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Countering accusations with inoculation: The moderating role of consumer-company identification

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ABSTRACT

Accusations of wrongdoing, baseless or justified, can severely tarnish a company's reputation. Once disseminated, even baseless accusations can persist and cause considerable damage for a company. This study examines the proactive crisis communication strategy of inoculating individuals against invalid accusations before they go viral. An experiment was conducted in a real world consumer context among members of an online consumer panel using an electronics discounter as the research stimulus. Expanding previous inoculation research on the role of value-relevant involvement for inoculation and the effectiveness of inoculation in the case of different preexisting attitudes, we find that consumers' identification with a company moderates inoculation effectiveness. Consumers strongly opposing or disidentifying with the company under attack reported fewer negative beliefs and attitude change as well as fewer intentions to spread the accusation after being exposed to an inoculation message refuting the claim against the company. Consumers strongly identifying with the company, on the other hand, did not profit from such an inoculation. Their level of identification alone was sufficient to prevent attitude slippage. Implications for public relations research and practice are discussed.

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1. Introduction

Accusations of wrongdoing, baseless or justified, can spread rapidly and severely tarnish a company's reputation or even lead to a full-fledged crisis if believed by consumers and other stakeholders. The proliferation of online social media can make negative information go viral rapidly. Once out there, even baseless accusations can persist and cause considerable damage as the example of the allegation that Starbucks provided financial support to the Israeli government and/or the Israeli Army shows.¹ Individuals or groups who are opposed to an attacked company are especially dangerous because they are likely to spread a negative message (Kamins, Folkes, & Perner, 1997). Individuals who are proponents of the company could lose their faith in the company if reached by the allegation. Therefore, convincing the public about the falseness of an accusation, and doing so at an early stage before allegations become widely disseminated, is important in order to prevent damage to the company or organization.

How to respond to accusations and how to communicate in critical situations is a major focus of the crisis management literature. Much research has been devoted to analyzing the effectiveness of various post-crisis response strategies (e.g.,

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¹ Starbucks faced calls for boycotts of its stores and products in the Middle East after a rumor spread that the coffee chain supported the Israeli government and/or the Israeli Army. This had direct impacts on local economies and residents, and also led to violent situations (http://news.starbucks.com/article.display.cfm?article_id=200).

Benoit, 1997; Coombs, 1998; Coombs & Holladay, 2002a; McDonald, Sparks, & Glendonb, 2010). Proactive communication strategies have received far less attention (Arpan & Roskos-Ewoldsen, 2005; Wan & Pfau, 2004), despite the notion that timely management intervention might kill a crisis before it reaches maturity stages (Gonzalez-Herrero & Pratt, 1996).

In the crisis communication literature, “stealing thunder” (Arpan & Pompper, 2003; Arpan & Roskos-Ewoldsen, 2005; Dolnik, Case, & Williams, 2003; Williams, Bourgeois, & Croyle, 1993) is one of the few approaches attesting to the advantages of proactive crisis communication strategies. This strategy “is an admission of a weakness [usually a mistake or failure] before that weakness is announced by another party” (Arpan & Pompper, 2003, p. 294), and it has been shown to enhance credibility and to result in perceptions of the crisis as less severe (Arpan & Roskos-Ewoldsen, 2005; Claeys & Cauberghe, 2012). In line with Coombs’ (2010) recommendation to use accommodating rebuild strategies (e.g., admitting failure, taking responsibility) when the crisis is severe and responsibility perception by stakeholders high, “stealing thunder” seems to be particularly viable when an accusation of wrongdoing is valid. In case of an invalid accusation, however, companies are advised to use deny strategies (Coombs, 2010; Coombs & Holladay, 2002b). Denying false information once disseminated is difficult and has turned out to be ineffective (Tybout, Calder, & Sternthal, 1981), particularly if there is no obvious external entity responsible for the situation.

