# Cryptid Communication: Media Messages and Public Beliefs about Cryptozoology

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Popular documentary television programs and news outlets have prominently featured messages about cryptids, or creatures whose existence mainstream science has not confirmed. Building on cultivation theory and priming theory, the present study tests how patterns in media use and exposure to specific media messages predict belief in these creatures. The study also draws on uses and gratifications theory to explore how motivations for consuming paranormal television predict belief in cryptids. Analyses of data from two national surveys (2021: N = 1,032; 2022: N = 1,020) incorporating random assignment to different image treatments demonstrate that viewing paranormal documentaries and reality programs predicts belief in cryptids, as does consuming paranormal news. Moreover, exposure to images priming television documentary programs about cryptids bolsters belief in such creatures. Informational uses of paranormal television predict belief in multiple cryptids. These findings suggest potential directions for future research on media use, media messages, and fringe beliefs.

Keywords: cryptids, cultivation theory, priming theory, media use, paranormal television

Although mainstream science has yet to confirm the existence of Bigfoot, mermaids, or the Loch Ness Monster, messages in U.S. media have prominently featured all these creatures. For example, science fiction programs ranging from the Federal Bureau of Investigation-themed drama *The X-Files* (Carter et al., 1993–2002, 2016–2018) to the children's program *Gravity Falls* (Hirsch, 2012–2016) have depicted an array of "cryptids," or creatures whose existence conventional science does not recognize. Similarly, documentary and reality programs on cable television networks such as the Discovery Channel and Animal Planet have purported to investigate the evidence for the current existence of mermaids (*Mermaids: The Body Found*, Bennett, 2011; and *Mermaids: The New Evidence*, Bavetta, 2013), Bigfoot (*Finding Bigfoot*, Hoffman, Kuhlman, & Brumels, 2011–2018; and *Finding Bigfoot: The Search Continues*, Hoffman, Kuhlman, & Brumels, 2021), and the extinct shark species megalodon (*Megalodon: The Monster Shark Lives*, Glover, 2013). In the growing realm of streaming

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video, PBS Digital Studios has produced a cryptid-themed series titled *Monstrum* (Fox, 2018–2020), and Paramount Plus recently produced a three-part documentary series (*Monster: The Mystery of Loch Ness*, McAvoy, 2022) detailing accounts of the Loch Ness Monster. Nor have news media outlets shied away from these topics, with CNN, the Fox News Channel, MSNBC, and a wide array of local news outlets all running stories about Bigfoot, the Loch Ness Monster, or other cryptids.

The prominence of such portrayals presumably reflects the influence of media values, including novelty and drama, in conjunction with ratings- and advertising-driven media economics (Evans, 2015; Myrick & Evans, 2014). Indeed, media messages about cryptids can draw substantial audiences: *Mermaids: The New Evidence* (Bavetta, 2013) was one of the highest rated programs on Animal Planet (Thaler, 2016), and *Finding Bigfoot* (Hoffman et al., 2011–2018) enjoyed a long run on the same network (Crair, 2018). For their part, some scientists view such popular portrayals of cryptozoology—that is, the study of animal species whose existence is not acknowledged by mainstream science (Dendle, 2006; Rossi, 2016; Simpson, 1984)—as harmless or even potentially beneficial in terms of fostering scientific reasoning (Naish, 2014). However, other scientists and skeptics have raised concerns about media depictions of cryptids and their potential effects on audience beliefs. For example, critics have argued that "pseudo-documentaries" such as the *Mermaids* (Bavetta, 2013; Bennett, 2011) programs and *Finding Bigfoot* (Hoffman et al., 2011–2018, 2021) use stylistic elements of documentary filmmaking along with the reputations of outlets such as the Discovery Channel and Animal Planet to legitimize nonscientific claims and spread misinformation (Shiffman, 2013; Thaler, 2016; Wallace, 2019).

Whereas the scientific community regards cryptozoology as lacking a foundation in evidence, communication literature provides a stronger basis for speculating that media messages *about* cryptids can shape audience beliefs. Given that members of the public often possess limited firsthand experience of science, they tend to rely on media portrayals to make judgments about scientific topics (Dudo et al., 2011; Nisbet et al., 2002), including ones related to biological sciences (Besley & Shanahan, 2005; Brossard & Shanahan, 2003; Liu & Priest, 2009; Myrick & Evans, 2014). Furthermore, members of the public draw on media depictions to form beliefs about a range of paranormal topics, including extra-sensory perception (ESP), unidentified flying objects (UFOs), and hauntings (Brewer, 2012, 2013; Brewer & Ley, 2021; Nisbet, 2006, 2016; Sarapin & Sparks, 2015; Sparks, 1998; Sparks & Miller, 2001; Sparks, Nelson, & Campbell, 1997; Sparks & Pellechia, 1997). Previous research highlights a pair of mechanisms that could underlie such linkages: *Cultivation* of beliefs through long-term media use (Gerbner & Gross, 1976; Morgan & Shanahan, 2010) and *priming* effects resulting from exposure to specific messages (Iyengar & Kinder, 1987; Scheufele & Tewksbury, 2007).

