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# RESISTANCE TO ETHICALLY SUSPICIOUS PARODY VIDEO ON YOUTUBE: A TEST OF INOCULATION THEORY

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By Joon Soo Lim and Eyun-Jung Ki

*Having observed the proliferation of video-based parody corporate stealth campaigning on YouTube, we attempted to examine the effectiveness of refutational preemption in providing viewers with ability to detect unduly manipulative intent and in conferring viewer resistance to the influence of the campaign. We also compared the relative efficacy of the inoculation pretreatment to post-hoc refutation. Results showed that subjects who received a preemptive inoculation message were better able to detect unduly manipulative intent in a parody video, were more resistant to altering their original attitudes toward the issue, and demonstrated less favorable attitudes toward the sponsor of the parody video than did their counterparts in the control group.*



With the evolution of Web media from digital interactive media<sup>1</sup> to social media, new ethical issues involving the use of social media's unique characteristics have also emerged. Increasingly, corporate front groups have been abusing the characteristics of social media, such as user-generated content (UGC), word-of-mouth tactics, and anonymity. In conjunction with such trends, some professional public relations or lobbying firms have started to engage in clandestine campaigns that conceal their true identity or the sponsors of these campaigns.

Parodies and spoofs have become popular formats for such clandestine campaign messages, thanks largely to the popularity of *YouTube*, a popular video-sharing Web site.<sup>2</sup> One such example has been dubbed the "YouTube Penguin Army scandal." Recently, a video clip spoofing *An Inconvenient Truth*, Al Gore's documentary film aimed at raising public awareness of global warming, appeared on *YouTube* with the claim that it was an amateur production created by a 29-year-old Californian. Controversy emerged when the alleged producer of the video was discovered to be the public relations and lobbying firm DCI Group in Washington, D.C., whose largest client is Exxon Mobil.<sup>3</sup> This case became worldwide news when the *Wall Street Journal* scooped the story, calling it the "YouTube Penguin Army scandal," because the video spoof ridiculed Al Gore's documentary by featuring a group of penguins in tuxedos.<sup>4</sup> Although the identities of the video's

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producer and a likely sponsor were later disclosed, it was reported that more than 60,000 people viewed the video<sup>5</sup> before the *Journal's* scoop revealed the story behind the video. This issue raised a serious ethical concern on the scale of other unethical public relations practices such as undisclosed special interests in front groups,<sup>6</sup> unidentified paid commentary,<sup>7</sup> and paid op-eds.<sup>8</sup>

Aside from the controversy surrounding such unethical corporate stealth campaigns, Pfau and his colleagues<sup>9</sup> raised the question of their effectiveness. They demonstrated that stealth campaigns that mask sponsors' true interests might induce a positive effect if the producer's true identity is not revealed. Those positive effects dissipated, however, and eventually backfired on the corporate front-groups and their sponsors when potential antidotes were administered to message recipients. The present study aimed to assess the influence of potential antidotes in curbing the negative impact of the parody video on the audience's attitudes. The antidotes used in this study were the preemptive inoculation and post hoc refutation.

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## Literature Review

*Efficacy of Inoculation in Conferring Resistance to Stealth Campaign.* Application of inoculation theory is useful in this study because it explains individuals' tendency to resist an ethically suspicious persuasive attempt when the malicious persuasive attack is revealed before reaching the audience.

*Main Effect of Inoculation.* In a biological analogy, McGuire<sup>10</sup> proposed the concept of inoculation to explain an individual's tendency to resist changes in attitude due to propaganda. Similar to the process of immunizing individuals against a virus by administering a weakened dose of the virus, an inoculation message was assumed to protect people from a persuasive attack by exposing them to weakened forms of the attacking message ahead of time.<sup>11</sup> The theory posits that refutational preemption triggers threat, motivating individuals to counterargue a subsequent attack message, thereby conferring resistance to attitude changes caused by the persuasive attack.<sup>12</sup>

Pfau et al.<sup>13</sup> argue that inoculation is effective because people tend to strengthen attitudes against change when exposed to the inoculation message, deflecting persuasiveness of the subsequent attack message from an opponent. In this process, threat or forewarning in the inoculation message is assumed to be an important factor that acts to confer viewers' resistance to influence by imminent attacks.

Consequently, it must be considered whether the inoculation pre-treatment confers resistance to the influence of stealth campaigns.<sup>14</sup> For public relations practitioners who need to manage an issue before it influences the public, it is critical to counter potential upcoming attacks that are maliciously intended to damage an organization's reputation. An organization can implement this inoculation strategy by providing either supportive defense messages or refutational messages.<sup>15</sup> During this process, an organization needs to examine if it can employ refutational preemption to effectively manage an issue by protecting its own reputa-

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tion while also revealing the manipulative actions of attackers from behind the scenes.