More promising than post hoc denial or “stealing thunder” is to immunize or “inoculate” stakeholders against an upcoming accusation before it hits. McGuire’s (1961a, 1961b, 1962, 1964) inoculation theory maintains that people can be protected against future attitude attacks much the same way they can be inoculated against viral attacks. Inoculation involves exposing individuals to a weak attack on their beliefs about an attitude object along with arguments countering the attack. Thus, inoculation involves refuting an accusation, and it is a viable strategy only when the attack is invalid. Evidence for the effectiveness of inoculation in a crisis situation has been presented by Wan and Pfau (2004). These authors find evidence for the effectiveness of proactive communication messages when people have a positive preexisting attitude toward the company. Those neutral or negative toward the firm were not affected by the proactive message. This finding accords with Pfau’s (1997) assertion that inoculation is more effective when receivers hold a positive attitude. We argue that the reason the proactive message was not effective among those unfavorable toward the company was that these consumers lacked motivation to process the inoculation message due to insufficient involvement with the firm.

In the research presented here we revisit inoculation theory as a strategy for crisis communication. By analyzing the moderating effect of different levels of identification, positive or negative, we expand previous research on the role of value-relevant involvement and pre-existing attitudes for inoculation effectiveness (Pfau et al., 2010; Wan & Pfau, 2004; Wood, 2007). The hypotheses are tested in a real-world setting using an electronics discounter as the research object and consumer panelists as research participants.

2. Literature review and hypotheses

Inoculation theory by McGuire (1961a, 1961b, 1962, 1964), McGuire and Papageorgis (1961, 1962) and Papageorgis and McGuire (1961) postulates that individuals can be inoculated against persuasive attacks on their attitudes in much the same manner they can be immunized against a virus. McGuire reasoned that exposing individuals to a weak attack on their beliefs about an attitude object, along with arguments countering the attack, stimulates recipients to defend their beliefs by generating arguments supporting them. Refutational inoculation, which consists of a warning of a possible future attack and the presentation of arguments refuting it, is said to work because the warning elicits threat and the counterarguments are used as “scripts” to strengthen existing attitudes against subsequent influence (McGuire, 1964; Papageorgis & McGuire, 1961).

Threat, operationalized as a mild dosage of the attack or accusation, is said to elicit the motivation for cognitive activity which protects beliefs. A message lacking the threat component, that is, a supportive message, should not motivate recipients to process the message. Research evidence showing the superiority of refutational treatments over supportive treatments in conferring resistance is ample (e.g., McGuire, 1961b, 1964; McGuire & Papageorgis, 1961; Sudefeld & Borrie, 1978; Tannenbaum, Macauley, & Norris, 1966; Tannenbaum & Norris, 1965). In a recent meta-analysis of research on inoculation theory, Banas and Rains (2010) confirmed the notion that inoculated individuals are more resistant to an attack than those who receive a supportive treatment or no treatment at all.

Pfau (1997) considered threat “the most distinguishing feature of inoculation” (p. 137). However, while confirming the dual roles of threat and counterarguing in the process of resistance, Pfau and his colleagues (Pfau et al., 1997, 2001) also uncovered a direct, unexplained path to resistance. This finding suggests that there is more to the process of eliciting resistance than the mechanisms of threat and counterarguing. Testing for perceived threat as a moderator mitigating the effectiveness of inoculation by means of meta-analysis, Banas and Rains (2010) could not confirm that greater levels of threat confer more resistance than lower levels of threat.² In search of alternative mechanisms, involvement, or “the importance or salience of an attitude object for a receiver” (Pfau et al., 1997, p. 190) was argued to play a role in the inoculation process (Compton & Pfau, 2005). Although Banas and Rains’ meta-analysis could not confirm that inoculation is more effective with those moderately involved compared to those of higher or lower involvement, they called for more research on the role of involvement in the inoculation process. In a recent study, Pfau, Banas and colleagues (2010) examined the relative impact of

² Banas and Rains (2010) note that the power for this test was quite low and advise to continue examining the role of threat in inoculation.

different types of involvement on resistance to influence and found that outcome-relevant and value-relevant involvement both exerted direct impacts on resistance.