Public opinion polls reveal greater belief in ESP, haunted houses, and extraterrestrial visitors than in cryptids. (Bader, Mencken, & Baker, 2010; Brewer & Ley, 2021). Nonetheless, a significant portion of the public believes in the latter. For example, a 2018 survey found that 21% of the U.S. public believed in Bigfoot (Chapman University, 2018), and a 2021 poll found that 24% of Americans thought Bigfoot was definitely or probably real (YouGov, 2021). Similarly, a 2013 survey found that 18% of the U.S. public thought the Loch Ness Monster was real (Public Policy Polling, 2013). Prior studies indicate that these beliefs may reflect personal experiences, psychological needs, and social contexts (Bader et

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al., 2010; Paddison, 2019). Yet, the influence of media messages on cryptid beliefs remains understudied.

Accordingly, this study extends genre-specific cultivation and priming theories to examine how public belief in cryptids reflects media consumption and exposure to specific messages. In addition, the study draws on uses and gratifications theory (Blumler, 1979; Rubin, 1983) to explore how different reasons for consuming paranormal media predict belief in cryptids. The analyses use original data from two national surveys—one conducted in 2021 and the other in 2022—that incorporated randomized assignment to different media image treatments. The survey results reveal that both paranormal documentary/reality television and paranormal news consumption predict cryptid belief and that the former is particularly likely to do so when used for information. The experimental results demonstrate that exposure to media images bolsters cryptid belief. These findings carry broader implications given that belief in cryptids may be linked to belief in conspiracy theories about topics such as climate change and vaccines (Cassino, 2022; Thaler, 2016).

#### Monster Mythmakers: Cultivating Belief in Cryptids

Folk tales about hidden creatures abound across cultures and long predate the rise of modern media (Buhs, 2011; Conway, Koseman, & Naish, 2013; Mullis, 2019). Just within the United States, one can find stories of Vermont's Champ, Massachusetts' Dover Demon, New Jersey's Jersey Devil, Maryland's Snallygaster, Georgia's Altie, Kentucky's Pope Lick Monster, West Virginia's Mothman, Wisconsin's Hodag, and many more cryptids (Ocker, 2022). To their believers, such creatures serve as objects of scientific discovery (Bader et al., 2010), fonts of spiritual transcendence (Paddison, 2019), inspirations for lived practices of enchantment (Mullis, 2019), and sources of irreverent fun (Foster, 2008)—as well as various combinations of these functions all at once.

The cultural resonances that cryptids carry have made them appealing subjects for producers of both transparently fictional and purportedly nonfictional television. Cultivation theory underscores television's role in shaping contemporary myths, akin to the historical role of religion in constructing social reality (Gerbner & Gross, 1976). Viewed in this light, the medium's ongoing fascination with Bigfoot, mermaids, and the like can be seen as an extension of oral and written folklore traditions revolving around monsters, fairies, and other mysterious creatures (Buhs, 2011; Mullis, 2019). In keeping with its role as a modern mythmaker, popular television often presents paranormal phenomena such as cryptid sightings "as if they actually occur" (Sparks et al., 1997, p. 349)—or at least as if they could be real.

Such portrayals may not only help preserve and further popularize cultural legacies surrounding hidden creatures but may also reinforce beliefs that cryptids exist. Cultivation theory suggests that prolonged exposure to dominant media messages can shape audience beliefs and attitudes (Gerbner & Gross, 1976). Specifically, it posits a correlation between television viewing and holding perceptions of the world that reflect the messages in television programming (Shanahan & Morgan, 1999). Numerous studies have validated this premise by demonstrating that television viewing patterns predict beliefs across many

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topics (Morgan & Shanahan, 2010), including perceptions of science and scientists (Brewer & Ley, 2021; Dudo et al., 2011; Gerbner, 1987; Nisbet et al., 2002).

At the same time, scholars have also identified important limitations of cultivation-based research (Hirsch, 1980; Hughes, 1980). One key challenge to such research involves demonstrating evidence for causality: Findings of associations between media use and audience beliefs may reflect the influence of the former on the latter but could also reflect the impact of the latter on the former (Potter, 1993). Thus, any cultivation analysis that relies solely on cross-sectional survey evidence can only demonstrate associations, rather than effects.

Subsequent accounts have also challenged the "classic" cultivation theory for its focus on television viewing in general, arguing that audience beliefs may reflect differences in messages across media genres (Hawkins & Pingree, 1981; Lee & Niederdeppe, 2011; Potter & Chang, 1990). Consistent with the logic of genre-specific cultivation, studies have found not only mixed evidence that overall television viewing predicts paranormal beliefs but also clearer evidence that viewing paranormal-themed television programming predicts these beliefs (Sarapin & Sparks, 2015; Sparks & Miller, 2001; Sparks et al., 1997; Stise et al., 2023). In particular, research has found that viewing paranormal documentaries or reality television programs such as *Ghost Hunters* (Piligian, Thayer, Nichols, David, & Katz, 2004–2016) and *Ancient Aliens* (Burns, Silver, Leventhal, & Tsoukalos, 2009–2023) is associated with belief in haunted houses and extraterrestrial visitors, whereas viewing paranormal-themed science fiction programs fails to predict the same beliefs (Brewer & Ley, 2021; Nisbet, 2016). This pattern may reflect the former genre's use of documentary filmmaking techniques, visual effects, sound, and "trappings of science" such as jargon and technology to construct an aura of perceptual realism and a patina of scientific credibility (Brewer, 2012, p. 313; Hornig, 1990; Kirby, 2011; Wallace, 2019).