Previous research has also assumed that inoculation pretreatment will be effective by motivating and providing the audience with the opportunity to engage in additional thought with regard to the controversial issue.<sup>16</sup> This inoculation-triggered elaboration may influence viewers to resist the influence of information in conflict with their prior strongly held beliefs or attitudes.<sup>17</sup> This being the case, a further question to explore is whether an individual's motivation to resist a possible persuasive message would be weaker if that person did not possess strongly held beliefs or attitudes in relation to the issue prior to viewing the message.

Sagarin and his colleagues<sup>18</sup> suggest that individuals tend to reject information that they perceive as having been designed to unfairly manipulate them. They posited that this perception of undue manipulation intent would be an ideal motivator for individuals to resist a persuasive message even when they are not especially knowledgeable about the legitimacy of the specific claims made in the message.<sup>19</sup> Another benefit of the perceived manipulation intent is that this perception is not restricted to the domain of one's prior beliefs or strongly held attitudes.

Sagarin et al. demonstrated that an inoculation treatment against an illegitimate persuasive attempt made the viewers more discriminating against unduly manipulative intent.<sup>20</sup> On the basis of Sagarin et al.'s finding, it is predicted that participants to whom the inoculation message is administered prior to their exposure to the front group's stealth campaign message will be better able to detect the unduly manipulative intent in the message.

**H1:** Participants who receive an inoculation treatment will be more capable of detecting unduly manipulative intent of a parody video that presumably comes from a corporate front group than will those in the control group.

Previous research showed that individuals' awareness of manipulative intent in a message led them to resist such manipulative intent while generating viewers' trust and faith in the person who informed them of the intent.<sup>21</sup> Inferences of manipulative intent can then lead to attitude resistance through counterarguing.<sup>22</sup> Although no prior model demonstrating this mediating role of increased counter-argumentation is specified here, it is assumed that inoculation manipulation elicits counter-arguing as a result of the cognitive response to undue manipulation intent. As a result, participants who receive the inoculation message prior to exposure to the front group's persuasive message will be more resistant to both the message and the message's sponsor. Thus, the following hypotheses were proposed.

**H2:** Participants who receive an inoculation treatment will be more resistant to attitude change following exposure

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to a parody video that presumably comes from a corporate front group than will those in the control group.

**H3:** Participants who receive an inoculation treatment will be more resistant to the sponsor of a parody video that presumably comes from a corporate front group than will those in the control group.

*Post Hoc Refutation.* While the primary goal of this study is to examine the effect of refutational preemption on viewers' resistance to unethical parody videos, it also attempted to examine the effect of post-hoc refutation on the audience's resistance to the stealth campaign. In everyday life, it is more likely that people would view a parody video first and then, perhaps, come across articles, news stories, or some other messages that would reveal the true identity of the producers behind such stealth campaigns as the "YouTube Penguin Army scandal."

Some studies have indicated that the use of an inoculation message is more effective than post hoc refutation in inhibiting viewers' attitude change following exposure to a persuasive attack.<sup>23</sup> Scholars have devoted time and resources to explaining why inoculation pretreatment is more effective than post-hoc refutation in conferring resistance to attitude change. First, the threat presented in inoculation pretreatment motivates recipients to counter-argue the subsequent persuasive attempt.<sup>24</sup> Second, inoculation can elicit issue involvement<sup>25</sup> or motivation to resist the imminent attack,<sup>26</sup> which in turn instills resistance to persuasion. Third, researchers who examined the sleeper effect have shown that persuasion does not occur when discounting information precedes the message. In such cases, subjects may be more disposed to counter-argue the message while they read it. Thus, the persuasive impact of the message is attenuated,<sup>27</sup> partly because a recipient wonders "why bother reading an article already proven to be false?"<sup>28</sup>

Despite the apparent merit in comparing the power of refutational preemption versus post-hoc refutation, this research inquiry has received limited attention in previous inoculation research. On the basis of theoretical accounts, this study proposed the following hypothesis:

**H4:** The inoculation pretreatment will be more effective than post hoc refutation in conferring viewers' resistance to attitude change following exposure to a parody video that presumably comes from a corporate front group.

*Roles of Issue Involvement in Resistance.* In inoculation research,<sup>29</sup> issue involvement was treated as a mediating variable, assuming that the threat elicited by inoculation pretreatment would boost the involvement levels. Zuwerink and Devine<sup>30</sup> found that individuals who demonstrated high issue involvement were more resistant to the message than those with low involvement. In contrast, findings in Pfau et al.'s study<sup>31</sup> indicated that involvement may function as a prerequisite for threat and, thus, also for inoculation. In their structural equation model, involvement was

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paralleled with inoculation treatment, supporting the instrumental role of involvement in inoculation. It is noteworthy that involvement contributed directly to individuals' resistance to attitude changes, whereas threat induced by inoculation treatment affected viewers' attitudes only in terms of the low-involving and moderately-involving topics.

This study examined the role of involvement in the inoculation effect with the following research question:

**RQ1:** To what extent does involvement eliminate the effect of inoculation treatment on viewers' resistance to a parody video that presumably comes from a corporate front group?

