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Finding an antidote: Testing the use of proactive crisis strategies to protect organizations from astroturf attacks

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ABSTRACT

Astroturfing, or the orchestration of manipulative propaganda campaigns, has become the center of conversations amid Fake News disputations. Exploring an astroturf attack as a paracrisis, this research investigates the effects of an attack and how proactive communication strategies can protect organizational outcomes (i.e., credibility, crisis responsibility, account acceptance, and organizational reputation). An online experiment using a U.S. adult sample ($N = 597$) was conducted to compare the effects of using pre-bunking, PR supportive, and strategic silence strategies. The study provides insights into advancing crisis communication theory by demonstrating the success of pre-bunking to thwart potential damage post-astroturf attack. In addition to expanding theoretical crisis response models, this research offers practitioners with advice that emphasizes the use of proactive strategies to pre-bunk disinformation.

1. Introduction

The term “astroturfing” has recently become a global phenomenon in political circles and amid the Fake News disputations. It has received coverage from talk show hosts such as John Oliver, and its egregious practices were exposed in *The New York Times* Best Seller, “The Smear” (Attkisson, 2017). The term refers to coordinated campaigns where messages supporting a specific agenda are distributed from shell organizations to ensure that ties to the fake grassroots campaigns can be kept secret (Leiser, 2016). Astroturfing is a subcategory of disinformation, defined as having a purposeful, and often malicious, intent to deliberately mislead audiences in support of strategic objectives (Keller, Schoch, Stier, & Yang, 2019). Astroturfing consists of two specific characteristics: (1) the use of deception to disguise the true origins of the message being portrayed and (2) a lack of transparency, which helps hide the identity behind the message (Leiser, 2016). Similar to artificial turf resembling real grass, astroturf attacks appear nearly identical to messages from real grassroots organizations, which poses threats to the organizations being attacked.

The realm of (mis/dis)information is a phenomenon that has recently attracted public relations and crisis communication scholars to produce debunking strategies (e.g., Caulfield, 2020; Jin, van der Meer, Lee, & Lu, 2020; Nsoesie & Oladeji, 2020; Pennycook, Cannon, & Rand, 2018; van

der Meer & Jin, 2020; Wang & Zhuang, 2018). However, astroturfing has yet to be theoretically tested using dominant crisis communication frameworks, inhibiting organizations from understanding its effect. When it comes to the classification of astroturfing within crisis communication literature, astroturf attacks are considered an evolved form of a crisis; a paracrisis. Similar in that both concepts threaten organizational assets, a paracrisis is differentiated as “a publicly visible crisis threat that charges an organization with irresponsible or unethical behavior” (Coombs & Holladay, 2012, p. 409).

Thus far, few studies have experimentally tested the effectiveness of response strategies when dealing with a paracrisis (Honisch & Más Manchón, 2019). This leaves an opportunity to theoretically test the effects of an astroturf-based paracrisis, along with response strategies, as it is unclear to both researchers and practitioners facing such events on how the public perceives these messages (Honisch & Más Manchón, 2019). At least two research gaps can be identified from this opportunity: First, there is a lack of knowledge about the effectiveness of response strategies when dealing with a paracrisis. The current manuscript advances findings from Honisch and Más Manchón’s (2019) study, which focused on the effects of four reactive response strategies (reform, humor, refuse, and refute) on an individual’s perceptions of an attacked organization’s reputation and behavioral intentions by examining proactive response strategies. This expansion leads to the second gap within

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paracrisis literature. When considering responding to paracrisis events, especially those that may be recurring, such as astroturfing campaigns, there is a need to understand how organizations can proactively address an attack by testing prepared strategies (Coombs, 2020). The current study sets out to examine this gap through the lens of inoculation theory. The use of inoculation has proven over time to be a useful tool in overcoming adverse effects of misinformation crises and persuasion attempts when looking at outcomes such as counterarguing, perceived threat, attitudes, and behavioral intentions (e.g., Braddock, 2019; Einwiller & Johar, 2013; Wan & Pfau, 2004). However, there has been a lack of testing inoculation against other proactive communication strategies (i.e., PR supportive and strategic silence) that could protect specific organizational crisis outcomes such as credibility, crisis responsibility, and organizational reputation, from disinformation attempts.

To help narrow these gaps within public relations and crisis communication research and practice, we conducted an online experiment ($N = 597$) to examine how the use of proactive communication strategies (i.e., strategic silence, PR supportive, inoculation) can assist in protecting organizational crisis outcomes in response to a paracrisis astroturf attack. Findings from this study provide insights that advance crisis communication theory by testing the effectiveness of inoculation theory compared to commonly used proactive strategies to overcome paracrisis. In addition, since astroturf attacks can be triggered at any time, against any organization unprovoked, this study offers needed evidence-based recommendations that can provide practitioners with more confidence in how to take control of a seemingly powerless situation.

2. Literature review

2.1. Approaching astroturfing as a paracrisis

With the emergence of fake news, crisis communication has been used to understand how (mis/dis)information influences attitudinal perceptions and behavioral intentions. Disinformation comes in many forms, with astroturfing being a specific persuasion-based tactic that finds itself effective during persistent campaigns. There has been a growing consensus among scholars that the terms of misinformation and disinformation are distinct and require clarification. Thus, it is important to discuss how this study approaches these concepts.

The concept of *misinformation* is defined within literature as information that is incorrect but does not have the intention to harm (Keller et al., 2019). As previously mentioned, scholars within the crisis communication arena have been examining the evolving post-truth world of misinformation by studying elements such as how it is processed, transmitted, and influences behavior (e.g., Chen & Cheng, 2019; van der Meer & Jin, 2020; Weidner, Beuk, & Bal, 2019). Recently, scholars have investigated how consumers process and respond to fake news about brands. By applying the persuasion knowledge model (PKM), it was found that persuasion knowledge plays an important role when individuals process misinformation, such as fake news, in protecting outcomes such as brand trust and reputation. Meaning that if individuals have high persuasion knowledge it will thwart them from processing the fake news, protecting attitude change (Chen & Cheng, 2019).

While *misinformation* unintentionally spreads harmful or inaccurate information, *disinformation* is adverse information shared with the intention to mislead (Keller et al., 2019). Crisis communication researchers, such as Vafeiadis, Bortree, Buckley, Diddi and Xiao (2019), have studied how organizations can lessen the damage inflicted by disinformation crises through reactive communication strategies set forth by the situational crisis communication theory (SCCT). It has been found that when reactively responding to a disinformation attack, organizations should consider following SCCT's rebuttal message strategy to overcome potential organizational damage (Vafeiadis et al., 2019).

Although astroturfing has recently become a mainstream concept, its roots can be traced back to practices from the early 20th century (Leiser, 2016). Similar to fake news, astroturfing campaigns, while untrue, have components that are not entirely implausible (Pennycook et al., 2018). Additionally, what sets astroturf attacks apart from other persuasion-based tactics is the motivation behind the content, which gives a false impression of public support for or against a specific topic, which serves an agenda (Farkas, 2018). The intention behind corporate astroturf-based messages can take two different approaches. The first strategy is to use astroturfing to promote one's own product by providing misleading information. The practice can include a multitude of actions including company-employed bloggers posting product reviews intended to be seen as unbiased, pay-for-play deals, and advertisements that redirect to corporate-written pages. In these cases, the act can be seen as a tactic to counter negative attention towards a brand. The second approach is to use astroturfing to attack rival organizations or causes by spreading rumors or negative information, which leads to the need of crisis management.

The current study extends upon previous post-truth crisis communication literature by investigating the effects of a paracrisis, specifically a disinformation-based astroturf attack, intentionally spreading negative and misleading information about an organization. Paracrisis management extends knowledge in how to manage and respond to new forms of crises that emerge online. Although still threatening to organizational assets, a paracrisis is unique to the online environment and is defined as "a publicly visible crisis threat that charges an organization with irresponsible or unethical behavior" (Coombs & Holladay, 2012, p. 409). In Coombs' (2019) revision of SCCT, there are three forms, including customer service (when publics express negative feelings about an organization's customer relations); faux pas (misusing social media); and challenges (when stakeholders question if the organization is acting responsibly). In the instance of astroturfing, the paracrisis manifests as a challenge. While Coombs (2019) has stated that organizations do not need to respond to all paracrisis, the present study proposes proactive ways to address these unique situations.

2.2. Proactive strategies within the crisis context

Crisis management is a well-established practice of protecting organizations and stakeholders of any industry from threats (Coombs, 2007a). The crisis lifecycle is broken down into six stages referred to as warning, risk assessment, response, management, resolution, and recovery (Chandler, 2019). Research examining crises leans towards topics such as examining pre-crisis guidelines for preparation, advice for organizations amid crisis, strategies for restoring post-crisis reputation, message consistency, or reputation renewal (Ulmer, Seeger, & Sellnow, 2007; Ulmer, Sellnow, & Seeger, 2010). Heavy emphasis has been put on analyzing the effectiveness of post-crisis response strategies (e.g., Chan, Jones, Jamieson, & Albarracín, 2017; Mills & Robson, 2019; Schoofs, Claeys, De Waele, & Cauberghe, 2019; van der Meer & Jin, 2020). There is far less research examining the proactive steps an organization can take when considering strategic crisis communication plans. Before introducing the proactive responses for disinformation conceptual framework, several key concepts need to be defined to provide clear groundwork including: (1) proactive communication, (2) strategic silence strategy, (3) PR supportive strategy, and (4) pre-bunking strategy.

