BRANDED AND NON-BRANDED TOBACCO COUNTER-ADVERTISEMENTS: AN EXPERIMENTAL STUDY OF REACTANCE AND OTHER MALADAPTIVE AND ADAPTIVE COPING RESPONSES

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Abstract

An experiment was done to investigate whether or not there is a need to treat smokers and non-smokers as separate target audiences when creating tobacco counter-advertisements. The Extended Parallel Process Model (Witte, 1992) and Reactance Theory (Brehm, 1966) were used to guide the development of predictions. The study revealed that social marketers need to have different advertising tactics for smokers and non-smokers, since smokers have reported more maladaptive coping responses and fewer adaptive coping responses than non-smokers. Moreover, based on the fact that a smoker's brand forms an essential part of their self-identity (Goldberg et al., 1995) the experiment was also designed to see if smokers would have differing levels of reactance and other maladaptive coping responses if they saw a counter-advertisement attacking their brand, one attacking a competing brand, and a non-branded one. The study did not reveal any significant differences in reactions among the three conditions.

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Introduction

What if cigarette ads told the Truth?

(<u>Truth Campaign</u>, Florida)

That question formed the headline of a tobacco counter-advertisement (Truth Campaign, Florida).When asked that question a smoker replied: "as far as them telling the truth, I don't see it happening it's a business" (Josh, smoker, University Student). Actually, the truth is in existence and it is heavily communicated. It is communicated through the placement of laws, through education, and social marketing. Laws were put in place to restrict tobacco companies' marketing efforts (Frieden & Bloomberg, 2007). Media literacy programs were introduced in schools, in order to educate the youth, so that they are less vulnerable to tobacco companies' marketing efforts and peer pressure (Austin, Pinkleton, Hust, & Cohen, 2005). Social marketing has played its part, with communicating the truth though antismoking advertisements (Lavack, 2004). Yet, when the same smoker was asked how he felt about a tobacco counter-advertisement he said: "doesn't do much for me" (Josh, smoker, University Student). This reaction was the drive for the research presented in this thesis.

Smokers are still rebelling against the truth. They see antismoking advertisements and they still insist to smoke. There is a concerning degree of nonchalance in their reactions, the roots of which must be understood. Studies have been able to demonstrate that antismoking advertisements have the capability to decrease intentions to smoke amongst adolescents (e.g. Pechmann & Ratneshwar, 1994; Pechmann, Zhao, Goldberg, & Reibling, 2003; & Zhao & Pechmann, 2007). Therefore, it could be that it is not the act of communicating the truth that poses as an obstacle to getting adaptive coping responses

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from smokers. Dorfman and Wallack (1993) have suggested that it is the communication strategy chosen to pass on the truth that needs to be examined. They made a distinction between public service advertisements as one strategy and counter-advertisements as another.

Dorfman and Wallack (1993) argued in favour of counter-advertisements as the more effective communication strategy. Public service advertisements (PSAs) target individuals directly by communicating the negative effects their behaviour is causing to themselves and those around them (Dorfman & Wallack, 1993). For example, PSAs might send the message that smoking causes cancer. However, counter-advertisements, such as the one described above, acknowledge the role that social and environmental factors play in influencing individuals' behaviours. As a result, this strategy redirects the blame to the environment, removing the pressure from individuals, so that they do not feel directly attacked (Dofrmann & Wallack, 1993). In the case of tobacco counter-advertisements, some could be found attacking the industry in general and others the brand and its iconic characters, such as the Marlboro man or Joe Camel. While counter-advertisements do appear to be more lenient on the individual, by attacking the brand an individual smokes, they could be attacking a part of their identity as well.

Belk (1988) explains that the objects one consumes can become a part of their identity. There is great meaning and value attached to a person's possessions, especially if these possessions allow them to be someone they could not be without them. This is what he refers to as the extended self. The products they consume and they way they consume them defines people (Belk, 1988). Goldberg et al. (1995) demonstrated how that could be seen between a smoker and the brand they smoke. Each brand has certain

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characteristics that become those of an individual once they choose to smoke it. When a smoker was asked how he would feel if it was his brand being attacked by the counter-advertisement he replied: "if it was my brand, it wouldn't change my opinion of it. I really believe once people choose their brand especially with cigarettes, it's like really hard to get them to sway unless they're gonna quit. As far as changing brands, not gonna happen" (Josh, smoker, University Student). Consequently, attacking a smoker's brand can be like attacking a smoker's identity. It could result in having the smoker become more attached to the act of smoking and to the brand they smoke. Smokers' responses could be explained using the extended parallel process model (EPPM) developed by Witte (1992). This research will make use of that model, in order to explore if there truly is a difference between smokers' reactions to counter-advertisements that attack their brand, a competing brand, or the industry in general.

The issue does not only begin with the need to understand how to communicate to a smoker in such a way as not to elicit maladaptive coping responses. It also stems from recognizing that there is a difference between the ways a smoker would perceive a threat from a counter-advertisement, as opposed to a non-smoker. Non-smokers do not have to deal with addiction when processing a message. They do not have to deal with losing a social group they belonged to, if they decided to quit as a result of the message. Also, they would not be losing a part of their identity. Witte's (1992) EPPM will also be used in this research, in order to guide the predictions made with regards to the difference in smokers and non-smokers' reactions.

Previous research has been done to understand the effectiveness of manipulation campaigns, which are campaigns that include counter-advertisements (Lavack, 2004).

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However, the components of these campaigns have not been examined (Lavack, 2004). Additionally, adult smokers' reactions to antismoking advertisements have not been considered much experimentally by researchers up until now (Agostinelli & Grube, 2003). Understanding the ways smokers versus non-smokers react to different components of counter-advertisements is the aim of this research. The knowledge gathered can aid in ameliorating counter-advertisements, so that social marketers' resources could be more efficiently directed to creating counter-advertisements that elicit the desired response from smokers.

<center>**Smokers' Motives**</center>

There are several "physiological, psychological, social, and environmental" factors that influence people's investment in the habit of smoking (Altman, Slater, Albright, & Maccoby, 1987, p.95). According to Moschis (1989), the causality between an individual and their adaptation of the act of smoking could be explained in two ways. First, the relationship could be understood by considering solely the individual and their physiological and psychological processes, and excluding the role the environment plays in shaping their motives. Second, the causality could be explained by taking into consideration the environmental influences including tobacco advertising (Moschis, 1989).

Physiological and Psychological Processes

Physiological processes. Costa e Silva and Fishburn (2004) explain that one of the main reasons people continue to smoke is addiction. The main chemical substance in cigarettes is nicotine, and it is highly addictive. It provides a sensation of pleasure and happiness, it makes people feel alert, energized, and it reduces their appetite. Consequently, it acts very similarly to heroin and cocaine. Addiction is hard to overcome, because abstaining from nicotine is accompanied by withdrawal symptoms, which make quitting extremely unpleasant (Costa e Silva & Fishburn, 2004).