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To test the proposed hypotheses and answer the research question, a Web-based experiment was administered. Participants were drawn from the same pool and randomly assigned. In a pretest-posttest control group design,<sup>32</sup> the experimental group received the inoculation pretreatment, while the control group participants did not. Participants in both groups were then exposed to a parody video. A third group of participants assigned to the post-hoc refutation group also did not receive pretreatment, but they were provided a post-hoc refutation message following their exposure to the parody video. Finally, their resistance to the intended persuasion was measured to test the effectiveness of inoculation strategy in conferring resistance to the parody video induced persuasion.

## Method

**Context of the Issue.** The issue addressed in this study is so-called "Net Neutrality," the idea that Internet cable network providers should make all Web sites equally accessible.<sup>33</sup> This issue gained special momentum in 2006 with rancorous debates and some failed legislative efforts. The debate over Net Neutrality involves a surprisingly broad spectrum of political activists, who are fiercely divided over the issue, in addition to software companies, search titans, content providers, and Internet telephony firms that have lined up to defend their status quo.<sup>34</sup> One side in the debate advocates, "Preserve the free and open Internet," while the other side argues that "Blocking premium pricing in the name of neutrality might have the unintended effect of blocking the premium services from which customers would benefit."<sup>35</sup> In an editorial observer column, Adam Cohen argued "The companies fighting Net Neutrality have been waging a misleading campaign, with the slogan 'hands off the Internet,' that tries to look like a grass-roots effort to protect the Internet in its current form. What they actually favor is stopping the government from protecting the Internet, so they can get their own hands on it."<sup>36</sup>

Although it is apparent that cable and phone companies have backed a few front groups to defend their positions, it is also true that the other side of the debate also has large corporate backers, like Google and Microsoft,<sup>37</sup> which could be hit by access fees. It is beyond the scope of this study to examine which side is currently gaining more support

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from the public or which side is closer to a grass-roots campaign. However, it is apparent that both sides have thoroughly used the Web as a forum for conveying their messages, recruiting supporters, and launching counter-attacks against opponents' parodies. It is especially noteworthy that parties on both sides of the debate have posted numerous parody videos on *YouTube*, accusing each other of working for corporate self-interests.

**Stimuli.**

*Video Parody.* Among the various existing parody videos, one titled "Save the Internet: Independence Day" was selected. In this parody of classic UFO films including 1996's "Independence Day," a grass-roots activist group called "Save the Internet" portrays the phone and cable companies as alien enemies to democracy who want to overrun the Congress and change the way the Internet works by replacing today's "level playing field" approach with their "gatekeeper" system. The video then promotes "Net Neutrality" and calls for actions against big cable and phone companies that want to establish a tiered system for Internet access and pricing.

*Inoculation.* An inoculation message was given in the form of a press release from an alleged grass-roots organization, the so-called "Citizens Forum For Net Competition." Consistent with typical inoculation treatment, the first part of the inoculation message was designed to elicit a threat to those who meant to view the parody video. This threat was operationalized as a warning of an impending and potentially influential campaign initiated by front groups to change participants' positions regarding the issue in question.<sup>38</sup> This message contained statistics and anecdotal evidence to warn viewers about the deceptive practices employed in front-group campaigns. The length of the inoculation message was approximately 380 words (See Appendix for the inoculation message used in this study).

A dummy message was also created to be administered to participants in the control group. The content of the dummy message was completely irrelevant to the front-group campaign or the specific causes addressed by the chosen campaign.

*Refutation.* A refutation message was defined as a *post-hoc response*, designed to counter core arguments of the opponent's attack. The attempt to invalidate the parody video was presented in the form of a detailed refutation of the attack message communicated by the opponent group. As suggested, the refutation message in this study specified the counterargument against the belief and stated a point-by-point rebuttal.<sup>39</sup>

**Participants.** Participants in this study included students taking introductory public relations courses at three large public universities across the United States. Students participated in the experiment voluntarily, but they received extra credit for completing a series of questionnaires.

All students were randomly assigned to the experimental conditions in this study. Initially, 133 students participated, though twenty dropped out during the multiple phases of the experiments. Only participant responses that were completed through all phases were used for

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the data analysis. Therefore, the final sample size was 113, and the retention rate was 85%.

**Procedures.** This research was conducted in two phases. During Phase 1, participants received an e-mail invitation to participate in a Web-based experiment. All participants were randomly assigned to either the experimental or the control group and completed a questionnaire designed to evaluate their initial attitudes toward the Net Neutrality issue and a few cable and Internet companies. After participants completed the Phase 1 questionnaire, those assigned to the inoculation treatment group read the inoculation message, while those in the refutational treatment group viewed the parody video. The control group received a dummy message that had nothing to do with the Net Neutrality issue.

Phase 2 was administered a week after the first phase was completed. Participants in the inoculation and control groups viewed the parody video, and those in the refutation message group read a refutational message aimed at countering the core argument of the video and discrediting the video's alleged sponsor. Following the message, participants completed a questionnaire designed to assess their attitudes toward the issue and the video's alleged sponsor.