Proactive strategies are not a new concept within crisis communication (e.g., Cook, Lewandowsky, & Ecker, 2017; Le, Teo, Pang, Li, & Goh, 2018; Wan & Pfau, 2004). However, this paper works to test the strategies and conceptualize them in a strategic framework to be used when applied in response to disinformation via astroturfing campaigns. In simple terms, proactive communication is when problems are prevented, or effects are mitigated, instead of addressed reactively (Coombs, 2019). Ideally, questions are answered before they are even asked by using proactive communication in hopes of reducing negative

effects on reputation (Claeys & Cauberghe, 2014). To do so, organizations must partake in issues management, by pre-crisis monitoring and having engagement with stakeholders in order to buffer effects when a negative event occurs (Lee & Lee, 2020).

There are three primary strategies appropriate for addressing disinformation that have been previously examined within proactive crisis communication literature; strategic silence, PR supportive, and inoculation. It should be noted that there is a fourth proactive strategy used within the literature that has been found to be effective, which is the previously mentioned concept of stealing thunder (Arpan & Pompper, 2003). However, since the mechanisms for this strategy include disclosing a weakness or failure before it is announced by a third party (Arpan & Pompper, 2003; Einwiller & Johar, 2013), it is not deemed appropriate when dealing with astroturfing campaigns due to the primary content being false or incorrect information. Thus, we propose that a comprehensive conceptual framework of proactive responses for disinformation contain the proactive strategies of strategic silence, PR supportive, and pre-bunking.

2.2.1. Strategic silence

The first primary proactive strategy an organization can use to overcome disinformation within the proposed proactive communication framework is the practice of strategic silence. Strategic silence can be an intentional or unintentional use of “lack of communication from an organization or its failure to provide clear and adequate responses to questions or concerns raised” (Woon & Pang, 2017, p. 335). Le et al. (2018) refer to it as a deliberate lack of organizational communication and examined eight international crises to investigate the use of intentional, strategic silence. From this study, researchers determined that while the dominant view within crisis management is for organizations to issue a response as quickly as possible, there are at least five scenarios when delaying silence has potential to work. It is recommended silence be adopted as a supporting strategy to prepare for a primary response when the organization needs time to investigate the situation, fix an issue with a clear cause without inciting panic, or make arrangements for a primary response. Claeys and Opgenhaffen (2016) found that silence, as opposed to stealing thunder, may be more appropriate when an organization fears a response may jeopardize their stakeholder relationships and implicate legal liability. Additionally, Smith (2013) recognized strategic silence as a way to convey patience or justification while an issue is under investigation.

2.2.2. PR supportive strategy

The second strategy that appears within the proactive crisis strategy literature is PR supportive, which is similar to the bolstering strategy found within SCCT in that it provides positive arguments to reinforce an individual's positive attitudes to prevent slippage, which refers to an attitude toward the company becoming more negative (McGuire, 1961). As a proactive strategy, it may be used when a crisis is detected, but not identifiable, as to build good will and serve as a buffer during an event (Wan & Pfau, 2004). It has been proposed that “the supportive approach may work better than inoculation in guarding against people's attitudinal slippage in the event of no crisis” (Wan & Pfau, 2004, p. 319). Although a supportive statement proactively fosters positive attitudes regarding an organization's business practices or products, the statement does not directly address the threat or susceptibility to a potential crisis (Benoit, 1995).

2.2.3. Pre-bunking

This leads to the last proactive strategy of pre-bunking, or inoculation. Inoculation is derived from the inoculation theory, which is referred to as the “grandparent theory of resistance to attitude change” (Eagly & Chaiken, 1993, p. 561). It hypothesizes that individuals presented with, or inoculated with, a forewarning message about an attack will be less affected by the persuasive attempt (McGuire, 1961). Rather than trying to persuade an individual, inoculation-based strategies use

two-sided messages to create resistance to persuasion (Allen, 1991; Banas & Rains, 2010).

Serving as a medical analogy, inoculation works similarly to a vaccination providing individuals with strengthened attitudes so they are resistant to potential persuasive attacks. To achieve this outcome, inoculation-based messages are composed of two mechanisms: threat and refutational preemption. The purpose of the threat component is to act as the motivational catalyst for resistance by forewarning receivers of a potential persuasive attack and acknowledge the potential vulnerability of a previously held attitude (Pfau, Haigh, Sims, & Wigley, 2007). The second component, refutational preemption, is the process in which the message raises and then systematically refutes specific challenges to attitudes that may come under attack in the future. The purpose of refutational preemption is to provide receivers of the message with information that can be used in counterarguing (Banas & Rains, 2010; Banas & Richards, 2017; McGuire, 1961). Studies over the last decade have consistently supported the positive effects of inoculation treatments on protecting attitudes and strengthening intentions (e.g., Banas & Rains, 2010; Banas & Richards, 2017; Dillingham & Ivanov, 2017; Nabi, 2003).

2.3. Pre-bunking crisis disinformation from astroturfing campaigns

While inoculation theory has been around for decades, researchers have begun to apply the theory to a broadening spectrum of communication topics, including pre-crisis organizational communication (Einwiller & Johar, 2013; Ivanov, Sellnow, Getchell, & Burns, 2018). Einwiller and Johar (2013) demonstrated how inoculation serves as an effective proactive strategy for coping with a crisis raised by consumer advocates while examining attitude change, word-of-mouth, and counter-arguments against the accusations. The study demonstrated how firms can openly address an accusation with refutational inoculation to foster cognitive activity. In addition, the success of using inoculation, or “pre-bunking,” to combat disinformation has been noted by both professionals and researchers to be effective at building immunity and reducing susceptibility (Braddock, 2019; Cherenson, 2020; van der Linden, Leiserowitz, Rosenthal, & Maibach, 2017). For example, Braddock (2019) found that the use of inoculation successfully thwarted disinformation persuasive attempts within extremist propaganda.

A potential issue that prevents inoculating stakeholders prior to a crisis is that practitioners cannot always predict the exact details of a crisis in order to forewarn stakeholders. However, it has been found that inoculation provides a broad base that does not require detailed information about the future crisis to employ the mechanisms of threat and refutational preemption. Further supporting the use of inoculation, Einwiller and Johar (2013) found that disidentified participants who were inoculated reported significantly less negative attitude change than when they had received either a supportive message or no message.

Traditionally, studies have examined the effects of inoculation on variables such as general attitude change, the extent of beliefs in accusations, psychological reactance, and behavioral intentions (see Cook et al., 2017; Einwiller & Johar, 2013; McGuire, 1961; Miller et al., 2013; Niederdeppe, Heley, & Berry, 2015; Ivanov & Parker, 2011; Richards & Banas, 2015; Roozenbeek & van der Linden, 2019). In the present study, we expand upon the inoculation theory from previous research endeavours by examining the effects the strategy can have on commonly examined post-crisis outcomes when compared to PR supportive or strategic silence. In addition, we extend the conversation from Einwiller and Johar's (2013) study by addressing not an accusation, but a disinformation astroturf attack. While an accusation may be justified or a baseless rumor, an astroturf attack embeds a truthful fact into a false claim, complicating the process of dissecting fact and fiction.

2.4. Crisis communication research outcomes

The conceptualization proposes strategies for proactive

communication and how to evaluate its effectiveness by incorporating previously examined crisis outcomes that have played integral roles within image repair theory (Benoit, 1997), situational crisis communication theory (SCCT) (Coombs, 2019), and the social-mediated crisis communication model (Jin, Liu, & Austin, 2014). To measure effectiveness, specific outcomes of credibility, crisis responsibility, account acceptance, and organizational reputation capture crisis communication assets extended from previously published crisis communication literature.

The concept of credibility refers to the believability of communication, such as a stakeholder judging the accuracy of a message (Metzger, Flanagin, Eyal, Lemus, & McCann, 2003; O'Keefe, 2002). In crisis communication literature, van Zoonen and van der Meer (2015) found credibility could boost the effectiveness of communication and explored it as a mediator of communication strategies on reputation. On social media, users determine the credibility of the information they are exposed to as these channels do not have gatekeepers (Kent, 2013). Understanding stakeholder perceptions during a paracrisis requires further investigation to explore perceptions of the attacker's and victim organization's credibility. Credibility is a multifaceted concept and measures various items (e.g., intelligence, expertise, informed, competent) (McCroskey & Teven, 1999). Inoculation has been found to protect attitudes against attack advertising when the inoculation message is perceived credible (Pfau, Kenski, Nitz, & Sorenson, 1990). Extending this knowledge by comparing pre-bunking with inoculation to PR supportive and strategic silence, the following hypothesis is proposed:

H1a. The use of the pre-bunking strategy, as compared with the PR supportive or strategic silence strategies, significantly increases the targeted organization's perceived credibility.