A parallel logic could hold when it comes to cryptozoology-themed documentaries and reality television shows, particularly given that prominent programs in the genre such as the *Mermaids* (Bavetta, 2013; Bennett, 2011) pseudo-documentaries and the *Finding Bigfoot* series (Hoffman et al., 2011–2018, 2021) have used a similar approach to convey legitimacy for their subject matter. These programs sometimes include disclaimers and skeptical viewpoints, but they tend to emphasize that cryptids are—or may be—real (Shiffman, 2013; Thaler, 2016; Wallace, 2019). Thus, the present study tests the following hypothesis:

# H1a: Paranormal documentary and reality television viewing will predict greater belief in cryptids.

Looking beyond paranormal documentary and reality television, research also suggests that news coverage of topics such as UFOs and psychic powers can bolster belief in these phenomena especially when such coverage conveys an aura of legitimacy. For example, one study found that exposure to coverage affirming a paranormal explanation for an alleged alien abduction led audience members to report greater belief in UFOs (Sparks et al., 1997; see also Stise et al., 2023). Similarly, other studies have found that news about "scientific" ghost hunters (Brewer, 2012) and parapsychology research (Brewer, 2013) can foster faith in hauntings and ESP. To be sure, news stories that debunk reports of paranormal phenomena can also fuel audience skepticism (Brewer, 2012, 2013; Sparks, 1998). However, an analysis of aggregate-level trends suggests that public belief in the paranormal dovetails with news attention to paranormal topics (Nisbet, 2006). Building on this research, the present study hypothesizes the following:

H1b: Paranormal news use will predict greater belief in cryptids.

# Priming Thoughts About Cryptids Through Exposure to Media Images

Whereas cultivation theory focuses on relationships between patterns in media use and audience members' beliefs, priming theory highlights how exposure to specific messages can influence judgments by activating thoughts stored in audience members' memories (Iyengar & Kinder, 1987; Scheufele & Tewksbury, 2007). The latter theory posits that people's opinions are "dependent on the types of considerations and examples about a topic that are available in short term memory" (Nisbet, 2006, para. 9; see also Zaller, 1992) and that media messages can shape the accessibility of such considerations through a process of spreading activation. As a case in point, exposure to positive portrayals of stem cell research in science documentary television may have fostered support for this technology by priming positive thoughts about it (Nisbet & Goidel, 2007). Similarly, exposure to media reports of UFOs or psychic powers may bolster belief in such phenomena by activating thoughts that reinforce their legitimacy (Nisbet, 2006).

Cultivation theory and priming theory offer potentially intertwined explanations of how media exposure may be related to audience beliefs (Shrum, 1995). Nonetheless, separately analyzing the processes can be beneficial. For example, one study demonstrated that long-term patterns in television viewing and short-term priming of media portrayals played distinct roles in predicting public beliefs about DNA testing (Brewer & Ley, 2010). Similarly, another study found that recent exposure to the television series *Shark Week* (Kurr, Pelletier, Golden, & Romeiro, 1988–2023) predicted fear of and perceived threat from sharks, consistent with a priming-based account, whereas long-term exposure reflecting cultivation processes did not predict these responses (Myrick & Evans, 2014).

In examining the role of priming, the present study focuses on whether exposure to media imagery from popular television documentary portrayals of cryptids influences belief in these creatures. Given that the portrayals on programs such as the *Mermaids* pseudo-documentaries (Bavetta, 2013; Bennett, 2011), *Finding Bigfoot* (Hoffman et al., 2011–2018, 2021), and *Megalodon: The Monster Shark Lives* (Glover, 2013) predominantly affirm the legitimacy of their subjects, seeing an image related one to these programs should tend to prime thoughts reinforcing belief in the cryptid at hand. Furthermore, this may be the case even among people unfamiliar with the specific contents of the programs if the imagery primes associations with media outlets widely perceived as scientifically legitimate, such as the Discovery Channel, Animal Planet, or PBS (see Brewer & Ley, 2021; Myrick & Evans, 2014; Wallace, 2019). Thus, the present study hypothesizes the following:

H2: Exposure to an image priming a television documentary program about a cryptid will increase belief in that cryptid.

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It is less clear whether one would expect exposure to media imagery involving one cryptid to shape beliefs about other cryptids. However, priming theory's underlying logic of spreading activation raises the possibility that such exposure will trigger thoughts reinforcing belief in cryptids more generally. Given the potential for such "spillover effects," the present study asks the following research question:

# *RQ1:* Will exposure to an image priming a television documentary program about a cryptid increase belief in other cryptids?

# Uses and Gratifications for Paranormal Television

In addition to applying cultivation theory and priming theory, the current study draws on uses and gratifications theory to explore how viewers' motives for consuming paranormal media predict their cryptid beliefs. This theory underscores audience agency in media selection by identifying various motivations, such as information seeking, entertainment, and communication, that shape media choices and their potential effects (Blumler, 1979; Rubin, 1983). Combining uses and gratifications theory with cultivation theory, the gratification/cultivation model suggests that viewer motivations influence media selection, encoding, and interpretation, including the development of perceptions and judgments from media content (Bilandzic & Rössler, 2004).

Building on this integrated model, one study argued that different motivations for consuming paranormal-themed television might "allow for different modes of processing the content and, hence, for different take-away messages or effects" (Sarapin & Sparks, 2015, p. 195). Analyzing paranormal television viewing and belief in psychic detectives among college students and police officers, the authors of the study found evidence suggesting such differences but did not directly explore viewer motivations. Thus the authors called for further research on these motivations and their impact on paranormal beliefs.