**Dependent Measures.** For this study, undue manipulative intent, attitudes toward the issue and attitudes toward the video sponsor were the dependent variables.

**Undue Manipulative Intent.** Participants' ability to discriminate the manipulative intent of an ethically suspicious video was measured using the five-item undue manipulative intent scale adopted from Sagarin et al.<sup>40</sup> Participants were asked to respond to the following statements using a scale ranging from completely agree to completely disagree: "The way this video tries to persuade people seems acceptable to me," "The producer of this video tried to manipulate the audience in ways that I don't like (reverse coding)," "I was annoyed by this video because the producer seemed to be trying to inappropriately manage or control the audience (reverse coding)," "I didn't mind this video; the producer tried to be persuasive without being excessively manipulative."

**Attitudes toward the Issue.** Attitudes toward the issue were measured during both Phase 1 (preattitude) and Phase 2 (postattitude). In a pretest-posttest control group design, random assignment enabled us to ensure group equivalence with regard to the pre-attitude prior to the treatment. Postattitude was measured one week after the treatment to observe the sustainability of the inoculation effect. To measure the attitudes, this investigation adopted six bipolar adjective pairs developed by Burgoon and colleagues<sup>41</sup> and other literature in inoculation research.<sup>42</sup> The pairs included wrong/right, negative/positive, unacceptable/acceptable, unfavorable/favorable, foolish/wise, and bad/good. The alpha reliabilities of the attitudes toward issue measure were at Phase 1, .98 ( $N=113$ ), and at Phase 2, .98 ( $N=113$ ).

**Attitudes toward Corporate Sponsor.** To measure participants' attitudes toward the corporate sponsor, Google, this study adopted six



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bipolar adjective pairs developed by Burgoon and colleagues.<sup>43</sup> Attitudes toward the sponsor were also measured at both Phase 1 and Phase 2. Respondents indicated their degree of agreement with statements regarding whether the producer of the video was “trustworthy,” “believable,” “reliable,” “honest,” “truthful,” and “balanced.” The alpha reliabilities of the attitudes toward corporate sponsor’s measure were at Phase 1, .95 ( $N=113$ ), and at Phase 2, .94 ( $N=113$ ).

#### *Control and Manipulation Check Measures.*

*Issue Involvement.* Issue involvement was used as a covariate in the experimental design. This study defined involvement as the “extent to which the attitudinal issue under consideration is of personal importance.”<sup>44</sup> It is often operationalized as issue salience or importance.<sup>45</sup> To measure participants’ involvement in Net Neutrality, the Personal Involvement Inventory (PII) by Zaichkowsky<sup>46</sup> was adopted. The four following items were used: unimportant/important, of no concern/of much concern, means nothing/significant, matter/not matter, and irrelevant/relevant. Reliability of the issue involvement scale was .97 ( $N=113$ ).

*Threat and Counterarguing Output.* For manipulation checks, threat and counterarguing output was used.<sup>47</sup> All participants were asked to evaluate threat and counterarguing output using five bi-polar adjectives including dangerous/not-dangerous, threatening/not-threatening, intimidating/not-intimidating, harmful/not-harmful, and risky/not risky. The reliability of these measures was .84. Therefore, all measures used in this study exceeded acceptable reliability levels.

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## **Results**

*Hypothesis Testing.* The four hypotheses were analyzed using analysis of covariance (ANCOVA). Involvement, pre-attitude toward the issue, and pre-attitude toward the corporate sponsor of the parody video were entered as covariates due to possible effects of the measurement of attitude change toward the issue and corporate sponsor after the inoculation treatment. Table 1 shows the results of the analysis for the four hypotheses.

**H1** proposed that participants who receive the inoculation treatment would be better able to detect the unduly manipulative intent of a parody video that presumably comes from a corporate front group than would those in the control group. The aforementioned five-question Likert-type scale was used to assess participants’ perceptions of undue manipulative intent, with higher scores indicating greater ability to detect the manipulative intent of a parody video. The analysis revealed a significant main effect of inoculation treatment [ $F(1, 70)=9.05, p < .01, \eta^2=.12, Power=.84$ ]. The mean of the inoculation group ( $M=3.88, sd=1.17$ ) is significantly different from the mean of the control group ( $M=3.00, sd=1.36$ ), indicating that individuals exposed to the preemptive inoculation message were more likely to detect the manipulative intent of a parody video than those who were not exposed.