Astroturfing campaigns aim to gain credibility by using persuasive messages to manipulate information and gain trust. Thus, it is imperative to gauge how the attacker's credibility is impacted by proactive messaging. Lower perceptions of the attacker's credibility implies less acceptance of the message, which leads to less damage to the victim organization. Within the realm of (mis/dis)information, Visentin, Pizzi and Pichierri (2019) examined the impacts of fake news on adjacent brand ads. The researchers found that the source credibility of the fake news significantly impacted adjacent brand ads' trust, which then influenced outcomes such as brand attitudes and future purchase intentions. Pre-bunking, which is the most direct messaging that confronts the attacker, is predicted to have the greatest effect on lowering perceptions of the attacker's credibility. The second hypothesis proposes:

H1b. The use of the pre-bunking strategy, as compared with the PR supportive or strategic silence strategies, significantly decreases the attacking organization's perceived credibility.

Although we have some preliminary evidence for the benefit of using pre-bunking through inoculation to thwart the effects of persuasive attempts, no organizational crisis communication research has 1) compared pre-bunking's effects with the dominant proactive strategies (PR supportive and strategic silence) in response to astroturfing; and 2) determined which strategy type may be more effective on key organizational crisis communication outcomes (e.g., crisis responsibility, account acceptance, and reputation). Therefore, to further understand the effects of proactive disinformation communication strategies in the setting of organizational crises, the remaining dependent variables will be examined through a series of research questions.

During a crisis, stakeholders seek information about the cause to assign blame and pressure accountability. This is driven in SCCT by attribution theory, which shows how people assign responsibility if they believe that an organization, intentionally or unintentionally, caused a crisis (Coombs & Holladay, 1996). This level of responsibility depends on how stakeholders perceive the crisis by asking the extent they blame the organization or feel they had power to control the situation (Coombs & Holladay, 2002). As crisis scholars have made an effort to advise

message strategies that lessen the weight of crisis responsibility on an organization, it is known that less attribution results in less severe consequences. Thus, we ask:

RQ1. Will the use of the pre-bunking strategy, when compared to the PR supportive or strategic silence strategies, significantly decrease perceived crisis responsibility of the targeted organization?

Crisis responses rely on the stakeholders accepting the messages provided by an organization (Coombs & Holladay, 2002). Without this acceptance, there is little hope for the message to have a positive effect on stakeholders. Account acceptance has been studied as a precursor to reputational scales in order to understand if a response is perceived as appropriate (Coombs & Holladay, 2008). To understand how crisis responses impact reputational assessments, account acceptance is understood to illustrate the cause of these perceptions. Thus, it is an important step in evaluating the effectiveness of pre-bunking against the other strategies with the following research question:

RQ2. Will the use of the pre-bunking strategy, as compared with the PR supportive or strategic silence strategies, significantly increase the account acceptance of the targeted organization's response?

Lastly, reputation is critical to an organization and crisis communication continually strives to investigate how response strategies can restore reputation during negative events (Coombs, 2007a). While a positive reputation can take an organization years to establish, an astroturfer's claims can disintegrate it with one effective campaign. This concept has been critical to dictating the future of an organization and has been thoroughly utilized in crisis communication literature (e.g., Coombs, 2004; An & Cheng, 2010; Lyon & Cameron, 2004; Ulmer et al., 2007). In SCCT, the framework often measures organizational reputation as the dependent variable to understand how it is impacted by a crisis, and an organization's response to it (Claeys & Cauberghe, 2014; Coombs, 2007b). In 2018, it was reported that out of 1200 communication professionals, 20 % indicated that (mis/dis)information via fake news had impacted their organizational reputation (Reber, Meng, Berger, Gower, & Zeffass, 2018). By acknowledging the impact disinformation via astroturfing campaigns can have on organizational reputation, the following research question tests pre-bunking through inoculation against the other proactive strategies:

RQ3. Will the perceived organizational reputation of the targeted organization be significantly higher post-astroturf attack when pre-bunking is used, as compared with the PR supportive or strategic silence strategies?

3. Methodology

An experimental study was designed to establish which proposed proactive strategy is most effective in lessening the effects of an astroturf attack on reputation. Participants were randomized into one of the following response conditions: strategic silence, PR supportive, and pre-bunking.

To increase ecological validity, two real organizations were used within this study, *The Washington Post* and *Accuracy in Media (AIM)*. The organizations were selected due to AIM's history of actively attacking *The Washington Post* with astroturfing campaigns. AIM claims it is a citizens' media watchdog with the mission of promoting "accuracy, fairness and balance in news reporting," yet its reporting reflects contrary (Accuracy in Media, 2020). Goss's (2009) analysis of the site and its discourses found that although 'accuracy' is celebrated in its name, it betrays this mission by exhibiting one-sidedness that is "written into AIM's DNA" (p. 465). Thus far, *The Washington Post* has not addressed the attacks, which provides a key opportunity to examine what would occur if proactive communication is used before readers become aware of the attacks. Since this study used two real organizations, participants reported pre-attitudes towards both, which was then controlled for

during analysis.

3.1. Sampling

A total of 655 participants were recruited through MTurk. MTurk is a web-based platform used for recruiting and paying subjects to perform tasks that allows for rapid recruitment of a diverse sample (Clifford, Jewell, & Waggoner, 2015). Following Shamon and Berning (2020) recommendations, two attention questions were included to help ensure participants were paying attention to the stimuli presented and to identify straightlining. One was shown after the pre-bunking stimulus was presented and asked participants to indicate what organization the pre-bunking message warned against. The second attention check was shown after the astroturfing video was viewed and asked who the video was published by. In total, there were 58 respondents who did not answer the attention checks correctly and were removed, leaving 597 usable responses for final analysis.

Demographics were collected and participants ranged in age from 18 to 84 ($M = 38.35$, $SD = 12.38$) living in the United States. Of those, 52 % were male ($n = 310$), 48 % were female ($n = 285$), and less than 1 % ($n = 2$) identified otherwise or preferred not to say. In terms of ethnicity, the majority were White ($n = 463$, 77.55 %), with the remaining being Black ($n = 69$, 11.56 %), Hispanic/Latino ($n = 63$, 10.55 %), Asian/Pacific Islander ($n = 43$, 7.20 %), Native American ($n = 8$, 1.34 %), and Other ($n = 14$, 2.35 %). The participants varied in educational background with the largest percentages having a four-year degree in college ($n = 285$, 47.84 %), followed by some college but no degree ($n = 97$, 16.25 %), and Master's degree ($n = 93$, 15.58 %). The political affiliation of participants also varied with 311 Democrats (17.09 % Strong Democrats, $n = 102$; 23.79 % Democrats, $n = 142$; 11.22 % Independent leaning Democrats, $n = 67$), 182 Republicans (5.86 % Strong Republicans, $n = 35$; 16.58 % Republicans, $n = 99$; 8.04 % Independent leaning Republicans, $n = 48$) and, lastly, 104 Independents (17.42 %). Lastly, participants were also asked how often they read *The Washington Post*, from once a week ($n = 117$, 19.60 %), several times a year ($n = 114$, 19.10 %), 2–3 times a week ($n = 110$, 18.43 %), and monthly ($n = 108$, 18.09 %), never ($n = 107$, 17.92 %), and daily ($n = 41$, 6.87 %).

3.2. Procedure

After participants read the informed consent script approved by the Institutional Review Board at a large research university in the U.S., they received a pre-crisis feeling thermometer with questions about their perceptions towards several organizations, including the two focused on within this study (e.g. *The Washington Post* and AIM). Participants were then randomized to receive a message from the organization being attacked, *The Washington Post*, using either the strategic silence, PR supportive, or pre-bunking, prior to being shown a series of astroturfing messages from AIM. Those who were randomized into the strategic silence condition did not receive a proactive message and instead reviewed an irrelevant message about sushi history commonly used in inoculation research (e.g., Banas & Miller, 2013; Banas & Richards, 2017). After all stimuli were presented, participants were given measures about perceptions of credibility, account acceptance, crisis responsibility, and reputation. Demographics were collected and a randomized code was generated for participants to receive payment.

3.3. Manipulations

Participants were randomized to receive one of the three proactive communication conditions (i.e., strategic silence, PR supportive, pre-bunking) about the organization being attacked, *The Washington Post* (Appendix A). The pre-bunking message published by *The Washington Post* provided specific information about the attacking organization (AIM) and explained the purpose of astroturfing, containing both forewarning and refutational preemption. In comparison, following

previous recommendations (i.e., Benoit, 1991), supportive messages solely focused on bolstering information about *The Washington Post*. Specifically, the PR supportive condition provided positive information regarding *The Washington Post*'s practices, while not mentioning AIM or a forthcoming astroturf attack. The goal of the supportive message was to reinforce positive aspects of the organization, rather than alerting to possible counterarguments. Lastly, those who were randomized into the strategic silence condition did not receive a message from *The Washington Post*.

For the astroturf-based stimulus, news headlines published by AIM, a real shell organization, were used. Each participant read four headlines that were retrieved from AIM's website and represent the organization's frequent attacks on *The Washington Post* (Appendix A).

3.4. Measurements

All measures were adopted from previous studies and tested for internal consistency. Cronbach's alpha coefficients ranged from .84 to .96, surpassing the acceptable threshold of .70 (Nunnally, 1978).