Psychological processes. Starr (1984) claims that there are ulterior psychological motives that accompany the physiological ones. The act of smoking is adopted by people who desire to be part of an in-group. As such, individuals take up the act of smoking to feel a sense of belonging with other smokers. One's desire to live up to other people's

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expectations is a big determinant of a person's choice in behaviour. People are under constant pressure to get their behaviour in line with that of other people's expectations, because they know that others form judgments of their personality based on their previous actions and interactions with them. Therefore, it follows that individuals in society play the puppet's role as they are constantly stressing to make sure that the impression that others, the puppet masters, have of them is actually the one those individuals want for themselves (Starr, 1984). Pechmann and Knight (2002) refer to the previous as a person's engagement in impression management. They explain that people judge each other based on the kind of products they consume. Each product carries along a specific image, and the person using that product adopts that image. Consequently, the product's traits become those of its consumer in other people's eyes. These kinds of judgments are called consumption stereotypes, and they can be formed at a very early age. In specific, stereotypes are defined as "abstract knowledge structures linking a social group to a set of traits or behavioural characteristics that guide the processing of information about the group" (Pechmann & Knight, 2002, p.5). This is seen in youth's cigarette brand preference. Goldberg et al. (1995) demonstrated that smokers associate each brand with a certain image, and the brand they choose to smoke becomes a key determinant of their identity. It is through a similar process to Pechmann and Knight's (2002) impression management strategy that smokers make their decisions on which brand they would choose to smoke. Through their choice of brand, smokers communicate their individuality and personality, part of which is shared with other smokers they choose to be associated with (Goldberg et al., 1995). Moreover, Starr (1984) pointed out that there are various expressive characteristics associated with the act of smoking, such

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as the way one holds the cigarette, the way one speaks while they smoke, and many other expressions, which become part of a smoker's personality. These expressive characteristics become a symbol of belongingness (Starr, 1984). Evidently, these researchers have shown that one major motive for adopting the act of smoking is the need to fit in with a social group. As a result, smoking becomes a right of entrance for youths looking to form their identity and establish their individuality (Pollay, 2000).

   Industry documents. One source that is worthy to consider when investigating smokers' motives are the tobacco companies' confidential documents retrieved from their marketing and advertising files. Pollay and Lavack (1993) demonstrated through their research that these companies have invested a lot of money and time to conduct market research that is aimed at understanding why people smoke, so that they can maintain and increase their customer base. The market research aids tobacco companies to target smokers and tailor their marketing efforts toward them. One example is Imperial Tobacco's Project 16. They conducted the study through the use of closed circuit television (CCTV) at hotels (Pollay & Lavack, 1993). CCTV involves the placement of cameras in monitors, which record the actions of people on one end, so that those at the other end can listen and observe. In other words, the tobacco company would have had access to visual and audio feeds from people staying at the hotel (TechTarget, 1999). This market research revealed that, in general, adolescents learn to smoke between the ages of 12 and 13, and they make use of cigarettes to portray their sense of independence. Interestingly, at that stage, they recognize that their 16 and 17 year old smoking peers are addicted. They are also aware that their older counterparts began regretting their decision to smoke (Pollay & Lavack, 1993). Another study by Imperial Tobacco called Project

Plus/Minus also showed that once young adolescents begin smoking they too become aware of the negative side effects. However, they feel like the harm will not affect them. They believe that they are not addicted yet and that they are still able to stop at any time they wish. Admitting their addiction, makes them feel enslaved by the cigarette. They attempt to escape this feeling by making rationalizations about the risks associated with smoking (Pollay & Lavack, 1993).

Market research done by R.J. Reynolds Macdonald Inc. (R.J.R.) called Youth Target Study '87, explores the personalities and psychographics of smokers (Pollay & Lavack, 1993). The study was done on a sample of 1022 participants that were between the ages of 15 and 24. Their personality traits were measured using Cattell's 16 Personality Factors. Also, participants' attitudes and knowledge about the negative side effects of smoking were measured. Finally, cluster analysis was done to segment the market based on the results received from the previous measures. The largest segment was labeled Thank God it's Friday (T.G.I.F.), and it formed 30% of the youth. Smokers made up 62% of the segment. They were characterized as pleasure-seeking and underachievers who enjoy hard rock and heavy metal music, and enjoy reading magazines, such as *Playboy* and *Penthouse* (Pollay & Lavack, 1993).

Environmental Influences

Evidence showing that there has been market research done on behalf of the tobacco companies (Pollay & Lavack, 1993), supports the second proposition put forth by Moschis (1989) that causality includes environmental influences including tobacco advertising. In fact, research has shown that there is a causal relationship between

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cigarette advertisements and an increase in youths' intentions to smoke (Pechmann & Knight, 2002). However, it is not only through tobacco advertising that people are exposed to persuasive messages from the industry.

Pierce et al. (1998) conducted a longitudinal research over the course of three years, in order to determine whether youths' receptivity to tobacco advertising and promotional activity makes them more susceptible to smoking or experimenting with smoking. Adolescents who were categorized as non-susceptible never smokers were interviewed in 1993. Then, the participants were interviewed again after three years, in 1996. Adolescents' degree of receptivity is a function of the amount of exposure, the degree of agreement, and the degree of positive emotional responses to the message being communicated through the tobacco industry's promotional efforts (Pierce at al., 1998). The results of the study revealed that 16.6% of the participants interviewed at baseline became susceptible to smoking in 1996. Also, 29.5% began experimenting, and 3.6% became established smokers. The latter participants reported having a favourite advertisement, and they were able to distinguish their brand preference in 1993. Additionally, they were more likely to have reported using a promotional item. Consequently, the more receptive adolescents were to the tobacco industry's promotional efforts, the more likely they were to progress towards smoking (Pierce et al., 1998).

Promotional activities include the likes of sponsorships and product placements in movies or television shows. Basil (1997) explored Brown and Williamson Tobacco Company's internal documents, and he found evidence of the company paying actors cash and/or luxury items, so that they can use their brand of cigarettes in the movies they star in. Additionally, he argued that tobacco companies are very careful and deliberate in

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choosing the actors and characters with whom to associate their brand. For instance, the celebrities endorsing the brand are usually playing the part of the successful and attractive person. They are portrayed as being rewarded in life for smoking. Unfortunately, people tend to identify and look up to these celebrities and the ideal character they play. This renders product placement an effective and latent type of promotion for cigarette companies, through which they can increase their consumer base (Basil, 1997).

On the same line of argument, Dewhirst and Hunter (2002) demonstrated through theoretical argumentation that sports sponsorship is highly beneficial for tobacco companies. They conducted interviews with senior advertising practitioners who handled tobacco accounts, and they gathered information from news and trade sources about the benefits of forming sponsorships and co-sponsorships. Dewhirst and Hunter (2002) state that the tobacco companies benefit from increased awareness through increased exposure of the target market to the brand name, logo, or brand colours. In addition, the cigarette brand image is reinforced through forming co-sponsorship with a complementary product. Marlboro and Budweiser are a good example, because both brands portray the image of ruggedness, individuality, and social acceptance (Dewhirst & Hunter, 2002). Another example was given of Marlboro's logo being placed beside Tic Tac's logo. By so doing, they are eliminating a source of concern for smokers, which in this case is bad breath. The increase in awareness, and comforting through co-sponsorships with hygienic products, could eventually lead to an increase in cigarette sales or market share (Dewhirst & Hunter, 2002).

Tobacco Advertising

The focus of this thesis is on understanding how to counteract tobacco advertising. Much research has been conducted in this area. Relating back to Goldberg et al.'s (1995) finding that a cigarette brand forms the essence of a smoker's identity, brings forth the need to explain the great importance that tobacco advertising has played in forming that identity. Pollay et al. (1996) demonstrated through an econometric study that the amount of cigarette brand advertising is positively related to the brand's market share. However, these researchers were not the only ones that shed light on the negative side effects of tobacco advertising. Tobacco advertising is a heavily researched topic (Pollay et al., 1996). This drive to know more and more about tobacco advertising could lead to society gaining more knowledge on how to counteract it.