In the study presented here, we broaden research on the mechanisms of inoculation by examining the moderating role of consumers' identification with a company (Bhattacharya & Sen, 2003). Identification is defined in terms of the degree to which consumers feel a sense of connectedness to a company and the extent to which aspects of the perceived organizational identity are self-referential and self-defining for them (Einwiller, Fedorikhin, Johnson, & Kamins, 2006; Mael & Ashforth, 1992; Pratt, 1998). Similarity in values of the individual and the company is a constituting element of consumer-company identification (Bhattacharya & Sen, 2003), and the closeness of the company to the self-concept enhances its relevance for the identified consumer. Thus, consumer-company identification comes along with an enhanced degree of value-relevant involvement. Value-relevant involvement stands for what social-judgment theorists (e.g., Sherif, Sherif, & Nebergall, 1965; Sherif & Cantril, 1947) have termed "ego-involvement" and refers to "the psychological state that is created by the activation of attitudes that are linked to important values" (Johnson & Eagly, 1989, p. 290). In the case of consumer-company identification, the attitudes linked to the values, that "have the characteristic of belonging to *me*, as being part of *me*" (Sherif & Cantril, 1947, p. 93) are favorable.

Just as consumers can identify with a company, they can distance themselves from it. Elsbach and Bhattacharya (2001) speak of disidentification when the condition entails a cognitive separation between the person's and the company's identity, and "the possession of values incongruent with a negatively viewed organization's identity" (p. 398). Disidentifiers are particularly dangerous for a company because they are likely to spread a negative message (Kamins et al., 1997); through a failure of the company they oppose they can boost their self-concept. Thus, for communication managers it is just as important to prevent opponents from believing an accusation as it is to protect beliefs and attitudes of fans.

How should inoculation work for people with varying degrees of identification? We expect that identifiers who are confronted with a refutational inoculation message mentioning an accusation against the company feel threatened and engage in more cognitive activity compared to when they read a supportive message. Because value-relevant involvement can exert a direct impact on resistance to persuasive attacks (Pfau et al., 2010), identified consumers' favorable beliefs and attitudes should be protected from slipping independent of threat or counterarguing. Bhattacharya and Sen (2003) posit: "Within a zone of tolerance, the higher the level of C–C identification, the greater is consumers' resilience to negative information about the company" (p. 84). Findings by Einwiller et al. (2006) show that identification insulates a company from the effects of negative publicity unless a persuasive attack is so negative that it undermines peoples' identification basis. Although the traditional inoculation paradigm seeks to strengthen individuals' positive attitude, there are indications of inoculation effectiveness among consumers with a negative preexisting attitude toward a target-issue. In a social context, Wood (2007) analyzed the effect of people's preexisting attitudes toward biotechnology and found that inoculating against a message propagating biotechnology worked independent of people's prior attitudes. Wood speculated that those initially opposed to the issue were threatened as they became aware that their beliefs about it were vulnerable and "likely used the new information presented in the inoculation message to reevaluate their initial position" (p. 372).

Consumers disidentified with a company should not be threatened by an attack against a company they oppose but feel *schadenfreude* instead. However, because of their value-relevant involvement they should nevertheless be motivated to process a refutational inoculation message by the company systematically. Since the refutational inoculation starts with a forewarning in form of the accusation, in a small dose, we can infer that this message is more probable to fall into these consumers' latitude of acceptance which increases message processing and stimulates cognitive activity (Sherif et al., 1965). Disidentifiers should be eager to find out about the failure, because through a failure of the company they oppose they can enhance their self-concept. Disconfirmation of expectancy provides another theoretical explanation for why the refutational inoculation should be processed systematically. Revealing negative information about oneself is incongruent with expectations; this raises the likelihood of systematic information processing (Maheswaran & Chaiken, 1991). Consequently, disidentifiers are also confronted with and process the company's counterarguments that follow the attack in the refutational inoculation message. Enhanced cognitive activity and the processing of counterarguments prevent their beliefs and attitudes from slipping in response to a later accusation. Disidentifiers are less likely to process a purely supportive message that does not contain negative information about the company and just belabors the obvious (McGuire, 1961b).