3.4.1. Pre-attitude feeling thermometer

Participants were asked to evaluate a series of organizations, including *The Washington Post* and AIM, on a 100-point feeling thermometer scale in which "0" indicated the lowest possible evaluation and "100" the most positive. If the participant was not familiar with an organization, they were told to select "have not heard of the organization," which was later recoded as "50," or "neither like nor dislike." The use of a feeling thermometer is commonly used in political communication experimental design literature in order to avoid priming participants within the experiment (Warner & McKinney, 2013; Warner, McKinney, Bramlett, Jennings, & Funk, 2019). In general, both *The Washington Post* ($M = 57.16$, $SD = 26.52$) and AIM ($M = 53.69$, $SD = 17.89$) were perceived somewhat neutral and both of these pre-attitudes were used as covariates in analysis.

3.4.2. Motivational threat

In order to gauge if the pre-bunking manipulation was successful, individuals received four items on a seven-point Likert scale to measure their perceived motivational threat (Banas & Richards, 2017; Richards & Banas, 2018). The items included statements such as: "I want to defend my current attitudes about *The Washington Post* from an attack from *Accuracy in Media* (AIM)" and "I feel motivated to resist persuasive messages about alternative accounts regarding *The Washington Post*" ($M = 5.36$, $SD = 1.76$, $\alpha = .86$).

3.4.3. Perceived credibility

Guided by McCroskey and Teven's (1999) credibility scale, after receiving the stimuli participants were asked about their perceived credibility towards *The Washington Post* and AIM. The scale included 18 bipolar statements including "I perceived this organization to be intelligent/unintelligent," "This organization is concerned with me/is not concerned with me," and "This organization is ethical/unethical" (*The Washington Post*: $M = 4.50$, $SD = 1.35$, $\alpha = .96$; AIM: $M = 3.91$, $SD = 1.25$, $\alpha = .94$).

3.4.4. Account acceptance

To measure individual's acceptance of the messages published by *The Washington Post*, a three-item scale was adapted from Blumstein et al. (1974). Items were measured on a 7-point Likert scale ranging from (1) strongly disagree to (7) strongly agree and included items such as "After hearing *The Washington Post*'s statement to the situation, you react favorably to *The Washington Post*" and "You consider the statement by *The Washington Post* to be appropriate" ($M = 4.65$, $SD = 1.36$, $\alpha = .92$).

3.4.5. Attribution of crisis responsibility

This concept refers to participants' evaluation of the extent that *The Washington Post* was responsible for the situation (Coombs, 2007b). A five-item scale was adapted from Coombs and Holladay (2002) and Griffin, Babin and Darden (1992). It included a series of statements on a 7-point Likert scale ranging from (1) strongly disagree to (7) strongly agree including "To what extent do you blame *The Washington Post* for what has happened?" and "To what extent did *The Washington Post* have power over the behaviors described?" ($M = 4.59$, $SD = 1.53$, $\alpha = .89$).

3.4.6. Post-crisis organizational reputation

A four-item measure of organizational reputation, adapted from an existing reputation measure (Coombs & Holladay, 1996, 2002), was presented for participants to respond using a 7-point Likert scale ranging from (1) strongly disagree to (7) strongly agree. Items included "The *Washington Post* is concerned with the well-being of its publics" and "Under most circumstances, I would be likely to believe what *The Washington Post* says" ($M = 4.47$, $SD = 5.77$, $\alpha = .84$).

4. Results

4.1. Preliminary analysis

Prior to testing the hypotheses and research questions, an induction check was conducted to ensure that the manipulation of pre-bunking had the desired effects. Following the procedure set forth by Banas and Richards (2017), motivational threat was measured as a key mechanism of inoculation. An ANOVA was conducted to ensure that manipulations within the pre-bunking condition were successful, $F(2, 594) = 4.05$, $p = .02$, Power = .72, $\eta^2 = .01$. It was found that there were statistically significant differences between the conditions, with individuals in the pre-bunking condition ($M = 5.47$, $SD = 1.69$) having the highest levels of perceived motivational threat, followed by supportive condition ($M = 5.36$, $SD = 1.74$), and strategic silence ($M = 4.84$, $SD = 1.92$). Thus, the manipulation was deemed successful.

4.2. Perceived credibility

4.2.1. Perceived credibility of attacked organization

Hypothesis 1a. proposed that the use of the pre-bunking strategy, as compared with the PR supportive or strategic silence proactive strategies, would significantly increase the attacked organization's perceived credibility. An ANCOVA was conducted to determine if there were significant differences between the three conditions and the perceived credibility of *The Washington Post*, when controlling for pre-attitudes towards *The Washington Post* and AIM (Table 1). It was found that there were significant differences between the conditions, $F(2, 592) = 7.54$, $p < .001$, Power = .94, $\eta^2 = .03$. Pairwise comparisons conducted using the Bonferroni correction revealed that there were statistically significant differences between individuals who received strategic silence from *The Washington Post* ($M = 4.09$, $SE = .12$) compared to those who received a pre-bunking message ($M = 4.62$, $SD = .07$, $p < .001$) and compared to those who received a PR supportive message ($M = 4.45$, $SD = .07$, $p = .03$). Meaning that individuals who received the

Table 1

ANCOVA Comparative Summary Of Effects Of Proactive Message Strategy on Perceived Credibility.

Condition	n	<i>The Washington Post</i> M (SE)	AIM M (SE)
Pre-bunking	264	4.62 (.06) _a	3.55 (.08) _{cd}
PR Supportive	255	4.45 (.07) _b	4.13 (.08) _c
Strategic Silence	78	4.09 (.12) _{ab}	4.02 (.15) _d

Note. Shared subscripts represent statistically significant differences: a,c = $p < .001$; b,d < .05.

strategic silence strategy from *The Washington Post* had lower perceptions of credibility towards *The Washington Post* than those who received either the pre-bunking or PR supportive message. There was not a statistically significant difference between individuals who received the pre-bunking message and those who received the PR supportive message condition. Thus, H1a is partially supported.

4.2.2. Perceived credibility of attacking organization

H1b predicted that the pre-bunking strategy would significantly decrease perceptions of AIM's credibility compared to the other proactive strategies. An ANCOVA was conducted to determine if there were significant differences between pre-bunking, PR supportive, and strategic silence, towards perceived credibility of AIM when controlling for pre-attitudes (Table 1). It was found that there were significant differences between the conditions, $F(2, 592) = 13.63$, $p < .001$, Power = 1.00, $\eta^2 = .04$. Pairwise comparisons conducted using the Bonferroni correction found that those who received a pre-bunking message from the *The Washington Post* had significantly weaker perceptions of AIM's credibility ($M = 3.55$, $SE = .08$) than those who did not received a message (strategic silence) ($M = 4.02$, $SE = .15$, $p = .02$) and those who received the PR supportive message ($M = 4.13$, $SE = .08$, $p < .001$). There was not a statistically significant difference found between individuals who received the PR supportive message and strategic silence ($p = 1.00$), meaning that individuals who received the pre-bunking treatment had the lowest perceived credibility of AIM compared to those who received the PR supportive message and strategic silence. Thus, H1b is supported.

4.3. Attribution of crisis responsibility

RQ1 investigated if the use of the pre-bunking strategy, as compared with the PR supportive or strategic silence strategies, would significantly decrease perceived crisis responsibility of the targeted organization. An ANCOVA found that there were significant differences between the conditions while controlling for pre-attitudes, $F(2, 592) = 6.51$, $p = .002$, Power = .91, $\eta^2 = .02$. Pairwise comparisons conducted using the Bonferroni correction found that those who received a pre-bunking message from *The Washington Post* had statistically significantly weaker perceptions of crisis responsibility ($M = 4.39$, $SE = .09$) than those who received a PR supportive message ($M = 4.81$, $SE = .09$, $p = .002$). There were no statistically significant differences between those who received strategic silence ($M = 4.76$, $SE = .16$) and those who received the pre-bunking strategy ($p = .12$) or PR supportive message ($p = 1.00$). Meaning that individuals who received a pre-bunking message perceived *The Washington Post* to be less responsible for the situation than those who received the PR supportive message.

4.4. Account acceptance

To examine RQ2 an ANCOVA was conducted to determine if the pre-bunking strategy, as compared with the PR supportive or strategic silence strategies, would significantly decrease perceived crisis responsibility of the targeted organization. The analysis found that there were significant differences between the message treatments while controlling for pre-attitudes, $F(2, 592) = 7.78$, $p < .001$, Power = .95, $\eta^2 = .03$ (Table 2). Pairwise comparisons of adjusted means using the Bonferroni correction found that individuals who received strategic silence had statistically significantly weaker levels of account acceptance ($M = 4.13$, $SE = 0.12$) compared to those in the pre-bunking ($M = 4.78$, $SE = .07$, $p < .001$) and PR supportive conditions ($M = 4.61$, $SE = 0.07$, $p = .02$). There was not a statistically significant difference of adjusted means between the pre-bunking and PR supportive conditions ($p = .31$). Meaning that use of both the pre-bunking or PR supportive strategies can increase account acceptance when compared to strategic silence.

Table 2

ANCOVA Comparative Summary of Effects of the Proactive Disinformation Communication Strategies.