Goldberg, Davis, and O'Keefe (2006) explored popular claims made by tobacco companies, in order to defend themselves in lawsuits. These claims are important, because controversies in literature revolve around them. These authors found five major recurring statements. First, tobacco companies plead innocent when they were accused of having the power to increase the number of smokers. Second, they repeatedly stated that they did not target non-smokers. They only targeted people that already smoked. As a result, they argued that there is no proper evidence to accuse them of either expanding their market or increasing their consumption rates. Third, they mentioned that they did not target youth. They emphasized that their advertisements and promotions were not the reason behind the increasing rates of youths' smoking. Finally, they defended their position by saying that they always adhered to the regulations and the law, and because of that they cannot be accused of doing anything illegal. Nevertheless, the plaintiffs'

attorneys were able to successfully counteract some of these statements (Goldberg, Davis, & O'Keefe, 2006), and so did other researchers before them.

For instance, Tye, Warner, and Glantz (1987) were curious about the ways in which people's physiological need for cigarettes were recognized, in order for tobacco companies to guarantee future sales and growth of their business. As a result, they published an article that dealt with understanding the effects of tobacco advertising on consumption, as reported by others in the past. A main argument they made concerned the tobacco industry's claim of being a mature market and not a growing one. They began by explaining the difference between mature tobacco markets and growing markets. They accepted that the tobacco market was mature, because overall sales were stable, or so they appeared on the surface. The puzzling issue was that these sales were stable at a time when quitting rates were increasing. Therefore, they questioned tobacco companies' claims of not aiming at attracting new consumers. They argued that there must have been some kind of growth taking place in the market, because the tobacco companies were still fruitful and still making profit (Tye et al., 1987).

Others, such as Pechmann and Knight (2002) were able to determine the existence of causality between tobacco advertising and increase in smoking uptake amongst adolescents through the use of controlled experiments. They were able to show that cigarette advertising followed by exposure to peers that smoke, does increase intentions to smoke amongst youth. They designed a study that aimed at testing the "two-step model of cigarette advertising effects" (p. 14). It was derived from the "two-step model of advertising effects", which was repeatedly tested and successfully supported by previous researchers (p. 8). The model includes two elements, a prime and an exposure to a

stereotype. In the first step, a prime was introduced in the form of an advertisement, so that the negative smoker stereotype, the positive smoker stereotype, or both would be activated. Then, in the second step, the stereotypes were reinforced through exposure to evidence of the product in use (Pechmann & Knight, 2002).

Pechmann and Knight's (2002) study was a full factorial design, with ad condition and peer exposure being manipulated. Ad condition had four levels. Participants were either shown four cigarette ads, four antismoking ads, three cigarette ads and one antismoking ad, or four control ads. As for peer exposure, participants were either exposed to peers that smoked, or they were exposed to peers that don't smoke. The authors measured stereotypic beliefs and smoking intentions amongst the youth after each manipulation. The results showed that cigarette ads followed by peers that smoke weaken adolescents' negative stereotypic beliefs and increase their intention to smoke. Whereas, seeing cigarette ads that are followed by exposure to peers that do not smoke, has no effect on stereotypic beliefs and intentions to smoke. Additionally, seeing antismoking ads or control ads, followed by exposure to either smoking or nonsmoking peers has no impact on beliefs or intentions. Finally, when peers smoked, adolescents expressed more negative thoughts, and these negative thoughts were more extreme after seeing antismoking ads as opposed to cigarette and control ads. Pechmann and Knight (2002) explained that they were concerned that negative thoughts simply came easy to all adolescents, because it is in general easier to come up with negative thoughts about smoking as opposed to positive ones. That could explain the greater amount of negative thoughts from peers who saw antismoking ads, when previously the findings showed that these ads had no effect on intentions or beliefs. Their research demonstrated the problem

and the solution. Tobacco advertising increases intentions to smoke. However, antismoking advertising has the potential to counteract that effect (Pechmann & Knight, 2002).

The unpleasant fact of the existence of a causal relationship between tobacco advertising and increase in smoking intentions (Pechmann & Knight, 2002) called for a need to understand the industry's advertising strategies and tactics. Researchers have accomplished that by conducting content analyses of cigarette advertisements. Altman, Slater, Albright, and Maccoby (1987) wanted to find out about the techniques that tobacco advertisers used in magazine ads, in order to convince women and youth readers to adopt the habit of smoking. They did their longitudinal study at a time when smoking's negative effects on health were made known. The authors looked at magazines, from the years 1960 to 1985. They chose ones that were obviously distinguishable to their readers, so that they would get a clear distinction between the content of advertisements aimed at women versus youth. They looked at seven variables within three categories. First, they looked for images that portrayed the act of smoking, in terms of the presence of a cigarette, of whether the cigarette was being held or smoked, and of the presence of smoke. The second variable was the presence of a low nicotine or low tar theme, which was referred to as the healthy image of smoking. Thirdly, they looked at signs that showed the vitality of smoking, in terms of showing an adventurous or risky appeal, showing a recreational appeal, and showing an erotic/romantic appeal (Altman et al., 1987).

The findings of their research revealed that there were fewer images of people holding cigarettes in the advertisements, after the Surgeon General's report in 1964.

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There was also an overall decrease in these images over the course of their longitudinal study. On the other hand, there were cigarette advertisements that introduced and promoted healthier cigarettes. The latter advertisements included statements proclaiming that cigarettes contained low amounts of tar or nicotine. Additionally, the advertisements increasingly made an association between health and smoking. Their last finding showed that there was also an increase in the risk and adventure themes in advertisements, which demonstrate smokers' ability to engage in physical activity (Altman et al., 1987).

Another study that looked at the content of advertisements on the basis of target market segmentation was done by Basil et al. (1991). More specifically, the authors were interested in how tobacco companies tailored their advertising in magazines based on the demographic and psychological characteristics of the end reader. They began by recording the quantity of tobacco advertisements in the selected magazines. They also counted how many ads were found for each segment of the readers, and noted how that count changed over time. Then, they analyzed the content of the advertisements looking for commonalities and differences in the approach that tobacco advertisers used for different target audience (Basil et al., 1991).

Their research (Basil et al., 1991) revealed that there was a growth in the investment in magazine advertisements after the radio and television ban, in America, in 1970. However, they observed an increase in the number of advertisements in magazines with a defined target audience. Advertisements targeting women were more product-oriented. They did not focus as much on the model, since they attempted to demonstrate that women were keener on selecting a cigarette brand based on its style. In addition, advertisements targeting women included more models with coy and suggestive poses,

than advertisements targeting men. Also, as opposed to those targeting men, advertisements targeting women included more horseplay between a man and a woman, and they included more erotic themes. Advertisements targeting Blacks were also more product-oriented, they included more models with coy and suggestive poses, and they had more erotic themes, than advertisements targeting Caucasian people. More generally, advertisements targeting the youth included more models and horseplay, and ones targeting older people included more erotic themes and models with coy and suggestive poses. For lower income readers, advertisements included more horseplay, models with coy and suggestive poses, and erotic themes, than advertisements aimed at people with higher incomes. Finally, consumers that were not heavy smokers were targeted by using models, in order to highlight the fun and attractive aspect of the act of smoking (Basil et al., 1991).

These content analyses have demonstrated that the tobacco companies are aware of how to increase consumption. And the experiment done by Pechmann and Knight (2002) showed that their efforts are successful. These findings support Tye et al.'s (1987) argument that the tobacco industry is a growing market. Fortunately, researchers were able to disprove tobacco companies' claims and shed light on the reality and the negative side-effects of tobacco advertising. These findings have advanced the government and public health management's knowledge, and encouraged the development of counteractive strategies.

Endeavours to Counteract Tobacco Advertising

As Rothschild (1999) suggested, it takes the right combination of law, education, and marketing for effective public health behaviour management. In order to counteract the negative side effects of tobacco advertising, laws were put in place, media literacy programs were implemented in schools, and social marketing was used. There is extensive research done to understand the efficiencies and deficiencies in the use of each of the three strategic tools.