**H2** predicted that participants who receive inoculation treatment would be more resistant to attitude changes following exposure to a parody video that presumably comes from a corporate front group than



**TABLE 1**

*Effects of Inoculation Treatments on the Perceptions of Undue Manipulative Intent and on Resistance to the Influence of Parody Video*

	Undue Manipulative Intent		ATI		ATS	
	Inoculation	Control	Inoculation	Control	Inoculation	Control
M	3.88	3.00	4.68 (4.25)	5.70 (4.29)	5.27 (6.09)	6.15 (6.26)
sd	1.17	1.36	1.52 (.94)	1.27 (.72)	1.19 (.82)	.90 (.80)
df	1/70		1/70		1/70	
F	9.05**		7.62**		8.05**	
HP	HP1= Supported		HP2= Supported		HP3=Supported	

Note: Results of ANCOVA tests using involvement, preattitude toward issue and sponsor as covariates. Undue manipulative intent was scored on 7-point scales ranging from 1 to 7, with higher scores indicating greater quality. Both Attitudes Toward Issue (ATI) and Attitudes Toward Sponsor (ATS) were measured using 7-point scales. Higher scores on the scale signify more positive attitudes. Mean and standard deviation of pre-attitude scores are provided in parentheses. There were no statistical differences in the preattitude scores, confirming that random treatment group assignments successfully equalized preattitude scores.

\*\*  $p < .01$

would those in the control group. Lower scores on the postattitude measure indicate greater resistance to the influence of the parody video aimed at promoting Net Neutrality. The analysis presented a significant main effect of inoculation treatment [ $F(1, 70)=7.62, p < .01, \eta^2=.10, Power=.77$ ]. The mean of the inoculation group's postattitude score ( $M=4.68, sd=1.52$ ) was significantly different from that of the control group ( $M=5.70, sd=1.27$ ), indicating that the inoculation treatment effectively limited the persuasive effects of the video parody on viewers' targeted attitudes as compared to the control condition.

**H3** proposed that participants who receive inoculation treatment would be more resistant to the sponsor of a parody video that presumably comes from a corporate front group than would those in the control group. Higher mean scores indicate more positive attitudes toward the presumed corporate sponsor of the parody video. The analysis revealed a significant main effect of the preemptive inoculation treatment [ $F(1, 70)=8.05, p < .01, \eta^2=.10, Power=.80$ ]. The mean score of the viewers' attitudes toward the corporate sponsor following inoculation treatment ( $M=5.27, sd=1.19$ ) is significantly different from the mean of the control group ( $M=6.15, sd=.90$ ) which indicates that individuals who were exposed to the inoculation message were more resistant to changing their attitudes toward the sponsor of a parody video than were those who did not receive the message.

**H4** suggested that the inoculation pretreatment would be more effective than post hoc refutation in conferring resistance to attitude change following exposure to a parody video that presumably comes from a corporate front group. We have tested this hypothesis by com-

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paring the mean scores of the inoculation group and the refutation group for each dependent variable: manipulative intent, attitudes toward the issue, and attitudes toward the sponsor. For all the dependent variables, none of the comparisons yielded any significant difference. Therefore, **H4** was not supported.

**RQ.** To examine the influence of participants' involvement on the results of **H1** to **H3**, we posed a research question asking, "To what extent does involvement eliminate the effect of the inoculation treatment on participants' resistance to the persuasive attack message?" To answer the research question, a series of analyses of covariance (ANCOVA) were performed with the involvement index acting as a covariate and the perception of undue manipulative intent and the attitude indices (i.e., attitudes toward the issue and attitudes toward the sponsor of the parody video) serving as dependent variables.

None of the analyses yielded significant effects of involvement on the dependent variables. On the other hand, the significant effect of inoculation treatment remained, even when involvement was entered as a covariate, thus demonstrating the robust effect of inoculation on conferring resistance to persuasion.

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## **Discussion**

We examined if refutational preemption could immunize individuals identifying unduly manipulative intent by conferring resistance to attitudes toward the issue manipulated and to the sponsor. We also wanted to compare the effect of inoculation and post-hoc refutation on resistance to attitude changes by simulating a real-world case in which people may run across countering messages from the mass media after their initial exposure to such a video parody, which could be considered as a post-hoc refutation condition.

As predicted, participants in the inoculation condition were better able to detect unfair manipulation, demonstrated fewer attitude changes after exposure to the video parody, and possessed a more negative view of the video sponsor than did their counterparts in the control group. These results are encouraging to educators and practitioners in public relations who seek to instill public resistance to deceptive persuasion.

It is important to note that findings in this study were obtained from the test on an issue (i.e., Net Neutrality) to which most participants had not developed enough knowledge, issue involvement, and prior attitudes to effectively evaluate which party was more manipulating. Thus, findings in this study imply that individuals may be less susceptible to a manipulative parody video when they are immunized in advance. In this case where participants did not have strong opinions and attitudes, inoculation preemption was so successful that participants' involvement did not influence the size of the effect of the treatment on resistance to attitude change.

However, these results also pose an ironic question: What if this refutational preemption strategy were employed by corporate front groups to counter arguments from grass-roots activist groups in situations where the public has little prior knowledge of the issue? In fact, this study

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featured Citizens for Net Competition, commonly conceived as a front group of cable and phone companies, in instilling resistance to the influence of persuasive parody from an organization that could be considered a grass-roots activist group. While this reverse projection of groups contradictory to common sense was intentionally made to reduce the possible impact of stereotypical judgment on manipulative intent, results of this study indicate that the presumed front group succeeded in creating participant resistance and less favorable attitudes toward the concept of Net Neutrality.