Based on the above reasoning on the impact of refutational inoculation messages for persons identifying and disidentifying with a company, we propose the following hypotheses:

- H1.** An accusation of wrongdoing elicits more threat in identifiers than in disidentifiers.
- H2.** A refutational inoculation (containing an accusation as well as counterarguments) as compared with a supportive message (that does not contain the accusation) or no message enhances cognitive activity in both identifiers and disidentifiers.
- H3.** A refutational inoculation as compared with a supportive message or no message reduces disidentifiers' belief in the accusation, their likelihood to spread the accusation and prevents their attitude from slipping. A refutational inoculation does not change beliefs, likelihood to spread the accusation and attitude change of identifiers as compared to a supportive or no message.
- H4.** The protective effect of a refutational inoculation on disidentifiers' attitudes is mediated by enhanced cognitive activity.

3. Method

3.1. Design and stimuli

A 2 (identification: identification vs. disidentification) \times 3 (message: refutational inoculation vs. supportive vs. none) between-subjects factorial experimental design was employed to test the hypotheses. The inoculation stimuli were designed as institutional advertisements of the real electronics discounter *Media Discount*.³ Consumer advocates had accused the retailer of advertising doorbusters to draw customers into its stores without having a sufficient amount of the bargain items in stock.⁴ In the mock supportive inoculation ad the retailer explained that its professed goal was to generate “happy bargain hunters” and that it conducted intense market research on consumer demands in order to always be well-stocked. The refutational inoculation ad differed from the supportive ad only by the preliminary remark, the forewarning, that *Media Discount* acknowledged the criticism that it did not keep enough of its advertised bargain items in stock. The explanation of its strategy then followed as a counterargument. The control group was not shown a *Media Discount* ad.

3.2. Participants and procedure

Participants were registered members of an online consumer panel. The experiment was conducted in two phases that were ten days apart. In Phase 1, which was announced as a “Study on consumer opinions about retail companies,” participants’ identification with *Media Discount* was measured using a 7-point five-item scale (from Einwiller et al., 2006; e.g., “*Media Discount* shares my values,” “I have a sense of connection with *Media Discount*,” “Being a customer of *Media Discount* is part of my sense of who I am”; $\alpha = .89$). The overall identification with the retailer was rather low ($M = 2.9$, $SD = 1.23$) and positively skewed ($\gamma = .81$). The lowest quartile ranged from scores of 1.00 to 2.00 ($N = 66$), the highest quartile from 3.60 to 7.00, ($N = 71$). The quartiles in between ranged from scores of 2.2 to 3.4 ($N = 127$). In order to detect and analyze differences between disidentifiers and identifiers we focused on the extreme groups of the distribution, the lowest and the highest quartiles.⁵

In Phase 1, we also assessed prior attitudes by means of three items on a 7-point semantic differential scale (*bad* [1]–*good* [7], *unfavorable*–*favorable*, *harmful*–*beneficial*; $\alpha = .95$) (see Mohr & Webb, 2005). All questions were also posed for another firm to prevent participants guessing the purpose of the study. Participants were then presented with a set of advertisements containing the refutational inoculation advertisement, the supportive advertisement or no *Media Discount* advertisement. In Phase 1 we also measured participants’ level of threat following a procedure used by Pfau and colleagues (Pfau, 1997; Pfau & Burgoon, 1988; Wan & Pfau, 2004): “Imagine that you receive information about *Media Discount* that questions your current opinion about the company. How do you find the possibility that you will come into contact with such information?” (7-point semantic differential scales: *threatening* [1]–*nonthreatening* [7], *intimidating*–*unintimidating*, *harmful*–*not harmful*, *dangerous*–*not dangerous*, *risky*–*not risky*; $\alpha = .94$).

Ten days later, all panelists who had completed Phase 1 were invited to participate in a “Study on how retail companies are presented in the media and perceived by consumers.” Here, they read the accusation against *Media Discount* concerning insufficient stockpiling of doorbusters embedded in an article on the retail industry that had allegedly appeared in a newspaper. The passage containing the accusation was taken from a real, previously published, article to ensure ecological validity. The article was perceived as credible ($M = 5.49$) and objective ($M = 5.06$) regardless of participants’ identification.

A pretest showed that it took at least 20 s to read the article; therefore we eliminated the cases whose timestamp in the online survey indicated a shorter reading time ($N = 31$). Also, five outliers (>600 s) were eliminated. The remaining sample comprised $N = 136$ cases. There were no significant effects on time spent reading the accusation for any independent variable.