Condition	n	Crisis Responsibility M (SE)	Account Acceptance M (SE)	Reputation M (SE)
Pre-bunking	264	4.39 (.09) _c	4.77 (0.07) _a	4.56 (0.07) _d
PR Supportive	255	4.81 (.09) _c	4.61 (0.07) _b	4.45 (0.07)
Strategic Silence	78	4.76 (.16)	4.22 (0.12) _{ab}	4.21 (0.12) _d

Shared subscripts represent statistically significant differences: $a = p < .001$, $c = p < .01$, $b, d, e = p < .05$.

4.5. Attacked organization's organizational reputation

Lastly, RQ3 stated that the perceived organizational reputation of the attacked organization would be significantly higher post-astroturf attack when pre-bunking was used compared to the other proactive strategies. An ANCOVA controlling for pre-attitudes found that there were significant differences between the message treatments, $F(2, 592) = 3.51$, $p = .04$, Power = .62, $\eta^2 = .01$ (Table 2). Pairwise comparisons of adjusted means using the Bonferroni correction found that individuals who received the pre-bunking treatment ($M = 4.56$, $SE = .07$) had statistically significantly higher adjusted means than those who received strategic silence ($M = 4.21$, $SE = .12$, $p = .03$). While those who received the pre-bunking message had higher organizational reputation scores than those who received the PR supportive strategy, the difference was not statistically significant ($M = 4.45$, $SE = .07$, $p = .73$). In addition, the PR supportive strategy did not differ significantly from strategic silence ($p = .25$). Meaning that both the pre-bunking and PR supportive strategies provided stronger reputation protection against the astroturf attack than the strategic silence strategy.

5. Discussion

The primary goal of this research endeavor was to identify proactive communication strategies that can assist communication practitioners facing paracrises, specifically repetitive or anticipated disinformation-based astroturfing campaigns. By integrating recently examined interdisciplinary theories, such as misinformation debunking and correcting (e.g., Jin et al., 2020; van der Meer & Jin, 2020), strategic silence (e.g., Le et al., 2018), inoculation (e.g., Braddock, 2019; Wan & Pfau, 2004), and paracrisis outcomes from SCCT (Coombs, 2019), this study presents an innovative proactive public relations framework connecting key strategies and their roles in the fight against disinformation crises. By testing the three strategies extended from prior proactive communication literature, the current study is the first step in testing a proposed conceptual framework to provide both researchers and practitioners guidance on what type of strategy should be initiated. In addition, this research study sought to empirically test the use of inoculation theory within the context of a paracrisis to situate it within the framework.

In the post-truth era, the spread of disinformation has become a systemic societal concern. While the creation and dissemination of disinformation is not new, the use of social media has provided a new breeding ground, and communication frameworks must evolve to understand this phenomenon (Mills & Robson, 2019). Whether it is true or false, the normalization and acceptance of information on digital media has changed how individuals consume content (Mills & Robson, 2019). Simultaneously, the digital media landscape continues to shift how communication efforts are initiated to protect organizational assets post-crisis by requiring shortened reaction times and more positive interactions with audiences online (Cheng, 2018). These constant shifts within the crisis communication and digital media landscapes require researchers to continue providing empirically supported, theoretically driven strategies for practitioners to use against challenges they face in

the industry.

Within the public relations practice, intentionally creating and spreading disinformation via astroturfing crosses an ethical boundary. However, it is a practice that has increasingly become prominent throughout the political and nonprofit sectors, as tensions rise through conflicting and competing interests. Examining how organizations can respond to disinformation attacks not only provides evidence that benefits outcomes such as organizational reputation, it also provides a better understanding of how to thwart the persuasiveness of disinformation. Specifically, as social media outlets such as Twitter begin to initiate pre-bunking strategies to disengage users from believing disinformation, it is important to empirically test these strategies to enhance effectiveness.

Our initial empirical evidence supports the idea that organizations should proactively communicate with PR supportive or pre-bunking strategies when they are able to foresee astroturf attacks, providing support against previously suggested literature suggesting that no response may be warranted when faced with a paracrisis (Coombs, 2019). Use of these two strategies has been met with competing information that finds pre-bunking may or may not provide equal protection compared to PR supportive messages (see Ivanov, Pfau, & Parker, 2009; Wan & Pfau, 2004). This study found that while there were not statistically significant differences present for all outcome variables, pre-bunking did outperform the PR supportive strategy when looking at credibility and crisis responsibility. These findings are consistent with prior research that studied the effectiveness of pre-bunking on accusations (Einwiller & Johar, 2013). The following sections will delve into discussion revolving around the effect of proactive message strategies on individual outcome variables.

With the goal of weaving in proactive communication into paracrisis response literature, the findings contribute to the knowledge of effective strategies to combat the emerging, and seemingly indefensible, astroturf attacks. This research offers practitioners with advice that emphasizes the use of proactive strategies, while also building upon well-developed crisis communication literature by empirically testing paracrisis responses. The main contribution of the present study is the effectiveness of proactive messaging, specifically the utility of using pre-bunking to prepare for an astroturf-based attack. If a circumstance allows, pre-bunking is an effective way to expose the nature of astroturfing and preserve integrity. The traditional PR supportive messaging, such as emphasizing the mission of the organization in a positive light, is also more beneficial than silence, which, prior to this study, could have been thought to construe patience, control, or protection against liability (Claeys & Ogenhaffen, 2016; Le et al., 2018; Smith, 2013). Although not recognizing a rumor with messaging may sound like an appealing and effortless way to dissolve a situation, organizations face a real threat and this study provides empirical evidence that shows how organizational reputation suffers. As it can be anticipated that paracrises will rise with the use and reliance on online information, this research offers guidance to practitioners and future directions for research invested in the unique threats posed by astroturf attacks. The proposed conceptual framework provides a way to effectively assess and respond to disinformation while promoting positive post-attack outcomes.

5.1. Crisis outcomes

Our findings highlight the role of proactive organizational messaging to thwart negative crisis outcomes from astroturf attacks, which is indicated by weakening effects on 1) credibility, 2) attribution of responsibility, 3) account acceptance, and 4) organizational reputation. In addition, this study extends findings from SCCT by examining the effectiveness of proactive communication strategies to overcome disinformation in regards to commonly examined reactive crisis communication outcome variables of account acceptance, attribution of responsibility, and organizational reputation.

As a conceptual framework, credibility refers to the believability that

an individual receiving a message assigns to the source's expertise and trustworthiness. There has been a plethora of support from previous research that when a source is found to be credible, persuasion and motivation can be increased (e.g., Eagly, Wood, & Chaiken, 1978; Metzger et al., 2003). This study sought to examine if there was a proactive strategy that could be used in order to protect *The Washington Post's* perceived credibility from being tarnished from the astroturf attack, while also diminishing the attackers credibility. Results found that the pre-bunking and PR supportive strategies protected *The Washington Post's* credibility. While not statistically significantly different from PR supportive, the mean scores for pre-bunking outperformed the other strategies. Strategic silence, a strategy promoted within paracrisis literature, lead to the lowest credibility score. When examining the performance of the proactive strategies when it came to tarnishing AIM's perceived credibility, individuals who received the pre-bunking message statistically significantly outperformed those who received the PR supportive or strategic silence. Findings show pre-bunking is a valuable and worthwhile endeavor, as having the ability to lower an attacker's credibility could make the astroturfing message less persuasive.

A key element of post-crisis communication research has been examining the effects of reactive response strategies on crisis responsibility. As such, crisis responsibility was tested to determine how proactive responses can affect the way stakeholders perceived the crisis situation to be in the control of *The Washington Post*. Results indicated that use of pre-bunking provided significantly stronger protection than that of the PR supportive strategy. The use of PR supportive messaging induced the highest levels of perceived responsibility. That could be due to individuals perceiving the organization to be bolstering its own self-interests by using the tactic, as stakeholders are known to discount organizational attempts to defend themselves when the defender is perceived as self-serving (Lauzen, 2016; Baumeister & Scher, 1988; Vanhamme & Grobben, 2008).

The success of a crisis response first depends on if the message is accepted by the audience. When account acceptance is high, such as it was with pre-bunking, the response is perceived appropriate (Coombs & Holladay, 2008). The low account acceptance of strategic silence illustrates that not responding was not sufficient in addressing the paracrisis. To combat an astroturf attack by gaining stakeholder acceptance of a response, organizations must provide a response, rather than strategic silence. By specifically utilizing a pre-bunking strategy the organization's message was more effective in achieving account acceptance. The significant differences between conditions and the positive increase in acceptance with pre-bunking show the importance of preparing for anticipated attacks and providing a response, rather than disregarding it, hoping it becomes irrelevant.

With high levels of account acceptance for proactive messaging, the organization's reputation also improved. Pre-bunking proved to be an important strategy when combating astroturf attacks, showing that this approach restored reputation the most. PR supportive messaging was also more beneficial than strategic silence. This reiterates that providing a response and preparing messaging prior to onset, if an attack can be anticipated, is critical. It is known that paracrisis can pose reputational threats and this experimental study confirms this, but also shows how the proposed framework can protect reputation (Coombs, 2007b, 2019). While not responding to an attack may sound appealing, as to not give attention to the attacking organization, these findings show that silence is least effective at combating the message and leads to detrimental outcomes. Proactive messaging does not give the credit to the attacker, but instead leads to more message acceptance and organizational reputation.

