

To be Heard, Speaking Softly: Building Resistance to Attitude Change

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Abstract Although there are several attitude resistance techniques, attitude inoculation most effectively serves the purpose of withstanding attacks from conflicting arguments.^[1] Inoculation treatment methods are comparable to that of medical vaccination, where a patient is exposed to a small, weakened dose of a pathogen. In this case, the pathogen is simply a counter-argument offered against an advertisement claim aimed at attitude change.^[2] These techniques are typically tested within a political domain, rarely in a commercial context. In this research the effects of inoculation treatments are investigated. We find that strong counter-arguments initially have a strong impact on an existing attitude, but their effect quickly dissipates. However, weaker counter-arguments, although initially not as effective as strong, are shown to be more influential over a longer period of time. Attention is also given to potential moderators of this main effect.

Key words attitude change, attitude immunization, inoculation, health marketing

1. Research Issue

The lazy organism is a term for the brain first coined by McGuire in 1969. It refers to the finite nature of our cognitive resources and people's limited ability to process simultaneous stimuli. People simply do not possess the desire or the capability to consciously process all of the information they encounter—to do so would require massive cognitive resources and would be inefficient for everyday living.^[3] Despite this, people do desire to hold correct attitudes. This is due to incorrect attitudes having a high prevalence to lead to harmful behavior or other negative outcomes.^[4] While initial attitudes are formed by basic drivers such as pleasure and pain,^[5] as our cognitive awareness develops, the motivation behind the formation of attitudes also becomes more diverse.^[5]

The study of attitude bears great value in the field of marketing due to the well documented link between attitudes and behavior^[5,6]. A primary goal of marketers is not only to lure people to a vested interest, but also to maintain their use of the offering and ideally keep brand loyal consumers.^[7] Understanding not only how attitudes are formed but also how to employ the best strategy for persuading people to maintain these attitudes offers a clear competitive advantage. The research on attitude formation and change is legion; the corresponding literature on attitude maintenance in the face of deliberate attempt to change attitudes is not. The research reported here is concerned with this issue and attempts to address the general question "how can an organization best defend their clients' positive attitude (to their brand) against attack from competitors wishing to change those attitudes?"

2. Research Status

2.1 Attitude formation

One of the strongest and most distinctive concepts in social psychology is the variable known as attitude. Attitude has been shown to be a mediating variable for knowledge acquisition and behavioral change;^[8] a person's attitude is defined by their positive or negative view toward a stimulus. These views, formed through direct observation or a reasoning process, develop beliefs that become the platform to automatic formation of an attitude toward a new stimulus.^[5] According to Cacioppo and Petty,^[6] attitudes are the general evaluations people hold in regard to themselves, other people, objects and issues. The attitudes people hold will, in turn, guide their behavior, emotional and intellectual processes as well as subjective influences. Attitudes, whether they are neutral, negative or positive are generally formed with the association of new offerings, ideas, beliefs and other cues to existing opinions based on previous information.^[5]

The Heuristic-systematic Model of Social Information Processing developed by Shelly Chaiken,^[9] as well as the Elaboration Likelihood Model (ELM) conceptualized by Petty and Cacioppo,^[6] illustrate linear frameworks of attitude formation and attitude change. One end of a spectrum of methods for treating messages received is named central processing, where attitudes are formed at a conscious level through a process of internal debate about the arguments. Peripheral information processing, where the attitude formation process is weaker and takes place at a largely automatic, subconscious, level through associative cues, lies at the other extreme. Attitudes can be formed at any level on the scale, and may also be formed through a combination of multiple cues each belonging at different points on the scale. It is also necessary to identify the elements, such as the delivery mode, which affects the message processing choice.^[10] When the message medium is fast-paced or of low involvement, it is more likely that messages are processed peripherally, while when the message, or topic, is of greater perceived personal importance and presents less urgency, message recipients are more likely to process the message through the central route. Clearly, the strength of the arguments and a number of personal and situational factors moderate this process, but the general principle is well accepted.