Taking up this suggestion, the present research explores three potential uses and gratifications identified by previous studies that looked at other media genres: Informational motivations, entertainment motivations, and communicative motivations. Specifically, it asks how each of these purposes for consuming paranormal television predicts belief in cryptids:

# *RQ2:* How are the uses of paranormal television for informational, entertainment, and communicative reasons related to belief in cryptids?

In examining these motivations, the present study does not treat them as mutually exclusive. Instead, it recognizes that multiple motivations may underlie any one person's engagement with paranormal media. For example, audience members may consume such media for purposes of both scientific discovery and playful enchantment (Conway et al., 2013; May, 2017; Mullis, 2019; Saler, 2003).

# Study 1

The first study tested whether different forms of media use and exposure to media imagery predicted beliefs about four prominent cryptids—Bigfoot, mermaids, the Loch Ness Monster, and the Yeti—

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using data from a national survey fielded by Qualtrics from August 23 to September 2, 2021 (N = 1,032). The study was designed by us and approved by our university's Institutional Review Board. Respondents were sampled from Qualtrics panels based on U.S. population quotas for gender, age, race, education, income, and region.

# **Belief in Cryptids**

Belief in cryptids was measured by asking respondents whether they strongly believed, believed, disbelieved, or strongly disbelieved the following statements: "Bigfoot is a real creature" (12% strongly believed, 34% believed, 35% disbelieved, and 20% strongly disbelieved), "Mermaids are real" (11%, 22%, 42%, and 25%, respectively), "The Yeti, also known as the abominable snowman, is real" (12%, 29%, 39%, and 20%, respectively), and "The Loch Ness Monster is a real creature" (10%, 31%, 39%, and 20%, respectively).

#### Media Use

Overall television viewing was measured using a question asking how many hours on an average day respondents spent "watching television shows and movies (including viewing on a computer or mobile device)." Science fiction viewing was measured using an item asking respondents how often they watched "science fiction shows," with options including "nearly every day," "a few times a week," "a few times a month," and "less often." The survey's measures of paranormal media use were preceded by a statement that "paranormal topics include ghosts and haunted houses, UFOs (unidentified flying objects) and aliens, ESP (extra-sensory perception), and creatures such as Bigfoot and the Loch Ness Monster." To capture paranormal topics" and "reality shows about paranormal topics." For each item, options paralleled the ones for the science fiction viewing measure. Responses to these two items were averaged to create an index (r = .71, p < .01). Paranormal news use was captured using an item asking respondents how closely they followed "news about paranormal topics," with options ranging from "very closely" to "not at all." Table 1 reports the descriptive statistics and coding for all independent variables.

	2021	2022
Gender (0 = male; 1 = female)	54%	54%
Self-identified as Black ( $0 = no; 1 = yes$ )	12%	13%
Self-identified as Hispanic ( $0 = no; 1 = yes$ )	19%	18%
Self-identified as Asian American ( $0 = no; 1 = yes$ )	5%	6%
Age (in years)	47.44 (18.16)	45.89 (17.34)
Education (0 = minimum; 5 = maximum)	2.41 (1.50)	2.43 (1.49)
Income (0 = minimum; 11 = maximum)	5.35 (3.38)	5.60 (3.56)
Political ideology (0 = very liberal; 6 = very conservative)	3.32 (1.79)	3.34 (1.63)
Religiosity ( $0 = not at all; 3 = very$ )	1.79 (1.12)	1.90 (1.07)
Overall television viewing $(0 = \text{none}; 4 = 4 \text{ or more hours/day})$	2.95 (1.10)	2.77 (1.19)
Science fiction viewing ( $0 = <$ few times a month; $3 =$ nearly every day)	1.10 (1.03)	1.08 (1.00)
Paranormal TV viewing ( $0 = <$ few times a month; $3 =$ nearly every day)	0.98 (0.96)	0.95 (1.02)
Paranormal news use $(0 = < \text{few times a month}; 3 = \text{nearly every day})$	1.45 (1.09)	1.20 (1.01)
Watch paranormal TV to learn $(0 = no; 1 = yes)$	_	28%
Watch paranormal TV for entertainment $(0 = no; 1 = yes)$	—	35%
Watch paranormal TV to talk about it $(0 = no; 1 = yes)$	—	13%

Table 1. Descri	otive Statistics	for Independent	Variables.
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*Note*. Table entries are means with standard deviations in parentheses except for dichotomous variables.

#### Media Image Treatments

Respondents were randomly assigned to one of three conditions. In the control condition (n = 353), the items measuring belief in cryptids were not accompanied by any image. In the *Bigfoot image* condition (n = 344), these items were accompanied by an official promotional image for the television program *Finding Bigfoot* (Hoffman et al., 2011–2018): a still from the Patterson–Gimlin film, perhaps the most famous purported video of Bigfoot, along with the show's logo and the Animal Planet channel logo. In the *mermaid image* condition (n = 335), the items measuring belief in cryptids were accompanied by an official promotional image for *Mermaids: The Body Found* (Bavetta, 2013): A computer-generated image of the mermaids from this "docufiction" along with program's title and the Animal Planet logo.

### Values and Demographics

Given that political and religious values can shape beliefs about science (Nisbet & Goidel, 2007; Nisbet et al., 2002) and paranormal topics (Bader et al., 2010), the survey included measures for *ideology* (captured on a 7-point scale ranging from "very liberal" to "very conservative") and *religiosity* (measured by asking respondents how important religion was to their life on a 4-point scale ranging from "very" to "not at all"). The survey also included measures for gender; self-identification as Black, Hispanic, and Asian American; age; education; and income.