Law

Weis and Burke (1986) highlighted the fact that there was an unequal distribution of power between the tobacco industry and the media. Due to their high profit margin, tobacco companies had great financial power in the past, before the government became involved through the imposition of advertising regulations. They had a lot of money, which they used to control negative press. In the 1980's the media was heavily dependent on advertisers for its revenue. For example, if a tobacco company were to pull out from advertising in a newspaper, then that newspaper would be at risk of losing a substantial percentage of its income. Consequently, tobacco companies would threaten to terminate their relationship with an advertiser, if it attempted to publish works that had the potential of tearing down the industry. This inhibited honest communication between the gatekeepers of knowledge and potential or current smokers (Weis & Burke, 1986).

Later on, with more research and findings evolving around the causal relationship between tobacco advertising and consumption and anti-tobacco advertising and consumption, governments began getting involved by placing advertising bans (Mitchell

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& Mulherin, 1988). However, even the government's attempt to control the tobacco industry's influence on the media was not fool proof. Goldberg and Kozlowski (1997) pointed out that there were loopholes in the 1997 Tobacco Agreement. The tobacco agreement is a settlement formed between the tobacco industry and the attorneys general of 39 states in America (Goldberg & Kozlowski, 1997). It required the tobacco industry to pay state Medicare and Medicaid costs that pertained to tobacco-related illnesses. Also, the agreement dictated that the tobacco industry invests in a public health education plan, quitting programs for smokers, and health care for uninsured children. Additionally, the agreement included outdoor advertising brands, and displaying tobacco products in stores. A restriction was also placed on the selling of cigarette packs in vending machines, on the use of characters, such as Joe Camel and the Marlboro man, in advertising material, on creating merchandise that include the cigarette brand logos, and on the sponsorship of sports events. Finally, it required bolder health warnings. The tobacco industry settled for the terms in the agreement, so that they could avoid law suits from smoking-related issues and punitive damages they would have to pay as a result (Goldberg & Kozlowski, 1997).

Goldberg and Kozlowski (1997) explored the gaps and concluded that marketers in the tobacco industry are skilled at manipulating the 4P's of marketing (price, place, promotion, and product), and the government should be aware of that when placing regulations on tobacco advertising. They argued that there are four ways in which the tobacco companies were given leeway, due to the government's underestimation of these companies' capabilities. First, they proposed that the government did not impose enough regulations on the tobacco companies. They were left the option to promote themselves in

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several ways. Second, they argued that the agreement failed to consider restricting tobacco companies from representing cigarettes as healthy. They were able to get away with advertising such products as the *slim* and *light* cigarettes. The authors believed that the latter products create the illusion that they are safer, and by so doing they attract consumers to start smoking. In addition, within the agreement, there was a requirement for the tobacco companies to fund an education campaign that would be put forth by parties independent from the government and the tobacco companies. However, the authors feared that the tobacco companies would exert pressure on these parties to exclude some effective public service advertisements. This relates to the political influence that tobacco companies were known to have in the past (Weis & Burke, 1986). Therefore, this article (Goldberg & Kozlowski, 1997) is pointing out that the government has not guaranteed that these companies will be stripped from their financial power. Another concern about the flexibility of the agreement was that the health warnings were ignored by cigarette consumers, which render them ineffective at creating negative associations with cigarettes and health (Goldberg & Kozlowski, 1997). Finally, they discussed how price, a part of the marketing mix, was not looked into. They stated that price could be a great de-motivating factor that would lead to a decrease in smoking (Goldberg & Kozlowski, 1997).

More recently, some of the shortcomings of the tobacco agreement have been overcome. Frieden and Bloomberg (2007) discussed four measures which have been implemented in order to decrease smoking uptake amongst adolescents and increase quitting rates amongst smokers. First, the government introduced tax, which increased the price of cigarettes. This strategy has been rated as the most effective, because smokers

with lower incomes became discouraged to buy cigarettes. Second, laws were passed, which prohibited indoor smoking. It was expected that once smokers are asked to refrain from smoking around others, it will highlight the danger that they are causing to others around them, and they will become more aware of it. Third, a comprehensive ban has been placed on advertising. The tobacco industry voluntarily placed the ban on themselves (Basil, 1997). Finally, efforts were made by public health management to spread the word about the negative effects of smoking and the negative influence of the tobacco industry (Frieden & Bloomberg, 2007). That was done and is still being done through antismoking advertising, placing health warnings on cigarette packs and publicized promotions, and having pictures of damaged organs on the packs (Frieden & Bloomberg, 2007).

Unfortunately, the tobacco industry has a lot of influence on what kind of information gets disseminated. They put pressure on politicians, so that they could have more control over the actions taken against them (Frieden & Bloomberg, 2007). The public needs to be more educated about what goes on between the government and the tobacco industry beneath the surface.

Education

The need for education was recognized, and it was applied to the youth is through media literacy programs. Austin et al. (2005) demonstrated the effectiveness of media literacy programs at school, in order to counteract the effectiveness of tobacco advertising. They defined media literacy as "a person's ability to access, analyze, evaluate, and communicate messages in a wide variety of forms" (Austin et al., 2005, p.

78). They conducted a pretest-posttest quasi-experimental study, at schools in eight different communities. Three communities were used as the control group, and the other five as the experimental group. The introduction of the media literacy program served as the treatment. The program included six lessons. The first lesson taught students the tobacco industry's advertising techniques and how to criticize the advertisements. The second lesson involved introducing them to the smoking myths shown in advertisements, and then contrasting them with the truth. The third lesson allowed students to explore their creative side and learn about counter-advertisements by asking them to create counter ads from cigarette ads found in magazines. As for the fourth lesson, students were taught that advertising is one of the ways that the tobacco companies use to market cigarettes. The fifth lesson exposed them to the anti-tobacco efforts around the world and in their own community. During the final lesson, students were asked to work with others in their community, in order to prepare a communications plan to counteract the tobacco industry's marketing efforts (Austin et al., 2005).

Austin et al.'s (2005) study revealed that media literacy programs were effective in the following ways. To begin with, the six lessons decreased students' susceptibility to influence from their peers that smoked. Also, students in the experimental group demonstrated a gain in knowledge resulting from the program. Additionally, those in the experimental group were more skeptical of tobacco advertisements than those in the control group. Students in the control group were less aware of the industry's use of positive characteristics and features in their ads to make the act of smoking look more desirable to the target audience.

Fortunately, the media literacy program was deemed effective (Austin et al., 2005). However, people need to be reminded of the things they learnt. Marketing could act as an efficient reinforce (Rothschild, 1999).

Marketing

The effect of antismoking advertisements on decreasing the intentions to smoke amongst adolescents has been supported by many studies. Pechmann and Ratneshwar (1994) conducted a 3 x 2 factorial design experiment. The authors exposed seventh graders either to cigarette ads, antismoking ads, or control ads from a magazine. Then, they gave the students two different readings. One reading described the traits of a smoking peer, and the other reading described the traits of a nonsmoking peer. The purpose of the experiment was to measure the nonsmoking adolescents' judgments or perceptions, their thoughts, and their inferences about their peers.