2.2 Resistance to change

In a marketing context, understanding resistance to attitude change will aid companies in retaining customers, resisting new competitor attacks and utilizing a new toolset for extending product life cycles.^[1] Once someone has invested in developing a strong attitude, they will desire to defend their attitudes.^[4] The easiest way for one to do so is through avoidance of attacks on held beliefs. In the modern marketplace however, consumers are constantly bombarded with advertising and this makes it much more difficult to avoid exposure to counterarguments challenging attitudes.^[11] Although methods such as supportive therapy, where a held attitude is reinforced with positive arguments toward the belief, will aid in strengthening attitudes, the effects will not be as strong or long lasting as inoculation. Inoculation is conceptualized from the practice of vaccination in the medical industry.^[2] This is where a subject is exposed to a small, weak and controlled dose of a virus. The weak exposure allows the person to build a resistance. When later encountering heavy exposure, the subject will more likely be unaffected by the virus, or in the least, recover much quicker than a person that had not been vaccinated. Inoculation theory transfers this method into the social psychology arena, where results are directly applicable within a marketing context. Within a persuasive communications context, the maintenance of an existing attitude is analogous to health, the competing advertising message the virus, and the inoculation treatment a message from the original brand advertisers anticipating an attack and giving the message recipient a counter-argument to it before it occurs.

McGuire and Papageorgis^[2] propose that in high forced-exposure situations, beliefs that may be strongly held but not often challenged will be likely to collapse. In order to prevent this, inoculation treatment is presented as a solution. Not only do attitudes strengthen against stronger versions of the weakened attacks subjects are exposed to, but also attitudes will strengthen against subsequent attacks, even against new arguments. For inoculation to have a strong effect, subject participation is necessary. These authors find that that as the subject becomes accustomed to their beliefs being attacked; they become able to create their own future defenses.

Despite the clear potential of great benefits to creating inoculation (or immunization) marketing campaigns, recent research has produced somewhat inconsistent results. Bither and Dolich,^[1] for instance, attribute inoculation treatment to the development of multi-sided advertising. Such a process results in the breaking down of previously conceived customer segmentation barriers. In such case, an advertisement can be designed to both strengthen the beliefs of existing consumers while also proposing new arguments challenging the attitudes of non-users. Two-sided messages are also said to significantly enhance the perceived novelty of the message.^[12] This, however, may not be ideal in all markets, or with all product groups.^[1] Again, inoculation may also encourage spread through word of mouth. Compton and Pfau^[13] show that people are more likely influenced by messages that stimulate discussion within groups. The necessary and perceived message strength, however, may differ amongst people, with potentially negative effect when the message strength is not correctly generalized.

Practical difficulties also remain, in that future attack themes cannot always be forecast in reality; thus inoculation-different messages where the inoculation treatment is of a different subject matter to attacks is a better measure of the success of inoculation treatment. McGuire^[14] states that “pre-exposure to the weakened counterargument may, by making the subject more aware of the vulnerability of his belief, stimulate him [sic] to develop supporting arguments and to think up and refute other counterarguments”. The content of inoculation treatment is not deemed to be so important, but rather the effect inoculation has on motivation to consider (elaborate upon) the attacking arguments.

In their research, Tormala and Petty^[15] found that resisting an attack that is perceived to be strong will likely increase the original belief. This is so long as the subject realizes that they had resisted an attack. Such findings shed more light on inoculation theory, but also pose an array of questions regarding potential moderating effects, some of which provide a focus for this research and are developed next.

2.3 Potential moderators of inoculation effects

2.3.1 Message strength

As just briefly discussed, the strength of an inoculation treatment message is a factor that comes into question when assessing the success of inoculation. Petty and Cacioppo state that stronger messages will require more cognitive resource use from message recipients. When the message is too strong, it may become ignored if the persons targeted are not prepared to invest their attention in it. In their study on attitude certainty, Tormala and Petty^[15] found that in cases where people believe they have successfully resisted a strong attack, certainty in their initial belief can increase. This effect is due to the conclusion that if a strong attack has failed to change people's minds, the attitude they hold must be correct and worth defending further. Tormala and Petty^[15] also found that when this occurs, the initial attitude will be more resistant to future attacks while also leading to predictable behavior. These suggestions are counter-intuitive –that a strong argument may cause mental processing in the longer run that effectively works against attitude change, and that a weaker argument may generate more attitudes in the long run as the initial impression is undermined by the receiver him/herself, by generating further counter-arguments. Hence the first hypothesis of this research:

H1: There will initially be a higher significant positive relationship between the strong argument and loyalty in contrast to the weak counter-argument.

2.3.2 Time

Current research seems undecided about the effects of inoculation treatments over time. In the original works of McGuire and Papageorgis,^[2] they proposed that the effects of an inoculation treatment would reduce over time. However, Ivanov and Pfau^[16] argue that earlier experiments had tested the longitudinal implications of inoculation treatment over relatively short periods of time; minutes, hours, days at most. More recent studies using longer time periods have shown inoculation treatment to be more effective than previously thought, with the decay rate of the treatment although indeed being present, occurring at a slower rate than first anticipated. The realization of such a finding brings attention to the possibility of inoculation treatment providing a new attitude with enough time without rejection, allowing the attitude to become implicit, likely replacing the older attitude.^[17]

In their recent experiment Ivanov and Pfau^[16] found, contrary to predictions, all inoculation treatments they tested were stable over the experiment timeline, which varied between a few days and 44 days. When considering the message type, traditionally it was thought that the inoculation messages against a belief would have slower decay rates than treatments supporting a belief.^[14] The findings presented evidence that validates this notion. Actually, to be more specific, this is identified as a more steady reduction rather than a strengthening over time effect as originally thought.