# Results

Given that the measures for belief in cryptids were ordinal, the analyses used a series of ordinal logistic regressions. The model for each regression included the media use variables and indicator variables for the media image treatments (with the control condition as the baseline) along with ideology, religiosity, and demographic variables. Table 2 presents the results.

Pigfoot Mormai		Mormaide	Voti	Loch Noss
	Bigioot	Mermanus	Teu	LUCH NESS
Gender	05 (.13)	.24 (.13)	09 (.13)	.19 (.13)
Self-identified as Black	.03 (.20)	.52* (.20)	.30 (.20)	.20 (.20)
Self-identified as Hispanic	20 (.18)	.28 (.18)	18 (.18)	04 (.18)
Self-identified as Asian American	.33 (.27)	.62* (.27)	.27 (.27)	.16 (.27)
Age	004 (.005)	026** (.005)	007 (.005)	007 (.005)
Education	09 (.05)	10* (.05)	06 (.05)	05 (.05)
Income	05* (.02)	01 (.02)	04 (.02)	01 (.02)
Political ideology	.12** (.04)	.01 (.04)	.07 (.04)	.08* (.04)
Religiosity	.08 (.06)	.17** (.06)	.08 (.06)	.08 (.06)
Overall television viewing	05 (.06)	.04 (.06)	06 (.06)	.04 (.06)
Science fiction viewing	.06 (.07)	.04 (.07)	.12 (.07)	.01 (.07)
Paranormal TV viewing	.54** (.08)	.45** (.08)	.54** (.08)	.54** (.08)
Paranormal news use	.30** (.07)	.20** (.07)	.25** (.07)	.22** (.07)
Bigfoot image condition	.41** (.15)	.29 (.15)	.43** (.15)	.32** (.15)
Mermaid image condition	.21 (.15)	.32* (.15)	.23 (.15)	.28 (.15)
Constant 1	70* (.36)	-1.22** (.37)	93* (.36)	39 (.36)
Constant 2	1.15** (.36)	1.10** (.36)	1.01** (.36)	1.61** (.36)
Constant 3	3.29** (.38)	2.75** (.38)	2.96** (.37)	3.66** (.38)
Nagelkerke pseudo $R^2$	.22	.29	.22	.19
Ν	982	982	982	982

Table 2. Predicting Belief in Cryptids; 2021 Qualtrics Survey.

*Note*. \*  $p \le .05$ ; \*\*  $p \le .01$ . Table entries are ordered logistic regression coefficients with standard errors in parentheses.

A look at the media use variables shows that neither overall television viewing nor science fiction viewing significantly predicted belief in any of the four cryptids. On the other hand, the results supported two expectations derived from genre-specific cultivation theory. Consistent with *H1a*, paranormal documentary and reality television viewing predicted greater belief in the four cryptids (p < .01 for each). In addition, paranormal news use predicted greater belief in cryptids (p < .01 for each)—a result consistent with *H1b*.

Turning to the effects of the media image treatments, exposure to the Bigfoot image increased belief in Bigfoot (p < .01). Similarly, exposure to the mermaid image increased belief in mermaids (p < .01)

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.05). Both results provide support for H2's prediction that seeing an image priming a television documentary program about a cryptid will increase belief in that cryptid.

In response to RQ1, exposure to the Bigfoot image increased belief in the Yeti (p < .01) and the Loch Ness Monster (p < .01); its effect also bordered on significance for belief in mermaids (p = .052). The effect of the mermaid treatment approached significance for belief in the Loch Ness Monster (p = .058) but did not come close to significance for belief in Bigfoot or the Yeti. Thus, the results provide mixed evidence for spillover effects from media images for a specific cryptid on belief in other cryptids.

The analyses yielded no consistent patterns in terms of how values and demographics predicted belief in cryptids. Black respondents, Asian American respondents, and less educated respondents were particularly likely to believe in mermaids (p < .05 for each), whereas older respondents were particularly unlikely to believe in them (p < .01). Those with higher incomes were relatively unlikely to believe in Bigfoot (p < .05). Conservatives were particularly likely to believe in Bigfoot (p < .05), whereas religiosity was positively associated with belief in mermaids (p < .01).

# Study 2

The second study tested how different forms of media use, exposure to media imagery, and reasons for using paranormal television predicted beliefs about three cryptids: Bigfoot (one of the cases included in Study 1); the Mothman, a cryptid that has risen in prominence over the past two decades (see Mallow, 2021); and the megalodon, a creature recognized by mainstream science as existing in the past but not the present. This study analyzed data from a national survey administered by Qualtrics from December 8 to 18, 2022 (N = 1,020). As before, the study was designed by us and approved by our university's Institutional Review Board. Respondents were sampled from Qualtrics panels based on U.S. population quotas for gender, age, race, education, income, and region.

#### **Belief in Cryptids**

Belief in cryptids was measured by asking respondents whether they believed Bigfoot (42% yes), "the Mothman creature" (13% yes), and "the megalodon shark" (45% yes) "may currently exist."

#### Media Use

The measures for *overall television viewing* and *science fiction viewing* were identical to the ones in Study 1. As before, the measures of paranormal media use were preceded by a statement defining paranormal topics. The measure for *paranormal news use* was the same as in Study 1. *Paranormal television viewing* was measured using an item asking respondents how often they watched "documentaries or reality shows about paranormal topics," with the same response options as before. Respondents who said they watched such shows at least a few times a month were also asked whether they watched them "to learn new things" (35%), "to be entertained" (28%), and "to talk about them with other people" (13%). Informational, entertainment, and communicative motivations were

positively, if modestly, correlated with one another (p < .05 in each case), reflecting how individuals may consume paranormal media for multiple reasons.