3.3. Dependent variables

After being exposed to the accusation in Phase 2 and evaluating the article (credible, objective, threatening), participants listed all the thoughts that came to their mind about *Media Discount* (plus another firm mentioned in the article; see Cacioppo & Petty, 1981). Thoughts were counted to assess cognitive activity. Attitude after the accusation was measured as in Phase 1 (Phase 2: $\alpha = .94$). Attitude change was gauged by subtracting attitude at time 1 from attitude at time 2, so negative values indicate deterioration. Extent of belief in the accusation that the retailer misleads its customers was indicated on a 7-point scale (1 = *no* and 7 = *yes*). Intentions concerning the likelihood to spread the negative information about *Media Discount* were also measured (1 = *very unlikely* and 7 = *very likely*). To further assess the intensity of cognitive activity, we asked participants at the end to write down all the arguments that came to their minds that spoke against the accusation. The number of “real”

³ Company name changed for anonymity purposes.

⁴ The discounter won the lawsuit. The court decided that the retailer had sufficiently supplied that demand. The accusation was therefore legally invalid.

⁵ Comparing upper or lower quartiles has been considered an option to increase the likelihood of finding difference if the pattern is linear and the sample size is large (Tybout in Böckenholt et al., 2001, pp. 48–49) as extreme group analysis tends to increase statistical power (e.g., Alf & Abrahams, 1995; Feldt, 1961). Application of extreme group analysis is not uncommon in the social sciences (e.g., Pontari & Schlenker, 2000; Verplanken & Holland, 2002). Although the procedure has received critical reexamination (Preacher, Rucker, MacCallum, & Nicewander, 2005) we consider it a reasonable approach here in order to detect differences between the theoretically discriminated extreme groups of identifiers and disidentifiers.

Table 1

The effectiveness of supportive and inoculation treatments in conferring resistance to influence; means.

	Supportive message		Refutational inoculation		Control group	
	Strong (N=22)	Dis-identification (N=22)	Strong (N=27)	Dis-identification (N=20)	Strong (N=21)	Dis-identification (N=24)
Threat (Phase 1)	5.27	6.40	5.30	5.70	5.04	6.02
Threat (Phase 2)	5.18	6.14	4.81	5.05	4.95	5.91
Attitude before	6.12	3.33	5.99	3.86	5.68	3.31
Attitude after	5.71	2.64	5.47	3.63	5.41	2.36
Attitude change (after-before)	-0.39	-0.70	-0.52	-0.23	-0.25	-0.96
Likelihood of negative WOM	2.68	5.18	3.11	4.05	3.00	5.29
Belief in accusation	2.50	4.43	2.44	4.15	3.19	4.83
Number of thoughts	1.64	2.45	2.59	3.15	2.29	2.00
Number of counter-arguments	0.95	0.50	1.63	1.45	0.90	0.50

Notes: Threat, attitude, likelihood of negative WOM and belief in accusation were measured on 7-point scales. For threat, lower scores signify more threat; for attitude, likelihood of negative WOM and belief higher scores signify a stronger manifestation of the variable.

counterarguments was counted; comments like “can’t think of anything” or “it’s true” were disregarded. For an overview of means see Table 1.

4. Results

4.1. Threat

ANOVA results revealed a significant main effect of identification showing that identifiers found a possible accusation more threatening ($M = 5.21$) than did dis-identifiers ($M = 6.05$), $F(1, 128) = 12.17$, $p < .001$, $\eta_p^2 = .09$. This main effect also emerged in Phase 2 when participants judged the article containing the accusation ($M_{ID} = 4.97$ vs. $M_{DID} = 5.72$), $F(1, 128) = 7.3$, $p < .01$, $\eta_p^2 = .05$. These findings support Hypothesis 1.