5.2. Implications for practice

The proposed conceptual framework of proactive responses for disinformation provides actionable steps and communication strategies that practitioners can take when faced with a disinformation-based

paracrisis on social media. Currently, literature regarding paracrisis suggests that practitioners can choose not to respond to a paracrisis (Coombs, 2019). However, findings from this study demonstrate that when faced with an astroturf or disinformation-based attack, practitioners should actively try to communicate with stakeholders either with a supportive public relations message, or, ideally, by using pre-bunking messaging to forewarn stakeholders of an attack. In order to forewarn, practitioners must stay vigilant in environmental scanning, looking for potential warning signs of a crisis online. Identifying threats allows proactive communication to serve as a buffer before the crisis, even if exact information within the disinformation attack is not known. This idea is supported by previously published inoculation literature which suggests that explicit information about an attack is not needed within the proactive communication due to inoculation providing an umbrella effect (Compton, Jackson, & Dimmock, 2016). Pre-bunking is an effective proactive strategy that outperformed the other strategies, although PR supportive and pre-bunking messaging did not always statistically differ. With these preliminary findings in mind, practitioners may want to interweave forewarning information and counterarguing points about an impending attack within their PR supportive messaging when possible.

5.3. Limitations and future research direction

This study has several limitations to be addressed by future research. First, the stimuli in this study presented a real astroturf attack from AIM against *The Washington Post*. Limitations worth discussion involve the familiarity participants may have with these organizations and its effect on how they perceived the situation. One attempt to control for this is through the pre-feeling thermometer which showed that the average perception of the organizations were generally neutral in nature and used as covariates in analysis. Secondly, as astroturf campaigns gain momentum in all facets of communication, such as social media and political communication, research is needed to further understand how to effectively prepare and respond to attacks and explore other industries and platforms affected to validate the generalizability of these results. Additionally, this study only collected data from participants on MTurk located within the United States. Future research may explore how cultural contexts influence attitudinal perceptions of disinformation of individuals not represented on MTurk or cross-culturally. Lastly, the stimuli were presented in a condensed time frame, reducing the ecological validity of the experiment. In reality, the astroturf response and attack process is lengthened, and organizations are assured that stakeholders will be exposed to proactive messaging, which is an essential part of this process. A possible direction for future research is to investigate how the timed release of messages factor into perceptions with a longitudinal study, such as Einwiller and Johar's (2013) 10-day period between inoculation and an accusation.

Future research should expand on other variables that could potentially impact an organization, such as behavior intentions and value-relevant involvement. Einwiller and Johar (2013) found value-relevant involvement to explain effects as participants' identification with a company moderated inoculation effectiveness. In the present study, attention checks were utilized to identify how closely respondents were paying attention. While data with misidentified attention checks were removed, future research may examine levels of involvement, or "the importance or salience of an attitude object for a receiver" (Pfaue et al., 1997, p. 190), to assess if and how involvement impacts the motivation to process an inoculation message.

The present study exposes the meaning and intent of astroturfing while placing the organization in a favorable light. With the emerging changes in the intensity, scope, and nature of crises, the proposed proactive response for disinformation framework extends the best efforts to combat astroturf attacks. Findings suggest that using pre-bunking or PR supportive messaging could help organizations overcome potential damage from astroturf attacks. A promising line of future research is to

continue building upon this proactive communication framework to determine if different crisis circumstances and response strategies increase or decrease proactive effects.

Declaration of Competing Interest

We do not have any interests that might be interpreted as influencing

Appendix A

Stimuli

PROACTIVE MESSAGE STIMULI

Inoculation

We know people want to see accurate information at the *Washington Post* – and so do we.

False information from groups like *Accuracy in Media* is harmful to our community and it makes the world less informed. It's not a new concept, and we all have a responsibility to do our part in addressing it.

Accuracy in Media is a shell organization. It was created in 1969 as a conservative news media watchdog to promote accuracy, fairness, and balance in news reporting. However, *Accuracy in Media* has been shown to betray its mission by showing one-sidedness and keeping its donor-base of politicians and corporations anonymous. *Accuracy in Media* attacks organizations through astroturfing campaigns. 'Astroturfing' refers to a campaign that is meant to look like a publicly supported movement to shape public opinion. However, it comes from an outside organization that does not reveal its true motivations or funding.

The *Accuracy in Media* headlines being spread online tells viewers that the *Washington Post* has politically motivated bias and is unethical. For example, you may see claims that we hold double standards for politicians or that we are in a downward spiral trying to cover scandals and flawed reporting.

What these headlines do not tell you is that we specialize in national politics and have developed a reputation as one of America's leading political journalism institutions. At the *Washington Post*, our mission and values guide the work we do every day. Our award-winning journalists have covered Washington and the world with daily news since 1877. As of 2012, we are the eighth-largest newspaper in the United States and its second-largest newspaper website as of 2011.

Regardless of false information the organization *Accuracy in Media* provides through its misleading campaign, no newspaper outlet strives for the relentless coverage of important affairs in the U.S. and the world as the *Washington Post* does.

PR Support (no inoculation)

Our mission is simple: To tell the truth as nearly as the truth may be discovered. This mission is rooted in our belief that democracy dies in the darkness. We strive to tell all the truth so far as we can learn it, concerning the important affairs of America and the world.

At the *Washington Post*, our mission and values guide the work we do every day. Our award-winning journalists have covered Washington and the world with daily news since 1877. As of 2012, we are the eighth-largest newspaper in the United States and its second-largest newspaper website as of 2011.

We specialize in national politics and have developed a reputation as one of America's leading political journalism institutions, particularly since our coverage of the Watergate scandal in the 1970s. We are proud to have won more than 50 Pulitzer Prizes and numerous other prestigious journalism awards since then.

Thank you for supporting great journalists. We rely on readers like you to uphold a free press.

ASTROTURFING STIMULI

(Adapted from *Accuracy in Media* headlines)

- Accuracy in Media - <https://www.aim.org> -

Washington Post Called Out for Double-Standard in Treating Controversial Politicians

- Accuracy in Media - <https://www.aim.org> -

Scandal at The Washington Post: Fraud, Lobbying & Insider Trading

- Accuracy in Media - <https://www.aim.org> -

Losses Mount As Washington Post Continues Downward Spiral

- Accuracy in Media - <https://www.aim.org> -

Washington Post Tries to Salvage Reputation in Wake of Flawed Covington Reporting

the research, and APA ethical standards were adhered to in the research process. This manuscript has not been previously published, nor is it under consideration for publication elsewhere.