Finally, this study failed to identify the superiority of inoculation to post-hoc refutation in instilling resistance to attitude change. There were no differences found in means for each dependent variable between participants in the refutation and inoculation groups. A post-hoc analysis was run to examine if the refutational message also generated the same effect as inoculation did. Results confirmed that refutation after the suspicious video also conferred the resistance to attitude change, with the refutation group being more aware of unduly manipulative intent [ $F(1, 70)=12.67, p < .01$ ], possessing less favorable attitudes to Net Neutrality [ $F(1, 70)=7.12, p < .01$ ], and demonstrating more negative attitudes toward the video's sponsor [ $F(1, 70)=17.11, p < .001$ ] than the control group. It is interesting that both inoculation pretreatment and refutational countering exerted the same effect in instilling attitude change against the video parody.

**Limitation and Future Study Suggestions.** While this study is meaningful in several ways, there are some limitations from both theoretical and practical perspectives that can be used to guide future research endeavors. First, we did not examine the mechanism by which perceptions of undue manipulative intent lead to resistance, although hypotheses 2 and 3 are grounded on an assumption drawn from previous studies. Indeed, participants in this study who perceived the parody video as unduly manipulative also resisted attitude change, suggesting a possible link between manipulative intent and resistance to attitude change. However, it is not known whether participants developed resistance as a result of their perception of unfair manipulation in the parody video. As previously mentioned, past studies suggest that unduly manipulative intent could be a mediating variable leading to resistance to attitude change presumably as a function of counterarguing. Future research could determine this relationship by employing a mediation analysis.

Second, the way in which we presented the inoculation and post-hoc refutational message as a text-based news release may not accurately reflect the real battle that is occurring on YouTube. In reality, each competing party on a controversial issue continually threads on the rival's attack video with another video message aimed at discrediting the credibility of the source and countering the rival's core arguments. Thus, future research should employ the video-based inoculation message in testing inoculation theory.

The use of a somewhat neutral issue in testing the inoculation theory also limits the interpretation of this study's findings. The question

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remains whether the effect of debunking the forthcoming claims by a suspicious communicator would work even in a politically sensitive issue like the "Al Gore Penguin Army" YouTube video. To viewers who are strongly opposed to the position advocated by such a parody video, forewarning is expected to confer viewer resistance to the persuasive impact of the message by reinforcing the viewer's prior positions. However, what if viewers are initially in favor of the position being advocated? Could the inoculation preemption effectively weaken their prior attitudes or effectively eliminate their cognitive dissonance? Future research should explore the role of the prior issue position in strengthening or weakening resistance to the influence of parody videos.

Finally, this present study did not consider the credibility factor in testing our hypotheses. That is, participants in this study were not given any cue about the organization aside from its name on the top of the press release used as the inoculation message. Indeed, the rival side commonly discredited the group (i.e., Citizens for Net Competition) as a cable and phone business' front group. If participants had known that the alerted message came from a corporate front group to confuse them, the results of this study would have been different. In this regard, Pfau et al.<sup>48</sup> pointed out that an individual's perception of an organization's reputation, image, and credibility could affect the effectiveness of the inoculation threat. Future research must consider experimental designs that vary the credibility cue in testing inoculation theory when the issue is not well known by the general population.

*Appendix and Notes follow.*

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**APPENDIX**  
*Inoculation Message*

**Citizen's Forum For Net Competition**

1120 13<sup>th</sup> Street  
Vancouver, WA 97889  
Phone: 602.596.4379      netcompetition@netcompetition.org

**Beware of Suspicious Video Attacks on Net Competition. Don't be fooled.**

Companies like Google, Microsoft, and their front groups are spending millions weekly to deceive and misinform the American public. Their latest attempt to hoodwink Internet users comes in the form of a parody video on YouTube — a clever piece of industry propaganda riddled with half-truths and outright lies. The Internet giants conceal their real interests behind the guise of a plausible-sounding message, while undermining the work of genuine public and consumer advocates.

Those Internet companies have attempted to discredit us and our transparent policy position. Most of these parodies are produced by the Internet giants with the intent of undermining the concept of Net Competition and smearing its supporters. It's unfortunate that they disguise themselves as Internet-friendly activists.

Using this clandestine propaganda strategy, the Internet giants will continue to promote the deceptively named "Net Neutrality" in hopes of making their proposed Net regulation sound less onerous and threatening, and more virtuous.

Now, they want to convey the perception that cable and phone companies aim at creating a two-tiered Internet with a fast lane and a slow lane. This effort is nothing more than propaganda designed to clear a path for the big Internet companies that have already congested your Internet.