4.2. Belief in the accusation

Apart from the expected main effect of identification ($M_{ID} = 2.69$ vs. $M_{DID} = 4.49$), $F(1, 129) = 71.52$, $p < .0001$, $\eta_p^2 = .36$, the ANOVA procedure revealed a main effect of message type; those who had read a refutational inoculation believed the accusation least ($M = 3.17$), followed by those who read the supportive message ($M = 3.44$), and the control group ($M = 4.07$), $F(2, 129) = 4.36$, $p < .02$, $\eta_p^2 = .06$. The comparison between the refutational inoculation group and the control group was significant, $F(1, 132) = 8.41$, $p < .01$. Although the identification \times message type interaction was non-significant, the pattern of results of identifiers and dis-identifiers differed (see Fig. 1). As predicted in Hypothesis 3, dis-identifiers’ belief in the accusation was significantly lower when they had received a refutational inoculation ($M = 4.15$) versus the no message control ($M = 4.83$), $F(1, 62) = 3.24$, $p < .05$. The mean in the supportive condition ($M = 4.43$) did not differ from that in the

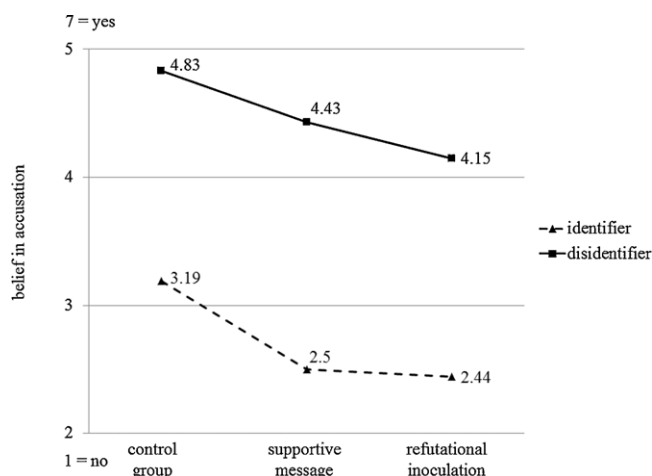


Fig. 1. Main effects of identification and message type on belief in the accusation.

Notes: Dis-identifiers’ belief in the accusation is significantly lower in the refutational inoculation versus control condition. The mean in the supportive condition does not differ from the control group. Identifiers’ belief in the accusation is significantly lower than the control group in both, the refutational inoculation and the supportive message condition.

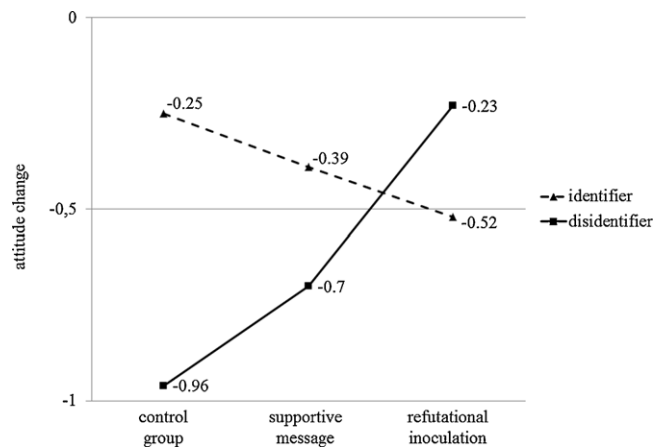


Fig. 2. Interaction of message type \times identification on attitude change.

Notes: Significant interaction: for identifiers there is no difference in attitude change; disidentifiers exhibit was significantly less negative attitude change after receiving a refutational inoculation compared to a supportive or no message; the comparison between the refutational inoculation and the control group is significant.

control condition, $F(1, 62) = 1.17, p = .28$. Unexpectedly, identifiers also profited from a proactive message. Their belief was protected, however, by a refutational inoculation just as well as by a supportive message ($M_{\text{control}} = 3.19$ vs. $M_{\text{ref inocu}} = 2.44$), $F(1, 67) = 4.93, p < .05$, and ($M_{\text{control}} = 3.19$ vs. $M_{\text{suppo}} = 2.50$), $F(1, 67) = 3.84, p < .05$.