While the research of Ivanov and Pfau^[16] gives greater reasoning to the processes behind time in effect to inoculation treatment, the experiment condition used is not defined within a marketing context. As indicated by Bither and Dolich,^[1] people do not usually hold attitudes toward brands and products as strongly as they do cultural views as in the case of this experiment, generating cultural opinion leading to law-making and taboo practices. As such, the decay effects of inoculation treatment may vary depending on the strength of the initial attitude. Another shortcoming of this experiment is the use of people who may or may not be actively involved with the stimulus questions.

In summary, it does seem as if the effects of inoculation (and other attitude-supporting techniques) fade over time, although inoculation methods are shown to be superior in this respect. There remains uncertainty, though, regarding the speed of attitude decay and the relative merits of strong and weak argument relative to the effect decay. Hence the second research hypothesis:

H2: A weak counter-argument will have longer-lasting effects in contrast to a strong counterargument; showing a slower rate of decay.

3. Research Method

3.1 General design and pre-test

The research experiment reported here has a simple design where three groups are exposed to no inoculation, a weak inoculation argument or a strong inoculation argument, respectively. The data is collected in two rounds, 14 days apart. The first exposure is made with an inoculation treatment included; the second exposure merely measures the amount of attitude decay.

The topic selected is in the health-marketing domain—a toothpaste brand for smokers is attacked by a new brand. Scenarios are used, and then data collected through an online panel data service. All measures applied have been validated in other, published, research; scales utilize multiple seven-point Likert items. The scenarios are shown in Figure 1. All respondents are exposed to the initial scenario, those in the second group are also exposed to the second, strong message and the third group exposed to the base message plus the weak argument. In round 2 of the data collection, only the initial scenario is used, with the attitude measurement items.

As a smoker consciously looking after your dental hygiene, consider that for several years you have been using a toothpaste brand especially for smokers, named “Crown”. This specially formulated toothpaste aids you in countering the negative discoloring effects on teeth caused by smoking. Throughout your use of the Crown brand, you have neither experienced any side effects nor any problems. The whitening treatment it promises has been generally effective. With frequent use of the Crown toothpaste, you are able to keep the attractive white coloring of your teeth.

While doing your shopping and seeking out your regular smoker’s toothpaste, you notice a new competing brand “Royal”, which is selling for the same price as your regular brand. You recall having seen advertising from Royal, which claimed to act much faster and be stronger than any existing brand. Thanks to its speedy results, the new Royal brand claims that you would even be able to reduce the treatment frequency and amount of time spent brushing.

Figure 1a The base scenario to which all respondents were exposed

As you are considering which brand to purchase, you remember seeing advertising from your regular smoker’s toothpaste, Crown. Their advertisement claims that new competitors (such as Royal) only achieve their quick results through the use of a chemical that is proven to cause tooth decay, thus achieving only temporary cosmetic effects. According to Crown, the Royal smoker’s toothpaste product fails to aid in the long-term improvement of your oral hygiene, and puts your teeth at risk.

Figure 1b The additional, strong, persuasive argument given only to Group 2

As you are now considering the decision of which brand to purchase, you remember seeing advertising from your regular smoker’s toothpaste, Crown. The advertisement highlights the fact that they are very experienced at making smokers’ toothpaste, unlike newer market entries. Crown implores you to stick with the brand you know and trust.

Figure 1c The additional, weak, persuasive argument given only to Group 3

A pretest conducted with undergraduate students shows the 4-item argument strength scale to be reliable (Alpha = .87) and the difference—in the expected direction—between the strong and weak arguments statistically significant.

3.2 Sample

In the first instance 452 subjects were included in the experiment. However, due to the longitudinal nature of the experiment and the high number of participants dropping out or becoming unavailable, the final sample is composed of 136 subjects. Of these, 52 were each in the control (base scenario exposure only) and

strong argument groups, and 32 in the weak argument group. Participants of this study all reside in North America and all of the respondents are self-identified smokers, consuming a minimum of 20 cigarettes per week. Because the study explores the habits of cigarette smokers, persons under 18 years of age were not permitted to participate. The age range of participants was 18yrs to 55yrs (18-30 = 32, 31-42 = 51, 43-55 = 53) with an even gender split. 24 of the respondents claim to be light smokers (up to 1/2 a pack a day), 87 average (1/2 to 1 pack per day) and 25 heavy (over 1 pack per day) smokers.