#### Media Image Treatments

Respondents were randomly assigned to one of four conditions. In the control condition (n = 257), the items measuring belief in cryptids were not accompanied by any image. In the *Bigfoot image* condition (n = 255), these items were accompanied by an official promotional image for the television program *Finding Bigfoot: The Search Continues* (Hoffman et al., 2021): an outline of the creature superimposed over a photograph of the human cast, beneath the logo of Discovery Plus Originals. In the *Mothman image* condition (n = 264), the items were accompanied by a title card for an episode of the PBS series *Monstrum* (Fox, 2018–2020) that included the text "Discovering Mothman," an artist's rendition of the creature, an image of the program's host, and the logos of PBS and the program itself. In the *megalodon image* condition (n = 244), the items measuring belief in cryptids appeared with a screen capture from a television advertisement that included the logos of *Shark Week* (Kurr et al., 1988–2023; which incorporated a shark fin) and the Discovery Channel along with the program title of *Megalodon: The Monster Shark Lives* (Glover, 2013).

### Values and Demographics

The survey for Study 2 captured the same values and demographics as the survey for Study 1 did.

# Results

Given that Study 2 captured belief in cryptids through dichotomous measures, the analyses for this study used a series of logistic regressions. The first model for each dependent variable (Model 1) included the media use variables and indicator variables for the media image treatments (with the control condition as the baseline) along with values and demographics. The second model for each dependent variable (Model 2) added the measures of reasons for watching paranormal reality or documentary television. Table 3 presents the results for both models.

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	Bigfoot		Mothman		Megalodon	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Gender	.00 (.16)	01 (.16)	.18 (.23)	.15 (.23)	01 (.15)	02 (.15)
Self-identified as Black	.60* (.24)	.61* (.24)	.81** (.31)	.83** (.32)	14 (.23)	14 (.23)
Self-identified as Hispanic	.01 (.22)	.03 (.22)	.58* (.29)	.61* (.29)	.08 (.21)	.08 (.21)
Self-identified as Asian American	.01 (.33)	.03 (.34)	18 (.52)	16 (.53)	.01 (.29)	.01 (.29)
Age	.025** (.005)	.026** (.005)	.002 (.007)	.001 (.008)	027** (.005)	027** (.005)
Education	25** (.06)	26** (.06)	09 (.08)	09 (.08)	02 (.05)	02 (.05)
Income	04 (.02)	04 (.02)	.04 (.03)	.03 (.03)	.04 (.02)	.04 (.02)
Political ideology	02 (.05)	01 (.05)	16* (.07)	15* (.07)	06 (.05)	05 (.05)
Religiosity	.08 (.07)	.09 (.07)	.24* (.11)	.26* (.11)	.14* (.07)	.15* (.07)
Overall television viewing	.04 (.06)	.03 (.06)	19* (.09)	23** (.09)	.04 (.06)	.03 (.06)
Science fiction viewing	02 (.08)	02 (.08)	01 (.12)	01 (.12)	.13 (.08)	.13 (.08)
Paranormal TV viewing	.34** (.09)	.17 (.11)	.29* (.12)	.08 (.15)	03 (.09)	10 (.11)
Paranormal TV to learn	—	.48** (.18)	_	.63** (.23)	—	.25 (.18)
Paranormal TV for entertainment	—	.33 (.18)	—	.48* (.24)	—	.12 (.18)
Paranormal TV to talk about it	—	.09 (.23)	—	.07 (.28)	_	07 (.22)
Paranormal news use	.17* (.09)	.14 (.09)	.47** (.13)	.43** (.13)	.11 (.09)	.10 (.09)
Bigfoot image condition	.51** (.20)	.51** (.20)	.05 (.31)	.08 (.32)	08 (.19)	09 (.19)
Mothman image condition	20 (.20)	21 (.20)	.92** (.28)	.96** (.28)	.17 (.19)	.16 (.19)
Megalodon image condition	32 (.21)	32 (.21)	.35 (.31)	.39 (.31)	.49* (.19)	.49* (.19)
Constant	-1.51** (.43)	-1.56** (.43)	-3.11** (.63)	-3.23** (.64)	.27 (.40)	.27 (.40)
Nagelkerke pseudo R <sup>2</sup>	.18	.20	.18	.20	.10	.11
Ν	978	978	978	978	978	978

Table 3. Predicting Belief in Cryptids; 2022 Qualtrics Survey.

*Note*. \*  $p \le .05$ ; \*\*  $p \le .01$ . Table entries are logistic regression coefficients with standard errors in parentheses.

As in Study 1, neither overall television viewing nor science fiction viewing significantly predicted belief in Bigfoot. The same was true for the belief that the megalodon currently exists. However, overall television viewing was negatively related to belief in the Mothman (p < .01). The results for Model 1 indicate that paranormal reality and documentary television predicted greater belief in Bigfoot (p < .01) and the Mothman (p < .05) but not the megalodon. The first and second results are consistent with *H1a*, whereas the third is not. Similarly, paranormal news use predicted greater belief in Bigfoot (p < .05) and the Mothman (p < .01) but not the megalodon—a pattern that provides partial support for *H1b*.