Students in the control condition were compared overall based on their differences in judgment of a smoking or non-smoking peer (Pechmann & Ratneshwar, 1994). The findings showed that they judged smoking peers less favourably on common sense and on personal appeal, but they judged them similarly on glamour and maturity. The control group served as a basis for comparison for the antismoking ads condition and cigarette ad condition. The results revealed that the students exposed to antismoking ads rated the smoking peer less favourably on common sense, personal appeal, glamour, and maturity than the nonsmoking peer. In addition, their ratings were even less favourable than that of the control group. As for the seventh graders in the cigarette ad condition, their judgments were not significantly different than the control group. They rated

smoking peers and non-smoking peers similarly on common sense, personal appeal, glamour, and maturity. Moreover, students that saw antismoking ads produced more negative inferences about peers that smoked, as opposed to the control group. However, the cigarette ads had no influence on the amount of negative inferences made towards smokers. In addition, students' thoughts about the smokers' traits were not influenced by seeing antismoking ads, and their thoughts were similar in favourability to those of the control group. Finally, viewing cigarette ads resulted in students producing more positive thoughts about peers that smoked as opposed to peers that do not smoke. Additionally, one noteworthy difference is that the students in the cigarette ad condition produced positive thoughts whereas those in the control group produced negative thoughts (Pechmann & Ratneshwar, 1994).

In contrast to the previous research done by Pechmann and Ratneshwar (1994), the following study provides evidence for the most effective themes depicted in antismoking advertisements. Pechmann et al. (2003) considered the effect of seven different themes on consumers' cognition and intentions to smoke. The seven themes were: *Disease and Death*, *Endangers Others*, *Cosmetics*, *Smokers' Negative Life Circumstances*, *Refusal Skills Model*, *Marketing Tactics*, and *Selling Disease and Death*. Disease and Death themes deal with content that show the negative side effects of smoking on health. As for the second theme, *Endangers Others*, an example of it is found in advertisements that illustrate the danger that smoking can impose on others. The third theme, *Cosmetics*, transmits the message that one's beauty deteriorates as a result of smoking. For example, advertisements could contain messages that demonstrate that smoking makes teeth turn yellow, lips and eyes wrinkle, and fingernails brown. The third

theme, *Smokers' Negative Life Circumstances*, included advertisements that showed the negative consequences of smoking to a smoker's life. The *Refusal Skills Model* message theme refers to making role models out of people that demonstrate their refusal to smoke, or their disgust towards those that smoke, in such a way as to negate the positive association that people might have with smoking. The sixth theme, *Marketing Tactics*, could be found in advertisements that claim that tobacco companies use marketing tactics, in order to make one think that smoking is a positive act. The final theme discussed in this article, *Selling Disease and Death*, refers to advertisements that depict tobacco companies as ones that sell death and disease through the sale of their products (Pechmann et al., 2003).

The study was a between-subjects factorial. Nine advertisements were randomly grouped and placed on videos. Each video contained eight advertisements and one control advertisement. The eight advertisements included the seven themes and one varied ad, chosen from one of the themes, which was included to test the effect of heterogeneity. They were then showed to seventh and tenth graders. After seeing the ads, participants answered a survey that measured advertisement effectiveness. The results revealed that there were three messages that increased participants' intentions not to smoke: *Endangers Others, Smokers' Negative Life Circumstances,* and *Refusal Skills Model*. These themes did so by making seventh and tenth graders feel that smoking will impair their approval by other members of the society. On the other hand, there were two message themes that decreased intentions to smoke by making participants feel that smoking was associated with a lot of health risks: *Disease and Death* and *Selling Disease and Death* (Pechmann et al., 2003).

Zhao and Pechmann's (2007) research shows that there still is the need to look into ways to improve the effectiveness of anti-tobacco advertisements. So much money has been spent on campaigns for the prevention of tobacco use. Unfortunately, the fact remains that further guidance is required, in order to improve the persuasiveness of the campaign messages. Consequently, they took a deeper look into ways in which advertising strategies could be created so that they are more in line with the types of adolescents they are targeted to. This highlights the fact that existing anti-tobacco advertisements are unsuccessfully matching the advertising message to the audience type. They based their work on the regulatory focus theory and persuasion research. According to the regulatory focus theory, there are two types of consumers. One type of consumer is promotion-focused, and they are more achievement oriented. The other type is prevention-focused, and these consumers are risk averse and would rather stay away from harm or threat. Prevention-focused consumers, unlike promotion-focused consumers, are more likely to pay attention to the central message of an advertisement rather than its peripheral cues. The persuasion research reveals that advertising is most persuasive when the message type is matched with the consumer type. The authors conducted two experiments in which they showed either smoking advertisements or control advertisements to adolescents. The results revealed that it is best to match the consumer type with the message type. In specific, the promotion-focused adolescents were more likely to be persuaded by promotion-focused messages that were positively framed. On the other hand, prevention-focused adolescents were more likely to be persuaded by prevention-focused messages that were negatively framed (Zhao & Pechmann, 2007).

Advertising is an effective way to influence people's opinions and is a vital contributor to economic growth (Dorfman & Wallack, 1993). As a result, social marketers rely on it in order to change people's behaviour so that it is less detrimental to themselves, other people, and the society. Getting an individual to quit smoking is one of the behaviours that have been the target of social marketers for many years. It has demonstrated much success. However, its success is limited, because youth are still adopting the act of smoking and adult smokers are still in existence.

Gap in Research

Most of the research done in the area of tobacco advertising has been on youth (Agostinelli & Grube, 2003). While it is important to understand how to deglamorize smoking in the eyes of adolescents, so that smoking uptake decreases, there is also a need to rid them of adult smokers as role models. The fact is that adolescents aspire to be independent and distinguished like the adult smokers they are exposed to (Pollay, 2000). Their increased perception of smokers as they grow up will make the idea of smoking more acceptable to them (Perry & Murray, 1985). Therefore, increasing quitting rates amongst adult smokers could be beneficial in decreasing rates of smoking uptake amongst youth.

Previous research was successful at measuring and understanding how adolescents' intent to smoke differs according to a variety of advertising conditions and themes (e.g. Pechmann & Knight, 2002; Pechmann et al., 2003). However, there is a need to understand what adult smokers themselves think about anti-smoking advertisements. How do they impact them? Smokers have a tendency to rebel against the messages in the ads and that may result in strengthening their pro-smoking attitudes instead of pushing them to quit. This complexity in their reactions deserves attention, so that social marketers are better able to reach them in their communication efforts, and eventually increase quitting rates even further (Agostinelli & Grube, 2003).

Before the research question is introduced, there needs to be a clarification made with regards to the two different types of anti-smoking communication strategies available to social marketers. These two communication strategies are: public service

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advertising and counter advertising (Dorfman & Wallack, 1993). These two terms are

often used interchangeably to mean the same thing in the tobacco advertising literature.

However, Dorfman and Wallack (1993) and Lavack (2004) have differentiated between

the two strategies, giving credit to the difference in the effectiveness of counter-

advertisements.

Counter-Advertisements

The terms *counter-advertisements* and *public service advertisements* (PSA) are sometimes used interchangeably under the pretense that they both refer to the same type of advertisements. Nonetheless, this thesis will make the distinction between the terms using the definition that was presented by Dorfman and Wallack (1993). According to them, public service advertisements and counter-advertisements represent two distinct communication strategies. Each strategy has its unique way in transmitting the message to the audience. Distinguishing the terms allows researchers to conduct research with the differences in mind. That will eventually lead to a better understanding of when, how, and which strategy to use in social marketing.

Dorfman and Wallack describe public service advertisements as "a highly visible communications strategy used to promote health" (1993, p.717). They define them as advertisements that aim at changing one's attitudes, in order to get them to commit to behaviours that would bring an end to a certain health problem. However, despite the evidence showing the effectiveness of antismoking ads in general, the authors suggest that there is such a thing as an effective and ineffective use of public service advertisements. They argue that "selling good behaviour" is not effective (p. 716). Individuals do not want to be told that they are the cause of a problem in society. This places an increased amount of pressure on individuals, which causes them to rebel. They stated that changing smoking habits of individuals can be time consuming and it can often yield ineffective results, because people do not want to be told that they are the source of the problem.

