point increase relative to the pretest baseline; there was only a half-point increase in the debunking condition). This means that when conspiracies circulate, persistent efforts to debunk them have a measurable positive effect.

This study also tested whether partisan identification moderated the effect of media stimulus on belief in conspiracy theories. Bennett and Iyengar (2008) argue that media effects will be small because “media users will be more attuned to resisting any messages that prove discrepant” (p. 725). Given this, Republicans in the experiment should have been more likely to embrace the birther conspiracy and less moved by the truther conspiracy. Conversely, Democrats should have been more apt to believe Bush had a role in the 9/11 attacks than Republicans and more resistant to challenges to Obama’s citizenship. Because people counter argue when confronted with attitude-discrepant information and selectively process partisan messages (Coe et al., 2008; Taber & Lodge, 2006), partisanship may have moderated the effect of the stimulus. Nevertheless, past research found no moderating relationship in similar studies (e.g., Lin, 2009; Warner, 2010). This study reinforces those findings and undermines the minimal effects argument. Partisan identification did not moderate the effect of media stimulus in either the birther or truther experiment. While selective exposure may explain how ideologues opt into media echo-chambers, once people have walled themselves off from different perspectives, there appears to be no partisan filtering of the conspiratorial messages. This reinforces the value of a diverse media diet and suggests that if we are entering a new age of selective exposure, it does not also imply minimal media effects.

While these findings advance our understanding of the role of the media in fostering and combating belief in radical political conspiracies, there are important limitations. First, there was an unexpected finding in the control condition of the truther experiment. Control conditions are included to demonstrate that attitude change is not a function of random chance or systemic bias. However, the control in the truther condition did see a minor but statistically significant increase in belief. The change may be a chance false positive. False positives, while rare, should be expected to happen on occasion when the rejection criteria is set at  $p=0.05$ . In fact, it is more unreasonable to assume that a false positive would never be recorded. The significant change in the control condition could also be a test/retest effect. However, the interaction

effect between experimental condition and the media effect demonstrates that the experimental conditions significantly differed in the nature of the media effect. This rules out the possibility that the media effect observed is merely a product of a test/retest effect. Furthermore, the media effects observed in the conspiracy and debunking condition were much stronger than in the control and would remain statistically significant regardless of any revision downward imposed by the test/retest effect.

Additional limitations come from the experimental nature of this study. While some subjects were placed in experimental conditions in which they only heard messages reinforcing the conspiracy, these conditions were not echo-chambers in the most authentic sense. Participants were randomly assigned and did not self-select attitude-consistent conditions as would happen in a true case of selective exposure. This is both a limitation of the experimental design and a testament to the strength of media echo-chambers. The perspective being echoed was not a pre-conceived notion held by participants but rather a fairly radical conspiracy theory that few of the participants believed entering the study. If the effect is observed regardless of prior belief, it suggests that it may be media echo-chambers driving polarization rather than polarization driving more selective exposure. Furthermore, the use of partisan affiliation as an interaction term allows for some test of selective exposure, as it tests whether Republicans are more influenced by conservative echo-chambers and whether Democrats are more vulnerable to persuasion in liberal media environments. Another limitation imposed by the experimental design is that attitude change was measured immediately after exposure to the stimulus. It is likely that the effect recorded in the study dissipated after some time passed. However, for those who truly exist in media echo-chambers, this dissipation would only happen if their media diet changed or when the issue ceased to be a topic of conversation in their media environment. Finally, participants in our study were undergraduate students and are therefore more likely to share a homogenous set of experiences and may have less formed political attitudes. Perhaps the media effect would be smaller in a group with stronger preexisting political attitudes. If this is the case, then the finding that prior political affiliation does not moderate the media effect may be a product of a sample with attitudes that are more malleable than the general public. The findings would still apply in instances of attitude-consistency (e.g., self-selected media echo-chambers) but we might expect more resistance from ambivalent or hostile audiences.

In spite of these limitations, this study contributes important insights to our understanding of the effects of media echo-chambers, the value of debunking information, and the absence of partisan filtering in some media effects. Future research should continue to test the relationship between partisan identification and media influence. If media influence is found to operate independent of partisanship in natural conditions (rather than the artificial experimental setting created here) it may help resolve the chicken-egg debate that partisan selective exposure research often invites. More research is also needed to address the divergent findings regarding the debunking messages in this study. This study did not provide the information necessary to determine whether debunking was more effective in the birther experiment because of the weakness of the birther arguments, the strength of the persuasive response, or the medium



used to present the rebuttal. When faced with political misinformation and conspiracy theories, however, it is important to know which debunking strategies are most effective. While this study fails to answer that question, it clearly demonstrates the value of debunking conspiracies. Finally, this study helps explain why belief in conspiracy theories persists in the face of debunking evidence. While few of the participants in this experiment were true believers in either conspiracy, the influence exerted on them by ideologically homogeneous media and the mitigating power of diverse sources suggest that belief is likely to be strongest amongst those who avoid attitude-discrepant information. This is contrary to the supposition that debunking evidence falls on deaf ears amongst those inclined to believe a conspiracy. Future research should determine whether the effects of debunking information are applicable in a sample of actual conspiracy sympathizers. If so, the results of these experiments not only extend the discussion of media effects in the digital age, they also provide a template for combating some of the most extremist modes of political discourse in modern American politics.

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