David Farber, a distinguished career professor of computer science and public policy at Carnegie Mellon University, and Michael Katz, a professor of economics at the University of California at Berkeley said, "when traffic surges beyond the ability of the network to carry it, something is going to be delayed. When choosing what gets delayed, it makes sense to allow a network to favor traffic from, say, a patient's heart monitor over traffic delivering a music download." Currently, companies like Google, which paid \$1.65 billion to acquire YouTube precisely to increase video traffic online, are really getting a free ride. It is no secret that they want to stick consumers with the whole bill.

So, when you see a suspicious parody video on YouTube, remember that those big Internet companies want the government to take control of the Internet on behalf of them.

**Who should pay for causing Internet congestion? Multi-billion dollar corporations or you? Keep our Internet competitive.**

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## NOTES

1. Matthew P. McAllister and Joseph Turow, "New Media and the Commercial Sphere: Two Intersecting Trends, Five Categories of Concern," *Journal of Broadcasting & Electronic Media* 46 (December 2002): 505-14.
2. Laura Parker, "Parodies Prompt Laughs, Lawsuits," *USA Today*, March 23, 2007, sec. A, p. 1.
3. Antonio Regalado and Dinne Searcey, "Where Did That Video Spoofing Gore's Film Come From?" *Wall Street Journal*, August 3, 2006, sec. B, p. 1. DCI group did not make a comment about the video spoof. For years, Exxon-Mobile has funded some advertising campaigns which contribute to convincing the public that global warming is not a problem; "Behind the Lines: Esso's Claim to Care About the Environment," *Ecologist*, (November 2002): 11.
4. Tux is the official mascot of the Linux, an open-source operating system.
5. Regalado and Searcey, "Where Did That Video Spoofing," B1.
6. Kathy R. Fitzpatrick and Michael J. Palenchar, "Disclosing Special Interests: Constitutional Restrictions on Front Groups," *Journal of Public Relations Research* 18 (July 2006): 203-24.
7. Stuart Elliott, "An Undisclosed Paid Endorsement Ignites a Debate in the Public Relations Industry," *New York Times*, January 12, 2005, p. 2.
8. Eamon Javers, "This Opinion Brought to You By...: Stealth Sponsorship of Talking Heads and Op-Ed Columnists Is Surprisingly Common," *Business Week*, January 30, 2006, 35.
9. Michael Pfau, Michel M. Haigh, Jeanetta Sims, and Shelley Wigley, "The Influence of Corporate Front-Group Stealth Campaigns," *Communication Research* 34 (February 2007): 73-99.
10. William J. McGuire, "Inducing Resistance to Persuasion: Some Contemporary Approaches," in *Advances in Experimental Social Psychology*, ed. Leonard Berkowitz (NY: Academic Press, 1964), 191-229.
11. Alice H. Eagly and Shelly Chaiken, *The Psychology of Attitudes* (TX: Thompson, 1993), 561-66.
12. Michael Pfau and Michael Burgoon, "Inoculation in Political Campaign Communication," *Human Communication Research* 15 (fall 1988): 91-111; Michael Pfau, Joshua Compton, Kimberly A. Parker, Elaine M. Wittenberg, Chasu An, Monica Ferguson, Heather Horton, and Yuri Malyshev, "The Traditional Explanation for Resistance Versus Attitude Accessibility: Do They Trigger Distinct or Overlapping Processes of Resistance?" *Human Communication Research* 30 (July 2004): 329-60.
13. Michael Pfau, Kyle James Tusing, Ascan F. Koerner, Waipeng Lee, Linda C. Godbold, Linda J. Penaloza, Violet Shu-Huei Yang, and Yah-Huei Hong, "Enriching the Inoculation Construct: The Role of Critical Components in the Process of Resistance," *Human Communication Research* 24 (winter 1997): 187-215.
14. Bruce Pinkleton, "The Effects of Negative Comparative Political Advertising on Candidate Evaluations and Advertising Evaluations: An Exploration," *Journal of Advertising* 26 (spring 1997): 19-29.