Dorfman and Wallack (1993) proposed that framing advertisements in such a way that they portray the problem as arising from the surrounding social environment, would be more effective at getting people's attention. The latter is done through the use of counter-ads. Counter-advertisements are a communication strategy that "shifts the attention from the person to the attending social, political, and physical environment" (p. 717). Meaning social marketers would remove the pressure from the individuals that have been affected by the problem, and direct it to the influential people that have the power to attack the problem at its source. They claimed that counter-ads are an effective type of communication strategy, because they are mostly aimed at the environmental factors instead of individual factors. Counter ads can focus on bringing the problem into the awareness of individuals while simultaneously encouraging them to be a part of the solution. In addition, counter-ads can make use of the paid media. That allows social marketers to be more selective, so that they make sure that the message gets through to the intended audience at the right place and time.

Lavack (2004) also demonstrated that counter ads are a form of communication strategy that is distinguished from the traditional public health ads. She supports her argument by describing successful examples of *manipulation campaigns*. A manipulation campaign is made up of a series of counter-advertisements (using Dorfman and Wallack's 1993 definition) that attack the tobacco industry and its tactics, as opposed to Dorfman and Wallack's (1993) public service advertisements, which aim at inducing smoking prevention amongst youth and smoking cessation amongst adults. The manipulation campaign came about as a result of the government's access to the tobacco industry's documents after the Minnesota Tobacco Trial and the 1998 Master Settlement

Agreement, which mandated that the tobacco industry release its documents. In order to demonstrate the effectiveness of such a communication strategy, Lavack presented impressive statistics from previous studies. For example, 39% of smokers revealed that they believed that gaining more knowledge about the industry's tactics might help them to quit.

The strongest characteristic of counter-ads is their controversial nature, which attracts the attention of the media, and allows for a greater spread and the creation of a buzz amongst the general public. Similar to Dorfman ad Wallack's (1993) point, counter ads have the advantage of arousing a smoker's anger at the industry, because they feel manipulated, rather than arousing feelings of guilt, which can be destructive. However, it might be difficult for youth to understand the message in these ads, because they need to understand the concept of industry manipulation first. This led to the suggestion that some education should be administered to adolescents so that they are able to understand it. This further supports Rothschild's (1999) claim that law, education, and marketing should be combined for effective public health management. Nonetheless, counter-ads have the potential to result in adolescents wanting to avoid smoking, so that they preserve their individuality by making the statement that they do not allow themselves to be manipulated by the tobacco industry.

Lavack (2004) provides examples of three successful manipulation campaigns in California, Florida, and Massachusetts. The campaign in California focused on portraying the tobacco industry as manipulative. It was successful at decreasing smoking rates, in terms of use and uptake, and quitting rates. As for the Florida Truth campaign, it succeeded at changing beliefs and attitudes and reducing smoking rates amongst the

youth. This was achieved by creating a campaign that relied on edgy humour to deliver the message of the tobacco industry's manipulative ways. The main aim was to redirect youth's rebellion, so that they are rebelling against the industry. The Massachusetts campaign was also a success, as it resulted in a decrease in teenagers' smoking rates. The latter campaign interestingly focused on using people that were previously tobacco industry advocates to speak out against the industry, and pinpoint its manipulation techniques. Finally, the American Legacy Foundation campaign was also successful at increasing teenagers' attitudes against tobacco companies by once again highlighting the manipulative tactics of the industry.

The success of counter-ads as its own distinguished communication strategy has been well demonstrated by Lavack (2004). However, she argued that the tobacco industry is not oblivious to the strategy's impact on its sales. Therefore, it began pressuring government officials and politicians, influencing them to censor messages in these manipulation campaigns. The censoring made the ads seem less controversial, which was the characteristic that led to their success story. Moreover, it was hard to understand which components of the campaigns made them truly successful. That led to a lack of clarity on the true reason behind the decrease in smoking uptake and consumption, increase in quitting rates, and change in attitudes and beliefs. As a result, Lavack (2004) suggested that there is a requirement for future research to investigate experimentally the elements that make counter-ads successful.

Protection Motivation Theory

Researchers and practitioners in the public health communication domain rely on the protection motivation (PM) theory, in order to understand how the audience reacts to public health messages (Pechmann, 2001). Rogers (1975), the researcher that first proposed the PM theory, stated that its intended purpose is to facilitate "our understanding of the effects of fear appeals upon attitude change" (p. 110). Fear appeals are defined as "persuasive messages designed to scare people by describing the terrible things that will happen to them if they do not do what the message recommends" (Witte, 1992, p. 329). Fear appeals are used in a variety of ways in anti-tobacco advertisements, in order to persuade adults not to smoke and/or to quit smoking (Beaudoin, 2002).

According to Rogers (1975), the PM theory suggests that fear appeals consist of three components that explain the way attitude change is brought about (please refer to Figure 1). These three components are: magnitude of noxiousness, probability of occurrence, and efficacy of recommended response. It is based on a person's cognitive appraisal of these three components that protection motivation may be aroused and that attitude change may result. If the magnitude of the risk is great (appraised severity), if the probability of it affecting them is high (expectancy of exposure), and if they believe in the efficacy of the recommended coping response, then protection motivation is aroused. Protection motivation is a term that refers to a person's drive to adopt the recommended behaviour, in order to reduce or avoid the risk depicted in the message. Protection motivation is a multiplicative function. The degree of protection motivation aroused is dependent on the magnitude of each of the cognitive mediating processes, and if any of them is zero, then there will be no arousal.

Components of a Fear Appeal	Cognitive Mediating Processes	Attitude Change

Magnitude of Noxiousness → Appraised Severity

Probability of Occurrence → Expectancy of Exposure → Protection Motivation → Intent to Adopt Recommended Response

Efficacy of Recommended Response → Belief in Efficacy of Coping Response
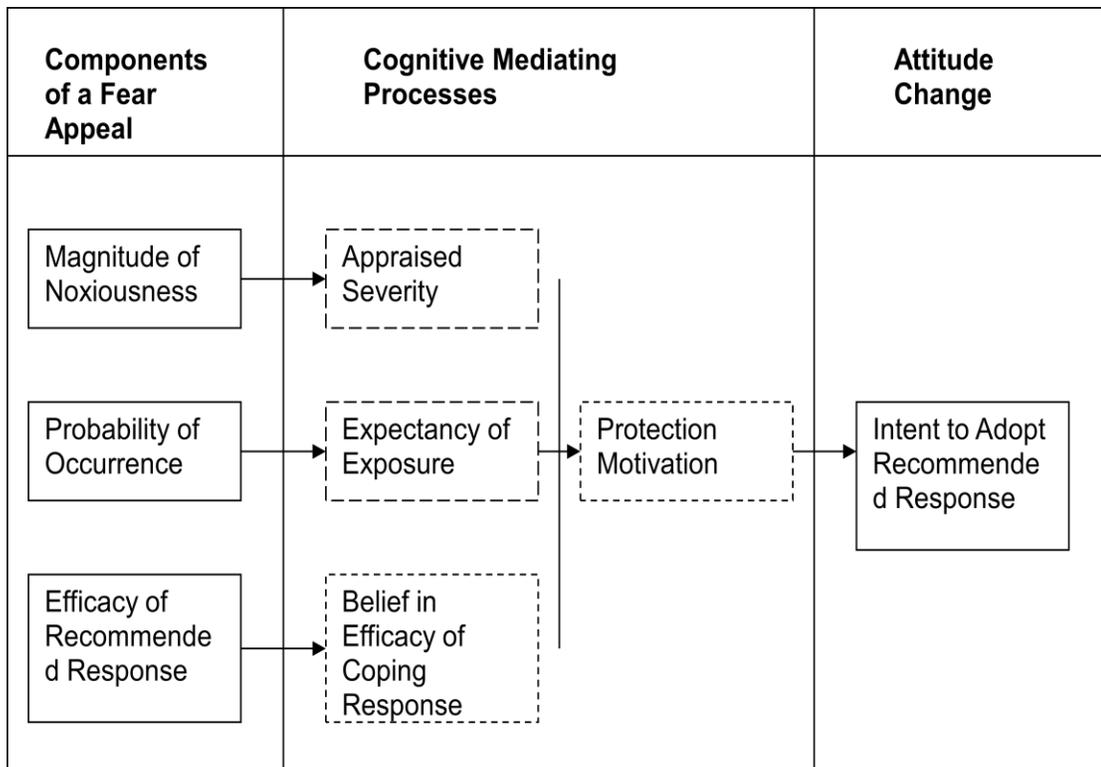
Figure 1. Schema of the protection motivation theory (Rogers, 1975)