4.3. Attitude change

The attitude toward *Media Discount* in Phase 1 compared to Phase 2 (after the accusation) changed significantly, $F(1, 129) = 40.1, p < .001, \eta_p^2 = .24$. The mixed ANOVA furthermore revealed a significant three-way interaction between time (before vs. after the accusation), identification and message type, $F(2, 129) = 3.33, p < .04, \eta_p^2 = .05$. The data for attitude change clarified that there was significantly less negative attitude change among disidentifiers when they had received a refutational inoculation in Phase 1 ($M = -.23$) than when they had received either a supportive ($M = -.70$) or no message ($M = -.96$). Only the comparison between the refutational inoculation and the control group was significant, $F(1, 63) = 8.47, p < .01$. There was no difference in attitude change for people with a high identification level; all attitudes slightly but non-significantly deteriorated ($M = -.40$). The results (see Fig. 2) fully support Hypothesis 3.

4.4. Negative word-of-mouth

Apart from the expected main effects of identification, $F(1, 130) = 49.52, p < .001, \eta_p^2 = .28$, there was a significant interaction of identification and message type on people's intention to spread the negative information about *Media Discount*, $F(2, 130) = 3.28, p < .05, \eta_p^2 = .05$. While identifiers did not intend to do so ($M = 2.94$), disidentifiers were less likely to speak negatively when they had been inoculated with a refutational inoculation ($M = 4.05$) but not when they had read a supportive message ($M = 5.18$) or none ($M = 5.29$). Only the refutational inoculation versus control group differed significantly, $F(1, 63) = 5.62, p < .05$.

4.5. Thoughts and counter-argumentation

There was a significant main effect of message type on the number of thoughts listed after exposure to the accusation. As hypothesized in Hypothesis 2, independent of their level of identification, participants wrote down more thoughts in the refutational inoculation condition ($M = 2.83$) than in the supportive ($M = 2.05$) or control condition ($M = 2.13$), $F(2, 130) = 4.09, p < .02, \eta_p^2 = .06$. Planned comparisons between the refutational inoculation and the control condition, $F(1, 133) = 4.93, p < .05$, as well as with the supportive condition, $F(1, 133) = 6.10, p < .02$, are significant.

At the end of Phase 2, participants wrote down all the arguments that came to their minds that spoke against the accusation. Apart from the significant main effect of identification ($M_{\text{ID}} = 1.20$ vs. $M_{\text{DID}} = .79$), $F(1, 130) = 3.99, p < .05, \eta_p^2 = .03$, results revealed that participants generated more counterarguments in the refutational inoculation ($M = 1.55$) than in the supportive ($M = .73$) or control condition ($M = .69$), $F(2, 130) = 10.2, p < .001, \eta_p^2 = .14$. Planned comparisons between the refutational inoculation and the supportive message, $F(1, 133) = 15.13, p < .001$, and with the control group, $F(1, 133) = 4.1, p < .001$, are significant.

4.6. Mediation analyses

To test **Hypothesis 4**, whether cognitive activity triggered by a refutational inoculation mediated inoculation effectiveness for disidentifiers, we analyzed a simple mediation model following [Hayes \(2012\)](#) using 10,000 bootstrap samples. The attitude after the accusation served as the dependent variable, the number of counterarguments as mediator, and the predictor variable was the dummy coded refutational inoculation (1) versus control (0) condition. Results show that apart from a significant direct effect (0.3736, $p < .05$), the indirect effect of inoculation on attitude is positive and statistically different from zero, as evidenced by a 95% bias-corrected bootstrap confidence interval that is entirely above zero (0.0517–0.9755). This indirect effect indicates that, for disidentifiers, the effect of the refutational inoculation on the attitude after the accusation was mediated by the number of counterarguments generated.

5. Discussion and conclusion

Crisis communication literature suggests that a timely intervention can prevent a crisis before it reaches maturity stages ([Gonzalez-Herrero & Pratt, 1996](#)). The research presented here aimed at expanding the still scant body of research on using communication proactively in coping with potential crises. We shed light on the effectiveness of inoculation as a proactive crisis communication strategy which is particularly viable when the accusation against a company is invalid and denying or refuting it is therefore advisable. This study also expands the body of research on inoculation by testing the mechanisms of inoculation over and above threat and counterarguing.