- 
15. Hua-Hsin Wan and Michael Pfau, "The Relative Effectiveness of Inoculation, Bolstering, and Combined Approaches in Crisis Communication," *Journal of Public Relations Research* 16 (July 2004): 301-28.
  16. Richard E. Petty and John T. Cacioppo, "The Elaboration Likelihood Model of Persuasion," in *Advances in Experimental Social Psychology*, ed. Leonard Berkowitz (CA: Academic Press, 1986), 123-205.
  17. Richard E. Petty and Jon A. Krosnick, eds., *Attitude Strength: Antecedents and Consequences* (NJ: Erlbaum, 1996), 93-96.
  18. Brad J. Sagarin, Robert B. Cialdini, William E. Rice, and Sherman B. Serna, "Dispelling the Illusion of Invulnerability: The Motivations and Mechanisms of Resistance to Persuasion," *Journal of Personality and Social Psychology* 83 (September 2002): 526-41.
  19. Sagarin et al., "Dispelling the Illusion," 528.
  20. Sagarin et al., "Dispelling the Illusion," 526-41.
  21. Larry Christensen, "The Negative Subject: Myth, Reality, or a Prior Experimental Experience Effect?" *Journal of Personality and Social Psychology* 35 (June 1977): 392-400.
  22. Sagarin et al., "Dispelling the Illusion," 534; Julia R. Zuwerlink and Patricia G. Devine, "Attitude Importance and Resistance to Persuasion," *Journal of Personality and Social Psychology* 70 (May 1996): 931-44.
  23. Michael Pfau, Henry C. Kenski, Michael Nitz, and John Sorenson, "Efficacy of Inoculation Strategies in Promoting Resistance to Political Attack Messages: Application to Direct Mail," *Communication Monographs* 57 (March 1990): 25-43.
  24. Michael Pfau, Bobi Ivanov, Brian Houston, Michel Haigh, Jeanetta Sims, Eileen Gilchrist, Jason Russell, Shelley Wigley, Jackie Eckstein, and Natalie Richert, "Inoculation and Mental Processing: The Instrumental Role of Associative Networks in the Process of Resistance to Counterattitudinal Influence," *Communication Monographs* 72 (December 2005): 414-41.
  25. Pfau et al., "Inoculation and Mental Processing," 416.
  26. Pfau et al., "Efficacy of Inoculation Strategies," 28-29.
  27. Anthony R. Pratkanis, Anthony G. Greenwald, Michael R. Leippe, and Michael H. Baumgardner, "In Search of Reliable Persuasion Effects: Iii. The Sleeper Effect Is Dead. Long Live the Sleeper Effect," *Journal of Personality and Social Psychology* 54 (February 1988): 203-18.
  28. Joseph Priester, Duane Wegener, Richard E. Petty, and Leandre Fabrigar, "Examining the Psychological Process Underlying the Sleeper Effect: The Elaboration Likelihood Model Explanation," *Media Psychology* 1 (1999): 27-48.
  29. Joshua A. Compton and Michael Pfau, "Use of Inoculation to Foster Resistance to Credit Card Marketing Targeting College Students," *Journal of Applied Communication Research* 32 (November 2004): 343-64.
  30. Zuwerlink and Devine, "Attitude Importance and Resistance to Persuasion."
  31. Pfau et al., "Enriching the Inoculation Construct," 190.

- 
32. Donald T. Campbell and Julian C. Stanley, *Experimental and Quasi-Experimental Designs for Research* (IL: Rand McNally College Publishing, 1963), 256-80.
  33. "Eden Illusion," *Washington Post*, March 13, 2006, sec. A, p. 14.
  34. Aaron Rutkoff, "The Internet: A Series of Spoofs," *Wall Street Journal*, August 8, 2006, [http://online.wsj.com/public/article/SB115403677535519628-7ICE80\\_FKcefWtDOsgTZT\\_n7H2w\\_20070807.html](http://online.wsj.com/public/article/SB115403677535519628-7ICE80_FKcefWtDOsgTZT_n7H2w_20070807.html) (December 1, 2007).
  35. David Farber and Michael Katz, "Hold Off On Net Neutrality," *Washington Post*, January 19, 2007, sec. A, p. 19.
  36. Adam Cohen, "Why the Democratic Ethics of the World Wide Web May Be about to End," *New York Times*, May 28, 2006, WK9.
  37. Cohen, "Why the Democratic Ethics," WK9.
  38. Pfau et al., "The Influence of Corporate Front-Group," 83.
  39. Percy H. Tannenbaum, Jacqueline R. Macauley, and Eleanor L. Norris, "Principle of Congruity and Reduction of Persuasion," *Journal of Personality & Social Psychology* 3 (February 1966): 233-38.
  40. Sagarin et al., "Dispelling the Illusion," 530.
  41. Michael Burgoon, Michael D. Miller, Marshall Cohen, and Charles L. Montgomery, "An Empirical Test of a Model of Resistance to Persuasion," *Human Communication Research* 5 (September 1978): 27-39.
  42. Michael Pfau, Michel Haigh, Andeelynn Fifrick, Douglas Holl, Aliison Tedesco, Jay Cope, Daved Nunnally, Amy Schiess, Donald Preston, Paul Roszkowsek, and Marlon Martin, "The Effects of Print News Photographs of the Casualties of War," *Journalism & Mass Communication Quarterly* 83 (spring 2006): 150-68; Pfau et al., "The Influence of Corporate Front-Group," 82-85.
  43. Burgoon et al., "An Empirical Test," 34.
  44. Richard E. Petty and John T. Cacioppo, "Issues Involvement Can Increase or Decrease Persuasion by Enhancing Message-Relevant Cognitive Responses," *Journal of Personality & Social Psychology* 37 (1979): 1915.
  45. Pfau et al., "The Influence of Corporate Front-Group," 85.
  46. Judith Lynne Zaichkowsky, "Measuring the Involvement Construct," *Journal of Consumer Research* 12 (December 1985): 341-52.
  47. Pfau et al., "The Influence of Corporate Front-Group," 85.
  48. Pfau et al., "The Influence of Corporate Front-Group," 84.