Consistent with the findings from Study 1, exposure to the Bigfoot image from Study 2 increased belief in Bigfoot (p < .01). Similarly, exposure to the Mothman image increased belief in the Mothman (p < .01), and exposure to the megalodon image increased belief that the megalodon currently exists (p < .05). These results provide additional support for H2's prediction that seeing an image priming a television documentary program about a cryptid will increase belief in that cryptid.

With regard to RQ1, exposure to the Bigfoot image did not significantly influence belief in the Mothman or the megalodon. Nor did exposure to the Mothman image significantly influence belief in Bigfoot or the megalodon. Completing this pattern, exposure to the megalodon image did not significantly influence belief in Bigfoot or the Mothman. Thus, Study 2 yielded no evidence for spillover effects from media images of a specific cryptid on belief in other cryptids.

In response to RQ2, the results from Model 2 suggest that watching paranormal reality and documentary television for learning purposes predicted greater belief in Bigfoot (p < .01) and the Mothman (p < .01) but not the megalodon. Viewing paranormal reality and documentary television for entertainment predicted greater belief in the Mothman (p < .05) but not Bigfoot or the megalodon, while watching this genre to talk about it with other people did not predict belief in any of the three cryptids. In short, the results provide evidence that informational uses of paranormal television are associated with belief in multiple cryptids and that entertainment uses of this genre are associated with belief in one cryptid, but no evidence that communicative uses of the genre are linked to such beliefs.

As in Study 1, the results for values and demographics were mixed. Black respondents were particularly likely to believe in Bigfoot (p < .05) and the Mothman (p < .01), and Hispanic respondents were particularly likely to believe in the Mothman (p < .05). Older respondents were particularly likely to believe in Bigfoot (p < .01) but particularly unlikely to believe in the megalodon (p < .01). More educated respondents were also particularly unlikely to believe in Bigfoot (p < .01). In terms of values, conservatism was negatively associated with belief in the Mothman (p < .05) whereas religiosity was positively associated with belief in both the Mothman (p < .05) and the megalodon (p < .05).

#### Conclusion

The past decade and a half have witnessed ongoing attention to cryptids in both paranormal documentary/reality television programs and stories from traditional news outlets. Given the prominence of these messages, the present study sought to explore whether a set of media factors are linked to beliefs about cryptids. The results from two national surveys demonstrate how consumption of paranormal-themed

media, exposure to media imagery, and motivations for viewing paranormal-themed television can predict belief in cryptids.

Among the forms of media use analyzed, neither overall television viewing nor science fiction viewing predicted beliefs about cryptids, with one exception: the former predicted *dis*belief in the Mothman. The results for overall television viewing add to a previous record of mixed findings regarding classic cultivation from such viewing (Sarapin & Sparks, 2015; Sparks & Miller, 2001; Sparks et al., 1997). Meanwhile, the results for science fiction viewing dovetail with previous findings that fictional television programming plays relatively little role in explaining paranormal beliefs (Brewer, 2012; Brewer & Ley, 2021; Nisbet, 2016).

Other forms of media use played a clearer role in predicting beliefs about cryptids. In particular, viewing paranormal documentaries and reality television predicted greater belief in five of the six cryptids considered—a pattern consistent with theoretical accounts of genre-specific cultivation (Hawkins & Pingree, 1981; Lee & Niederdeppe, 2011; Potter & Chang, 1990) and previous findings in other paranormal domains (Brewer, 2012; Brewer & Ley, 2021; Nisbet, 2006; Sarapin & Sparks, 2015; Sparks & Miller, 2001; Sparks et al., 1997; Stise et al., 2023). Similarly, the finding that following paranormal news use predicted belief in five of the six cryptids resonates with previous research demonstrating links between exposure to news coverage and beliefs about other paranormal topics (Brewer, 2012, 2013; Nisbet, 2006; Sparks et al., 1997, 1998; Stise et al., 2023). The patterns of results for these forms of media may reflect how their source credibility, stylistic elements, and content help to legitimize claims of paranormal phenomena (Brewer, 2012; Brewer & Ley, 2021; Hornig, 1990; Kirby, 2011; Shiffman, 2013; Thaler, 2016; Wallace, 2019).

At the same time, the findings for one creature stood out as an exception to the pattern: Neither paranormal documentary/reality viewing nor paranormal news use predicted belief in the megalodon. These results could reflect the megalodon's distinctive status as a species whose former (but not present) existence *has* been confirmed by mainstream science. Put simply, audience members may not perceive this creature as belonging to the same category as the others. In keeping with this speculation, belief in the megalodon was not significantly correlated with belief in the Mothman and was *negatively* correlated with belief in Bigfoot (p < .01).

Turning from long-term media use to specific media messages, the analyses consistently supported the hypothesized effects of media imagery. Exposure to cryptid documentary program imagery increased belief in the featured cryptid in every case. The results here follow from a priming-based account premised on increased cognitive accessibility of thoughts in memory resulting from spreading activation (Iyengar & Kinder, 1987; Scheufele & Tewksbury, 2007; Zaller, 1992)—in this case, thoughts presumably related to the specific content of programs and/or the broader credibility of their sources (Brewer & Ley, 2010; Myrick & Evans, 2014; Nisbet, 2006). The evidence for spillover effects to belief in other cryptids was less consistent, suggesting that such effects may sometimes be limited to the specific topic at hand.