The results of our study revealed that a refutational inoculation treatment is a useful method to generate resistance to negative information particularly when consumers are disidentified with a company. Challenging the notion that “refutation to potential challenges should be applied in the context of a ‘supportive environment’” ([Wan & Pfau, 2004](#), p. 321), we show that consumers disidentifying with a firm can be inoculated against persuasive attacks. Contrary to Wan and Pfau, who did not find any effect of inoculation on persons holding a negative prior attitude, we showed that inoculation (compared to a supportive or no message) protected disidentifiers’ beliefs and attitudes in the company and reduced their intention to spread negative information about the firm to other people. This latter effect regarding the likelihood of negative word-of-mouth is particularly important for communication practice because the proliferation of an allegation can bring about negative consequences like reputational damage.

Our findings also challenge inoculation theory’s traditional notion that threat is the most distinguishing feature of inoculation (e.g., [Pfau, 1997](#); [Pfau & Kenski, 1990](#)). Supporting previous findings where involvement bypassed the mechanisms of threat and counterarguing ([Pfau et al., 1997, 2010](#)), value-relevant involvement appeared to be mainly responsible for processing motivation and inoculation effectiveness in our study. Disidentifiers, value-involved in the sense that their attitudes have the characteristic of “not belonging to me,” as “not being part of me,” were motivated to process the refutational inoculation in particular because they hoped to find information to bolster their negative stance. As a consequence, they were confronted with the company’s counterarguments which helped them to generate counterarguments in the face of the attack. These counterarguments reduced the negative persuasive effect of the accusation.

Value-relevant involvement was also responsible for the lack of any effects of inoculation on identified consumers. Due to their connectedness with the company’s attributes and values, their attitudes were protected from slipping for reasons independent from any proactive communication message. Interestingly, however, their belief in the accusation was affected by prior communication. Just as in [Wan and Pfau’s \(2004\)](#) study, any form of messaging (a refutational inoculation and a supportive message), helped to prevent identifiers from believing the accusation. Belief in the accusation, however, was apparently not integrated into identifiers’ attitude thereby protecting the person’s self-concept. Motivated reasoning, that is, defensive information processing with a bias in the direction of the preferred conclusions ([Chaiken, Giner-Sorolla, & Chen, 1996](#); [Kunda, 1990](#)), serves as an explanation for this.

Even though two decades ago [Eagly and Chaiken \(1993\)](#) called inoculation theory the “grandparent theory of resistance to attitude change” (p. 561), inoculation research is far from retiring ([Compton & Pfau, 2005](#)). Future research should investigate possible causes other than threat and counterarguing for the effects of inoculation. Research is also needed to shed more light on the underlying processes that lead to inoculation effectiveness among people opposed to the attacked entity. Research should investigate the boundary conditions of inoculation effectiveness in this group. As counterarguments in the refutational inoculation are processed systematically, the effectiveness should vary with argument strength. Only strong arguments should lead to resistance to persuasion while weak arguments, that are easily refuted, might even cause a boomerang effect. Research should also identify boundary conditions among identifiers. If the accusation is too extremely negative, resistance might dwindle ([Einwiller et al., 2006](#)). Further research should clarify how much the unusual openness of a firm mentioning an accusation in the refutational inoculation helps to foster cognitive activity and promote inoculation effectiveness.

To practitioners, the results of our study provide clear advice. Once companies are aware of pending, invalid accusations through monitoring their environment, a promising strategy to prevent reputation damage is to prepare consumers by releasing refutational inoculation messages that detail the accusations and provide counterarguments to each one. Such messaging will help stave off the negative effects of the accusation on beliefs and attitudes, especially among consumers who oppose the company. A note of caution is however indicated as inoculation might be a potentially risky approach if no accusation occurs. [Wan and Pfau \(2004\)](#) find that “the supportive approach may work better than inoculation in guarding against people’s attitudinal slippage in the event of no crisis” (p. 319). Ethical issues need also to be considered,

and inoculation should not be used in a manipulative way to influence stakeholder attitudes (Veil & Kent, 2008). The best protection is to prevent public criticism by negotiating conflicts of interests with critical stakeholders and by fostering strong consumer-company identification and building a strong reputation (Coombs, 2007; Coombs & Holladay, 2002b).

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