In addition, this research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

References

- Accuracy in Media. (2020). *Our mission*. <https://www.aim.org/about/mission-statement/>.
- Allen, M. (1991). Meta-analysis comparing the persuasiveness of one-sided and two-sided messages. *Western Journal of Speech Communication*, 55(4), 390–404. <https://doi.org/10.1080/10570319109374395>.
- An, S. K., & Cheng, I. H. (2010). Crisis communication research in public relations journals: Tracking. In W. T. Coombs, & S. J. Holladay (Eds.), *The handbook of crisis communication* (pp. 65–90). Wiley-Blackwell.
- Arpan, L. M., & Pompper, D. (2003). Stormy weather: Testing stealing thunder as a crisis communication strategy to improve communication flow between organizations and journalists. *Public Relations Review*, 29(3), 291–308. [https://doi.org/10.1016/S0363-8111\(03\)00043-2](https://doi.org/10.1016/S0363-8111(03)00043-2).
- Attkisson, S. (2017). *The smear: How shady political operatives and fake news control what you see, what you think, and how you vote*. Harper Collins Publisher.
- Banas, J. A., & Miller, G. (2013). Inducing resistance to conspiracy theory propaganda: Testing inoculation and meta-inoculation strategies. *Human Communication Research*, 39(2), 1–24. <https://doi.org/10.1111/hcre.12000>.
- Banas, J. A., & Rains, S. A. (2010). A meta-analysis of research on inoculation theory. *Communication Monographs*, 77(3), 281–311. <https://doi.org/10.0.4.56/03637751003758193>.
- Banas, J. A., & Richards, A. S. (2017). Apprehension or motivation to defend attitudes? Exploring the underlying threat mechanism in inoculation-induced resistance to persuasion. *Communication Monographs*, 84(2), 164–178. <https://doi.org/10.0.4.56/03637751.2017.1307999>.
- Baumeister, R. F., & Scher, S. J. (1988). Self-defeating behavior patterns among normal individuals: Review and analysis of common self-destructive tendencies. *Psychological Bulletin*, 104(1), 3–22. <https://doi.org/10.1037/0033-2909.104.1.3>.
- Benoit, W. L. (1991). Two tests of the mechanism of inoculation theory. *Southern Journal of Communication*, 56(3), 219–229. <https://doi.org/10.1080/10417949109372832>.
- Benoit, W. L. (1995). *Accounts, excuses, and apologies: A theory of image restoration strategies*. State University of New York Press.
- Benoit, W. L. (1997). Image repair discourse and crisis communication. *Public Relations Review*, 23(2), 177–186. [https://doi.org/10.1016/S0363-8111\(97\)90023-0](https://doi.org/10.1016/S0363-8111(97)90023-0).
- Blumstein, P. W., Carsow, K. G., Hall, J., Hawkins, B., Hoffman, R., Ishem, E., Palmer, M., Spens, D., Taylor, J., & Zimmerman, D. L. (1974). The honoring of accounts. *American Sociological Review*, 40, 551–566. <https://doi.org/10.2307/2094421>.
- Braddock, K. (2019). Vaccinating against hate: Using attitudinal inoculation to confer resistance to persuasion by extremist propaganda. *Terrorism and Political Violence*, 1–23. <https://doi.org/10.1080/09546553.2019.1693370>.
- Caulfield, T. (2020). *Does debunking work? Correcting COVID-19 misinformation on social media*. OSF Preprints. <https://doi.org/10.31219/osf.io/5uy2f>.
- Chan, M. S., Jones, C. R., Jamieson, K. H., & Albarracín, D. (2017). Debunking: A meta-analysis of the psychological efficacy of messages countering misinformation. *Psychological Science*, 28(11), 1531–1546. <https://doi.org/10.1177/095679761714579>.
- Chandler, R. C. (2019). *The six stages of a crisis*. Everbridge. http://go.everbridge.com/rs/everbridge/images/WhitePaper_Stage2.pdf.
- Chen, Z. F., & Cheng, Y. (2019). Consumer response to fake news about brands on social media: The effects of self-efficacy, media trust, and persuasion knowledge on brand trust. *Journal of Product and Brand Management*, 29(2), 188–198. <https://doi.org/10.1108/JPBM-12-2018-2145>.
- Cheng, Y. (2018). How social media is changing crisis communication strategies: Evidence from the updated literature. *Journal of Contingencies & Crisis Management*, 26(1), 58–68. <https://doi.org.libdata.lib.ua.edu/10.1111/1468-5973.12130>.
- Cherenson, M. (2020). How your comms can mitigate disinformation. *PR Daily*. <http://www.prdaily.com/how-your-comms-can-mitigate-disinformation/>.
- Claeys, A.-S., & Cauberghe, V. (2014). What makes crisis response strategies work? The impact of crisis involvement and message framing. *Journal of Business Research*, 67(2), 182–189. <https://doi.org/10.1016/j.jbusres.2012.10.005>.
- Claeys, A. S., & Opgenhaffen, M. (2016). Why practitioners do (not) apply crisis communication theory in practice. *Journal of Public Relations Research*, 28(5–6), 232–247. <https://doi.org/10.1080/1062726X.2016.1261703>.
- Clifford, S., Jewell, R. M., & Waggoner, P. D. (2015). Are samples drawn from Mechanical Turk valid for research on political ideology? *Research & Politics*, 2(4). <https://doi.org/10.1177/2053168015622072>.
- Compton, J., Jackson, B., & Dimmock, J. A. (2016). Persuading others to avoid persuasion: Inoculation theory and resistant health attitudes. *Frontiers in Psychology*, 7(122). <https://doi.org/10.3389/fpsyg.2016.00122>.
- Cook, J., Lewandowsky, S., & Ecker, U. K. H. (2017). Neutralizing misinformation through inoculation: Exposing misleading argumentation techniques reduces their influence. *PloS One*, 12(5), Article e0175799. <https://doi.org/10.1371/journal.pone.0175799>.
- Coombs, W. T. (2004). Impact of past crises on current crisis communication: Insights from situational crisis communication theory. *Journal of Business Communication*, 41(3), 265–289. <https://doi.org/10.1177/0021943604265607>.
- Coombs, W. T. (2020). Public sector crises: Realizations from Covid-19 for crisis communication. *Partecipazione e Conflitto*, 13(2). <https://doi.org/10.1285/i20356609v13i2p990>.
- Coombs, W. T. (2007a). *Crisis management and communications*. Institute for Public Relations. <https://instituteforpr.org/crisis-management-and-communications/>.
- Coombs, W. T. (2007b). Protecting organization reputations during a crisis: The development and application of situational crisis communication theory. *Corporate Reputation Review*, 10(3), 163–176. <https://doi.org/10.1057/palgrave.crr.1550049>.
- Coombs, W. T. (2019). *Ongoing crisis communication: Planning, managing, and responding* (5th ed.). SAGE Publications, Inc.
- Coombs, W. T., & Holladay, S. J. (1996). Communication and attributions in a crisis: An experimental study in crisis communication. *Journal of Public Relations Research*, 8(4), 279–295. https://doi.org/10.1207/s1532754xjpr0804_04.
- Coombs, W. T., & Holladay, S. J. (2002). Helping crisis managers protect reputational assets. *Management Communication Quarterly*, 16(2), 165–186. <https://doi.org/10.1177/089331802237233>.
- Coombs, W. T., & Holladay, S. J. (2008). Comparing apology to equivalent crisis response strategies: Clarifying apology's role and value in crisis communication. *Public Relations Review*, 34(3), 252–257. <https://doi.org/10.1016/j.pubrev.2008.04.001>.
- Coombs, W. T., & Holladay, J. (2012). The paracrisis: The challenges created by publicly managing crisis prevention. *Public Relations Review*, 38(3), 408–415. <https://doi.org/10.1016/j.pubrev.2012.04.004>.
- Dillingham, L., & Ivanov, B. (2017). Inoculation messages as a pre-emptive financial crisis communication strategy with inexperienced investors. *Journal of Applied Communication Research*, 45(3). <https://doi.org/10.1080/00909882.2017.1320571>.
- Eagly, A., & Chaiken, S. (1993). *The psychology of attitudes*. Harcourt Brace Jovanovich College Publishers.
- Eagly, A., Wood, W., & Chaiken, S. (1978). Causal inferences about communicators and their effect on opinion change. *Journal of Personality and Social Psychology*, 36(4), 424–435. <https://doi.org/10.1037/0022-3514.36.4.424>.
- Einwiller, S. A., & Johar, G. V. (2013). Countering accusations with inoculation: The moderating role of consumer-company identification. *Public Relations Review*, 39(3), 198–206. <https://doi.org/10.1016/j.pubrev.2013.03.002>.
- Farkas, J. (2018). Disguised propaganda on social media: Addressing democratic dangers and solutions. *Brown Journal of World Affairs*, 25(1), 1–16.
- Goss, B. M. (2009). The left-media's stranglehold. *Journalism Studies*, 10(4), 455–473. <https://doi.org/10.1080/14616700902783895>.
- Griffin, M., Babin, B. J., & Darden, W. R. (1992). Consumer assessments of responsibility for product-related injuries: The impact of regulations, warnings, and promotional policies. *Advances in Consumer Research*, 19(1), 870–878.
- Honisch, S. V., & Más Manchón, L. (2019). The effects of paracrisis origin and response strategy on Facebook audience's perceived organisational reputation and behavioural intentions. *Corporate Reputation Review*, 23, 133–144. <https://doi.org/10.1057/s41299-019-00070-4>.
- Ivanov, B., & Parker, K. A. (2011). Protecting images with inoculation: A look at brand, country, individual, and corporate images. *The International Journal of the Image*, 8(1), 1–12. <https://doi.org/10.18848/2154-8560/CGP/v08i01/1-9>.
- Ivanov, B., Pfau, M., & Parker, K. (2009). The attitude base as a moderator of the effectiveness of inoculation strategy. *Communication Monographs*, 76(1), 47–72. <https://doi.org/10.0.4.56/03637750802682471>.
- Ivanov, B., Sellnow, T., Getchell, M., & Burns, W. (2018). The potential for inoculation messages and postinoculation talk to minimize the social impact of politically motivated acts of violence. *Journal of Contingencies and Crisis Management*, 26, 414–424. <https://doi.org/10.1111/1468-5973.12213>.
- Jin, Y., Liu, B. F., & Austin, L. L. (2014). Examining the role of social media in effective crisis management: The effects of crisis origin, information form, and source on publics' crisis responses. *Communication Research*, 41(1), 74–94. <https://doi.org/10.1177/0093650211423918>.
- Jin, Y., van der Meer, T. G. L. A., Lee, Y.-I., & Lu, X. (2020). The effects of corrective communication and employee backup on the effectiveness of fighting crisis misinformation. *Public Relations Review*, 46(3). <https://doi.org/10.1016/j.pubrev.2020.101910>.
- Keller, F. B., Schoch, D., Stier, S., & Yang, J. (2019). Political astroturfing on twitter: How to coordinate a disinformation campaign. *Political Communication*, 1–25. <https://doi.org/10.1080/10584609.2019.1661888>.
- Kent, M. L. (2013). Using social media dialogically: Public relations role in reviving democracy. *Public Relations Review*, 39(4), 337–345. <https://doi.org/10.1016/j.pubrev.2013.07.024>.
- Launen, M. M. (2016). Image repair: A case study of Thierry Frémaux and the Cannes film festival. *Public Relations Review*, 42(1), 170–175. <https://doi.org/10.1016/j.pubrev.2015.11.002>.
- Le, P. D., Teo, H. X., Pang, A., Li, Y., & Goh, C. (2018). When is silence golden? The use of strategic silence in crisis communication. *Corporate Communications: An International Journal*. <https://doi.org/10.1108/CCEJ-10-2018-0108>.
- Lee, S. Y., & Lee, J. Y. (2020). Fixing the barn door before the horse bolts: Effects of pre-crisis engagement and stealing thunder in crisis communication. *Public Relations Review*. <https://doi.org/10.1016/j.pubrev.2020.101930>.
- Leiser, M. (2016). AstroTurfing, 'CyberTurfing' and other online persuasion campaigns. *European Journal of Law and Technology*, 7(1), 1–14.
- Lyon, L., & Cameron, G. T. (2004). A relational approach examining the interplay of prior reputation and immediate response to a crisis. *Journal of Public Relations Research*, 16(3), 213–241. <https://doi.org/10.1080/1532-754X.2004.11925128>.
- McCroskey, J. C., & Teven, J. J. (1999). Goodwill: A reexamination of the construct and its measurement. *Communication Monographs*, 66(1), 90–103. <https://doi.org/10.1080/03637759909376464>.
- McGuire, W. J. (1961). Resistance to persuasion conferred by active and passive prior refutation of the same and alternative counterarguments. *Journal of Abnormal & Social Psychology*, 63(2), 326–332. <https://doi.org/10.1037/h0048344>.
- Metzger, M. J., Flanagin, A. J., Eyal, K., Lemus, D. R., & McCann, R. M. (2003). Credibility for the 21st century: Integrating perspectives on source, message, and media credibility in the contemporary media environment. *Communication Yearbook*, 27(1), 293–335. <https://doi.org/10.1080/23808985.2003.11679029>.
- Miller, C. H., Ivanov, B., Sims, J. D., Compton, J., Harrison, K. J., Parker, K. A., Parker, J. L., & Averbach, J. M. (2013). Boosting the potency of resistance:

- Combining the motivational forces of inoculation and psychological reactance. *Human Communication Research*, 39(1), 127–155. <https://doi.org/10.1111/j.1468-2958.2012.01438.x>.
- Mills, A. J., & Robson, K. (2019). Brand management in the era of fake news: Narrative response as a strategy to insulate brand value. *Journal of Product & Brand Management*. <https://doi.org/10.1108/jpbm-12-2018-2150>.
- Nabi, R. L. (2003). “Feeling” resistance: Exploring the role of emotionally evocative visuals in inducing inoculation. *Media Psychology*, 5(2), 199–223. https://doi.org/10.1207/S1532785XMEP0502_4.
- Niederdeppe, J., Heley, K., & Berry, C. L. (2015). Inoculation and narrative strategies in competitive framing of three health policy issues. *Journal of Communication*, 65, 838–862. <https://doi.org/10.1111/jcom.12162>.
- Nsoesie, E. O., & Oladeji, O. (2020). Identifying patterns to prevent the spread of misinformation during epidemics. *The Harvard Kennedy School (HKS) Misinformation Review*, 1, 1–6. <https://doi.org/10.37016/mr-2020-014>.
- Nunnally, J. C. (1978). *Psychometric theory* (2nd ed.). McGraw-Hill.
- O’Keefe, D. J. (2002). *Persuasion: Theory and research* (2nd ed.). Sage.
- Pennycook, G., Cannon, T. D., & Rand, D. G. (2018). Prior exposure increases perceived accuracy of fake news. *Journal of Experimental Psychology: General*, 147(12), 1865–1880. <https://doi.org/10.1037/xge0000465>.
- Pfau, M., Haigh, M. M., Sims, J., & Wigley, S. (2007). The influence of corporate front-group stealth campaigns. *Communication Research*, 34(1), 73–99. <https://doi.org/10.1177/0093650206296083>.
- Pfau, M., Kenski, H. C., Nitz, M., & Sorenson, J. (1990). Efficacy of inoculation strategies in promoting resistance to political attack messages: Application to direct mail. *Communication Monographs*, 57(1), 25–43. <https://doi.org/10.1080/03637759009376183>.
- Pfau, M., Tusing, K. J., Koerner, A. F., Lee, W., Godbold, L. C., Penaloza, L. J., et al. (1997). Enriching the inoculation construct: The role of critical components in the process of resistance. *Human Communication Research*, 24, 187–215. <https://doi.org/10.1111/j.1468-2958.1997.tb00413.x>.
- Reber, B. H., Meng, J., Berger, B. K., Gower, K., & Zerfass, A. (2018). North American communication monitor 2018. *The Plank Center*. <http://plankcenter.ua.edu/wp-content/uploads/2018/10/NACM-2018-Tracking-Trends.pdf>.
- Richards, A. S., & Banas, J. A. (2015). Inoculating against reactance to persuasive health messages. *Health Communication*, 30(5), 451–460. <https://doi.org/10.1080/10410236.2013.867005>.
- Richards, A. S., & Banas, J. A. (2018). The opposing mediational effects of apprehensive threat and motivational threat when inoculating against reactance to health promotion. *Southern Communication Journal*, 1–11. <https://doi.org/10.1080/1041794x.2018.1498909>.
- Roizenbeek, J., & van der Linden, S. (2019). The fake news game: Inoculating against the risk of misinformation. *Journal of Risk Research*, 22(5), 570–580. <https://doi.org/10.1080/13669877.2018.144349>.
- Schoofs, L., Claeys, A.-S., De Waele, A., & Cauberghe, V. (2019). The role of empathy in crisis communication: Providing a deeper understanding of how organizational crises and crisis communication affect reputation. *Public Relations Review*, 45(5), 101851. <https://doi.org/10.1016/j.pubrev.2019.101851>.
- Shamon, H., & Berning, C. C. (2020). Attention check items and instructions in online surveys with incentivized and non-incentivized samples: Boon or bane for data quality? *Survey Research Methods*, 14(1), 55–77. <https://doi.org/10.18148/srm/2020.v14i1.7374>.
- Smith, R. D. (2013). *Strategic planning for public relations*. Routledge.
- Ulmer, R. R., Seeger, M. W., & Sellnow, T. L. (2007). Post-crisis communication and renewal: Expanding the parameters of post-crisis discourse. *Public Relations Review*, 33(2), 130–134. <https://doi.org/10.1016/j.pubrev.2006.11.015>.
- Ulmer, R. R., Sellnow, T. L., & Seeger, M. W. (2010). Considering the future of crisis communication research: Understanding the opportunities inherent to crisis events through the discourse of renewal. In W. T. Coombs, & S. J. Holladay (Eds.), *The handbook of crisis communication* (pp. 691–697). Wiley-Blackwell.
- Vafeiadis, M., Bortree, D. S., Buckley, C., Diddi, P., & Xiao, A. (2019). Refuting fake news on social media: Nonprofits, crisis response strategies and issue involvement. *Journal of Product & Brand Management*. <https://doi.org/10.1108/jpbm-12-2018-2146>.
- van der Linden, S., Leiserowitz, A., Rosenthal, S., & Maibach, E. (2017). Inoculating the public against misinformation about climate change. *Global Challenges*, 1(2). <https://doi.org/10.1002/gch2.201600008>.
- van der Meer, T. G. L. A., & Jin, J. (2020). Seeking formula for misinformation treatment in public health crises: The effects of corrective information type and source. *Health Communication*, 35(5), 560–575. <https://doi.org/10.1080/10410236.2019.1573295>.
- van Zoonen, W., & van der Meer, T. (2015). The importance of source and credibility perception in times of crisis: Crisis communication in a socially mediated era. *Journal of Public Relations Research*, 27(5), 371–388. <https://doi.org/10.1080/1062726X.2015.1062382>.
- Vanhamme, J., & Grobben, B. (2008). “Too good to be true!”. The effectiveness of csr history in countering negative publicity. *Journal of Business Ethics*, 85(S2), 273–283. <https://doi.org/10.1007/s10551-008-9731-2>.
- Visentin, M., Pizzi, G., & Pichierri, M. (2019). Fake news, real problems for brands: The impact of content truthfulness and source credibility on consumers’ behavioral intentions toward the advertised brands. *Journal of Interactive Marketing*, 45, 99–112. <https://doi.org/10.1016/j.intmar.2018.09.001>.
- Wan, H. H., & Pfau, M. (2004). The relative effectiveness of inoculation, bolstering, and combined approaches in crisis communication. *Journal of Public Relations Research*, 16(3), 301–328. https://doi.org/10.1207/s1532754xjpr1603_4.
- Wang, B., & Zhuang, J. (2018). Rumor response, debunking response, and decision makings of misinformed Twitter users during disasters. *Natural Hazards*, 93, 1145–1162. <https://doi.org/10.1007/s11069-018-3344-6>.
- Warner, B., & McKinney, M. (2013). To unite and divide: The polarizing effect of presidential debates. *Communication Studies*, 64(5), 508–527. <https://doi.org/10.1080/10510974.2013.832341>.
- Warner, B. R., McKinney, M. S., Bramlett, J. C., Jennings, F. J., & Funk, M. E. (2019). Reconsidering partisanship as a constraint on the persuasive effects of debates. *Communication Monographs*, 87(2), 137–157. <https://doi.org/10.1080/03637751.2019.1641731>.
- Weidner, K., Beuk, F., & Bal, A. (2019). Fake news and the willingness to share: Aschermeyer schema and confirmatory bias perspective. *Journal of Product & Brand Management*, 29(2), 180–187. <https://doi.org/10.1108/JPBm-12-2018-2155>.
- Woon, E., & Pang, A. (2017). Explicating the information vacuum: Stages, intensifications, and implications. *Corporate Communications: An International Journal*, 22(3), 329–353. <https://doi.org/10.1108/CCIJ-10-2016-0066>.