Finally, the results revealed relationships between audience reasons for viewing paranormalthemed television and belief in cryptids. Informational reasons for watching such television played the clearest role in predicting beliefs: This motivation was linked to belief in two of three cryptids. Entertainment motivations also predicted belief in one cryptid, whereas communicative motivations were not associated with belief in any cryptids. These results provide an initial step in answering previous calls for research on the uses and gratifications underlying paranormal media use (Sarapin & Sparks, 2015). Specifically, the findings here follow from a key premise in uses and gratifications theory (Blumler, 1979; Rubin, 1983) and the gratification/cultivation model (Bilandzic & Rössler, 2004), that is, different motivations for consuming media can carry different implications for responses to those media. In the case of paranormal television, the results of Study 2 suggest that entertainment uses may be slightly more common than informational uses and also that the latter may play a more consistent role in predicting beliefs.

In drawing conclusions from these findings, it is crucial to acknowledge the study's limitations. To begin with, correlational analyses limit strong causal inferences about cultivation processes. Paranormal television viewing and news use may shape cryptid beliefs, reflect them, or be linked to them through feedback loops. The same logic applies to uses and gratifications predicting beliefs. Future research could employ experimental methods to gain deeper insights into these relationships (see, e.g., Sparks, 1998; Sparks & Pellechia, 1997).

The experimental tests provide stronger evidence of causal relationships between exposure to media imagery and belief in cryptids. However, these tests do not assess whether such exposure activates preexisting beliefs, as predicted by priming theory (Iyengar & Kinder, 1987; Scheufele & Tewksbury, 2007). Thus, future studies could build on the indirect approach used here (see also Brewer & Ley, 2010; Myrick & Evans, 2014) to conduct tests that directly capture the role of priming thoughts in audience members' memories as a mechanism underlying the effects observed. Such research could also test how paranormal video content influences belief in cryptids and whether message features such as "found footage," music, jargon, technology, and scientific sources moderate these effects (Brewer, 2012; Kirby, 2011).

Yet another set of limitations stems from the study's measures of key concepts. Some of the study's measures of media use and reasons for consuming media rely on single indicators; with this in mind, future research could capture these concepts in greater depth. Similarly, the study's measures of beliefs about cryptids may not fully capture the nuances of such beliefs. Beliefs about paranormal phenomena can be complex and multifaceted, taking on different meanings for different people and multiple meanings for the same person. For some, these beliefs may reflect personal interpretations and experiences (e.g., Kripal, 2014), including spiritual or religious ones (e.g., Paddison, 2019). Moreover, individuals may hold beliefs about cryptids that are simultaneously serious and playful (Foster, 2008). Future research could gather more comprehensive measures of cryptid beliefs and explore their interactions with personal experiences (Sparks & Miller, 2001; Sparks et al., 1997). This approach would enable deeper investigations into how various reasons for consuming paranormal media may relate to different belief dimensions. For instance, informational uses might align with beliefs in cryptids as scientifically discoverable phenomena, whereas entertainment uses could be associated with belief as a form of fun.

A final set of limitations revolves around the broader generalizability of the study's results, which came from analyses of two non-probability samples collected in one nation during a relatively brief period (2021–2022). Future research could extend this study's findings by collecting data through probability

sampling and by examining other publics and/or new points in time. Having said this, comparing the results across the two surveys reinforces the study's findings regarding how paranormal documentary/reality television viewing, paranormal news use, and exposure to media imagery can predict belief in cryptids.

Taken together, the study's results speak to and extend previous research regarding how media use and media messages can help explain public belief in paranormal phenomena. The evidence presented here underscores the potential roles of genre-specific cultivation and media priming in this domain while illustrating the promise of examining uses and gratifications for consuming paranormal television. In line with cultivation theory, the findings highlight television's role as a modern mythmaker (Gerbner & Gross, 1976): By providing plausible portrayals of hidden creatures, the medium may help perpetuate belief in the sorts of monsters that have long occupied a prominent place in folklore. Yet it is also important to note that paranormal reality/documentary viewing and news use predicted belief in cryptids whereas overall television viewing and science fiction viewing generally did not. As Ocker (2022) observes, a horde of fictional "Frankensteins and King Kongs and Grendels" may weigh less in viewers' minds than "a single monster that is 'based on a true story'" (p. 277). To be sure, presenting pseudo-documentaries such as *Mermaids: The Body Found* (Bennett, 2011) with more prominent disclaimers or skeptical commentary might blunt the impact of their credible-seeming imagery (Brewer, 2012, 2013; Sparks & Pellechia, 1997; see also Garrett & Poulsen, 2019)—though perhaps at the cost of their entertainment value for viewers and, thus, ratings for media producers.

Looking beyond the context of cryptozoology, the study's results provide foundations for further research on the implications of media messages for belief in phenomena such as the "unidentified aerial phenomena" currently under investigation by the U.S. government (Stise et al., 2023, p. 1) and the alleged ghosts, hauntings, and mediums that remain a staple of documentary and reality cable television (Brewer & Ley, 2021). Exploring how media factors predict cryptid belief may also illuminate the media's influence on other fringe beliefs. Critics of cryptozoology programs suggest that these "docufictions" not only boost cryptid belief but also fuel conspiracy theories about government agencies "lying to us about climate change" and other science-related topics (Thaler, 2016). Along similar lines, one recent survey experiment found evidence that belief in Bigfoot was associated with a range of conspiratorial beliefs—including beliefs about vaccines causing autism—in respondents' minds (Cassino, 2022). Thus, insights regarding "cryptid communication" could carry implications beyond the realm of the paranormal.

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