The PM theory has been revised, criticized, and extended by many researchers. One source of conflict in the literature revolves around whether the protection motivation theory is a cognitive or emotional response process. Rogers (1975) argued against including fear as a component of the theory, because fear implies an emotional response and at the time the theory was developed, research in the field of psychology was geared more towards relying on cognitive processes to explain human reactions and interactions. However, Tanner, Hunt, and Eppright (1991) suggested that fear as an emotion is a vital part of the protection motivation model, and that it should be taken into consideration along with the cognitive processes. They argued that fear could enhance one's absorption and belief in the message being communicated. Additionally, fear signals the cognitive resources, so that they become fully attentive to the message. By so doing, there is an

increased chance that the individual will carry out adaptive behaviour to avoid the danger. Nonetheless, Rogers (1975) stated that sometimes individuals can avoid danger automatically, without being motivated by fear. He gave the example of a person that mundanely crosses the street. That person crosses the street without necessarily being pushed to do so by fear.

As part of his argument to exclude fear from the theory, Rogers (1975) said that it inhibits people by making them more occupied with its unpleasantness than with avoiding the danger. However, the latter statement formed the basis of Witte's (1992) Extended Parallel Process Model (EPPM) (please refer to Figure 2). She expanded on the original PM theory put forth by Rogers (1975) by taking into account the times where people would respond to a threat in a maladaptive manner and by acknowledging that there are individual differences in the ways people perceive threats. Therefore, fear plays a central role in the EPPM. According to Witte (1992), people do not always respond to threats with adaptive change. For example, not every person that sees a cigarette ad asking them not to smoke would end up not smoking. On the contrary, sometimes people adopt maladaptive coping responses. These types of responses occur when people do not act to avoid the danger. Instead, they cope by reducing the amount of fear aroused as a result of the threat.

External Stimuli	Message Processing (1st & 2nd Appraisals)	Outcomes	Process

MESSAGE COMPONENTS

Self-Efficacy
Response Efficacy
Susceptibility
Severity

PERCEIVED EFFICACY
(Self-Efficacy, Response Efficacy)

PERCEIVED THREAT
(Susceptibility, Severity)

FEAR

Protection Motivation

Adaptive Change

Defensive Motivation

Maladaptive Changes

Danger Control Process

Fear Control Process

No Threat Perceived

(No Response)

Individual Differences

Figure 2. The Extended Parallel Process Model (EPPM) (Witte, 1992)

Witte's (1992) EPP model posits that a person's perception of threat is a key determinant of their processing of the message. If the threat is perceived to be low, then the message will not be processed, regardless of the perceived efficacy (i.e. ability to cope) (Figure 2). As the levels of perceived threat increase and the levels of perceived efficacy increase right along, a person becomes more likely to accept the message. Consequently, the person adopts the danger control process, which stimulates protection motivation and then adaptive change, as was explained in the original PM theory (Rogers, 1975).

On the other hand, the model proposes that maladaptive coping responses are directly caused by fear. If the perceived threat is high, and the perceived efficacy is low, high levels of fear are aroused. The person will be overwhelmed by the threat and will adopt the fear control process, which stimulates defensive motivation and then maladaptive change. A person does not have to be aware of the fear control process occurring, and is not in control of it (Witte, 1992). The point at which the magnitude of threat is perceived to be too great to cope with adaptively in relation to the perceived efficacy is called the critical point (Witte, 1992). In general, the EPPM states that if threat is perceived to be too high and perceived efficacy is low, then a person falls into the fear control process. However, how much is considered to be too high or too low (i.e. the position of the critical point) varies from one individual to the other. People that have low self-esteem and that lack coping skills, versus people that have high self-esteem and that have good coping skills might differ in the way they perceive threat and appraise response and self efficacy. Therefore, the former are more susceptible to engaging in maladaptive coping responses (Witte, 1992). Maladaptive coping responses resulting from high levels of fear lead a person to either deny the threat or react against it, in such a way that they keep doing the risky behaviour (Witte, 1992).

This research focuses on maladaptive responses, consistent with Witte's (1992) EPPM. In addition, it is in line with Agostinelli and Grube (2003) and Lavack's (2004) suggestions for future research. Consequently, the purpose of this research is to understand adult smokers' reaction to counter-advertisements. Some counter-advertisements attack the industry in general while others attack a specific brand. Dorfman and Wallack (1993) argue in favour of counter-advertisements for not being too

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harsh on individuals, which would allow them to process the public health messages better. However, by attacking a brand that one smokes is similar to attacking the smoker personally, since the brand an individual smokes forms a part of their identity (Goldberg et al., 1995). Hence the research question is: is there a difference in the way smokers react to counter-advertisements attacking the industry in general, ones attacking their brand, and ones attacking a competing brand? In order to answer this question an exploratory study was done, with the aim of guiding the choice of theory and the type of predictions to be made.

Exploratory Study

Methods

Human Subjects approval was attained in order to conduct the study at the University of Lethbridge, Lethbridge Alberta. Four counter-advertisements were chosen for this study (please refer to Appendix A). Two counter-advertisements attack the industry in general (Ads 1 & 2) and the other two attack the brand (Ads 3 & 4). The choice of which brands to use was based on percentage of market share and counter-advertisement availability. The two brands are Marlboro, which is ranked number one for brand share, and Camel, which is ranked number three (CDC, 2011). Newport, which was ranked second in terms of market share (CDC, 2011), was not used because there were no counter-advertisements for the brand. Newport was only shown in public service advertisements.

There were two participant groups in this study, which were made up of the students of University of Lethbridge. Having two groups allowed for the gathering of two types of data. The first group was made up of twelve people smoking, in the smoking area around campus. One-on-one short interviews were conducted with this group (please refer to Appendix B). These participants allowed for information to be received while the smokers were in their element. This type of information was retrieved spontaneously, which provided first impression reactions to the counter-advertisements shown to them. Each interview lasted for a maximum of five minutes. The participants were shown one counter-advertisement each. There was hope to see if smokers' reactions differed when the brand they smoked was being attacked, as opposed to a competing brand. However,

there was only one opportunity to match the brand in the counter-advertisement to the smoker's brand.