3.3 Scales

Other than the demographic items all scales used are in Likert 7-point format, anchored by “agree strongly” and “disagree strongly”. The dependent variable, “loyalty”, represents the extent to which respondents maintain their original attitude and intention to their original brand, Crown, in spite of the attack made upon their belief by the new brand, Royal. Nine questions are used to measure loyalty, three each assessing cognitive, affective and behavioral dimensions of attitude.

3.4 Procedure

In order to conduct the survey experiment, a self-completion questionnaire was administered through a web-based survey instrument, using the professional panel of Cint, an online research agency. Employing the services of the panel data service allows for a minimization of researcher bias and guarantees the maintenance of anonymity for the test subjects, further protecting their privacy and increasing confidence in producing truthful answers without fear of ridicule.^[18] All survey respondents were first prompted with the survey information sheet, where an invitation to take part in the experiment is presented with the nature of the experiment and a general overview of the experiment also explained.^[19] All respondents maintained their anonymity, as identifier information was not required in this research. The research was conducted under the auspices of the authors’ University Ethics Committee.

The survey instrument was first constructed in Qualtricsonline software, with a subsequent distribution to smokers directed to the survey through the online panel service during November 2015. The respondents employed in this research are all self-identified smokers from North America.

4. Results

The loyalty scale again proved reliable, demonstrating a Cronbach’s alpha value of .819 for the first round and .799 in the second. The experiment data is summarized in Figure 2.

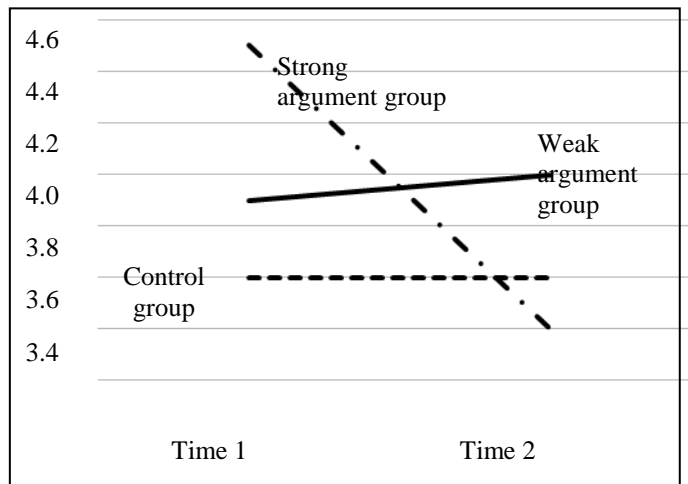


Figure 2 Affects of inoculation treatments on initial attitude over time

As can be seen in Figure 2, there is no difference in the attitude of the control group over the two time-periods, as might be expected. In spite of the appearance of an increase in attitude, the same is true of the weak-argument group, where the actual difference of 3.9 → 4.00 is not statistically significant ($p = .94$). The strong counter-argument group shows a strong initial reaction with a mean score of 4.5, this is 0.9 higher than the control group in the same period ($t = 4.2, p < .001$) and is also significantly higher (i.e., more persuasive) than the weak argument at the same initial time ($t = 2.2, p = .03$). However, the mean for the strong argument falls significantly from 4.5 in Time 1 to 3.4 in Time 2 ($t = 4.7, p < .001$).

5. Discussion and Conclusions

This study provides support for existing inoculation theory concerning the effects of message strength and the attributes of inoculation treatment over time under marketing conditions. A strong inoculation treatment counter-argument is initially found to be more persuasive. However, although the strong argument is more effective at first, it fades significantly between the two test periods. A weak counter-argument—which is not as effective in the initial test – is found to maintain a high level of persuasion.

The commercial implications for advertisers are clear. There are lessons for public policy advertising here as well, though. For example, road safety campaigns often features lurid content. This research suggests that a milder argument will, over time, be more effective at maintaining safe driving habits.

Despite being purposely chosen, a valid limitation of this research is the use of smokers. The featuring of tobacco restricted the survey from including subjects under the age of 18 years old. Future research is also encouraged to include other product categories and other cultures. The moderation variables of age, smoking frequency, gender are also on interest and worthy of more consideration, and it would be of interest, and some value, to untangle the cognitive, affective and behavioral aspects of loyalty within this context. Nevertheless, a foundation has been put in place upon which future research can build.

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