The second group consisted of three smokers recruited from "Management Subject Pool" (please refer to Appendix B). These participants were asked to participate in depth interviews, in exchange for course credit. The depth interviews were conducted during the same time period as the short interviews, which allowed for the opportunity to focus on issues emerging in the short interviews that merited closer examination. Also, depth interview participants provided smokers' responses that were given after contemplation, which was not possible in the short interviews. In addition, these smokers were not smoking during the interview, which might allow for a different first impression reaction than the previous group of participants. The depth interviews lasted for an hour at most. For this participant group, all four advertisements were shown, in order to allow for comparison between a participant's reactions to a counter-advertisement attacking a brand they smoke versus a competing brand, and between each of the latter and the industry (please refer to Appendix A). The order in which the advertisements were shown was rotated, in order to avoid primacy effect.

For ethical and legal reasons, only students above the age of eighteen were included in the study. Unfortunately, an equal number of males and females was not attained in this study, due to the nature of the approach. The sample consisted of twelve males and three females, with all the females being part of the short interview group. Consent forms were distributed at the beginning to both the short and depth interviewees (please refer to Appendix C). The consent forms for the depth interviews asked for the participant's permission to record their sessions. The participants were told that they have

the right to withdraw from an interview at any time. After withdrawal, any information

obtained from them would be destroyed. Fortunately, none of the participants withdrew.

Additionally, to maintain participants' confidentiality, they were told that their names

will not be used when reporting the results and nobody will have access to their answers,

except for the researcher and supervisory committee. Everything obtained from them was

stored on the researcher's password-protected computer. No ethical challenges were

foreseen to arise from this study and none did.

The three depth interviews were recorded. As for the short interviews, detailed

notes were taken after each one. Thematic coding was used to analyze the responses for

both groups. However, thematic coding was done immediately after each set of short

interviews, and later the data from both groups was analyzed altogether.

Results

The results from the interviews reveal a lack of acceptance of the dangers of

smoking on the part of smokers. They believe that they are far from having anything

affect them. Most of the smokers said that they would probably suffer from the negative

side effects shown in the advertisements in five or ten years, but not at the moment. The

counter-advertisement that elicited the most defensive reactions was the Marlboro

Impotent one. It was shown to one female who did not react as defensively as males.

Males immediately began defending themselves and explaining that they were absolutely

far from being impotent and they refused to accept the fact that it could happen to them at

a young age. They expected it would happen to much older men, but not them and not

now. Moreover, they said that when and if it happened they would stop smoking

immediately. In fact, most of the participants proclaimed that they would stop smoking at any sign of negative side effects, be it cancer or impotence. Unfortunately, they all proclaimed that addiction gets the better of them. When it is time for a cigarette, their need for it outweighs the negative side effects communicated in the advertisements. All of the participants stated that they find a way to push back and away the negative thoughts about the dangers of smoking.

The advertisements with the Marlboro man and Joe Camel were ridiculed, even though they agreed with the message in the ad at first. Participants said that they cannot take a cartoon seriously. They did not understand why it is that they were being associated with cartoons. Cartoons made the counter-ads seem amusing and they lacked the serious and emotional aspect found in the gory pictures on cigarette boxes or in public service advertisements. As a result, when they were asked what they would do to change the advertisements to make them more effective, they suggested the use of real people, a before and after comparison, an attack of their own brand, and less bright colours. None of the participants said that the advertisements gave them the push to quit smoking. However, there seemed to be a conflict in preference. The majority of the participants said that the scarier counter-ads are more touching, but there were some that said they would rather look at the counter-advertisements shown to them than ones with gory pictures. They explained that counter-advertisements were not as scary, they were easier to look at. This conflict in preference could be explained by referring to the EPPM model (Witte, 1992). Participants recognize that the gory counter-advertisements portray the brutal truth and that scares them. They confuse the high degree of fear with how effective the message is in persuading them to avoid the negative side effects. However, those that

admit that they learn to shun the scary thoughts, so that they are no longer a bother, and admit that something less scary could be a better motivator to quit, are recognizing that they are experiencing maladaptive coping responses.

Another interesting finding was the depth interview participants' refusal to blame the tobacco companies for their addiction to cigarettes. Instead they blamed the government for not being able to make good use of the money taken from the tobacco company, in order to come up with effective ways to help them quit. In general, they found the counter-advertisements to be useless and ineffective and they called for more measures to help them quit, such as making the cigarettes taste worse. Also, most of them claimed that smoking for them was part of their social life. Even if they tried to quit, being with a group of friends that are all smoking makes them want to smoke again. One participant suggested stopping all people from smoking at once, so that he would not feel the need to smoke again after attempting to quit.

Discussion

The findings from the exploratory study demonstrate that smokers report maladaptive coping responses after viewing counter-advertisements. The advertisements were ridiculed and criticized heavily. The negative side effects of smoking on health were dismissed, as they convinced themselves that they were not an immediate risk. None of the participants reported wanting to quit or feeling like the counter-advertisements helped them in realizing that they are able to quit. These findings supported the choice of theory and guided hypotheses development.

Hypotheses

This experiment will rely on the EPPM to explain the ways that adult smokers versus adult non-smokers would react to three variations of counter-advertisements, ones that are non-branded (i.e. that attack the industry in general), ones that attack the smoker's brand, and ones that attack a competing brand.

In light of what the EPPM model proposes, it is expected that non-smokers will be able to perceive a high degree of threat from all three counter-advertisements, but their perceived efficacy will be higher than that of smokers. Hence non-smokers will be more likely than smokers to go through adaptive change. In addition, non-smokers are more likely to have greater criticism of tobacco companies, so they will be more willing to read and process the counter-advertisement. However, smokers will have to deal with the social costs and physiological costs associated with quitting, so their perceived efficacy will be lower than non-smokers. Hence, smoker will be more likely to go through maladaptive changes.

> **H$_{1a}$:** Nonsmokers versus smokers shown any counter-advertisement will report more adaptive coping responses and fewer maladaptive coping responses.

Reactance theory, developed by Brehm (1966) explains how a person reacts when their freedom of behaviour is being threatened. According to Brehm (1966), people value their freedom of choice. That freedom is essential in allowing a person to choose the behaviour they would like to engage in, in order to maximize their satisfaction. The theory of psychological reactance is based on the assumption that "for a given person at a given time, there is a set of behaviours any one of which he could engage in either at the

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moment or at some time in the future. This set may be called the individual's free behaviors" (p. 3). *Free behaviours* are ones that an individual is aware they have the ability or capability to do at any time they choose. Moreover, they are behaviours that are realistically, psychologically, and physiologically possible to do. Once an individual's *free behaviour* is threatened, they will experience reactance. When a person experiences psychological reactance, they attempt to reclaim the free behaviour that has been threatened or confiscated. Consider the act of smoking. A smoker considers smoking as their *free behaviour*. When exposed to a counter-advertisement that threatens their perceptions of their current smoking behaviour, they will experience reactance by shunning or ridiculing the message in the advertisement and continuing to smoke. Nonetheless, there are various degrees to the amount of reactance an individual can experience, and that depends on the importance of the free behaviour that is being threatened or that is being eliminated, on the proportion of free behaviours being threatened or eliminated, and on the magnitude of the threat.

As was previously mentioned, smokers will experience a high magnitude of threat, but will have low levels of perceived efficacy. That will stimulate the fear control process in them leading them to ridicule the message and elements of the counter-advertisement, argue that the message does not include them, or avoid the whole counter-advertisement. This also suggests that they will have shorter ad viewing time, because they will not be willing to process and fully examine the counter-advertisement.

> **H$_{1b}$:** Non-smokers will spend a longer time viewing the counter-advertisement than smokers.

According to the EPPM (Witte, 1992) and in conjunction with reactance theory (Brehm, 1966), smokers will report different degrees of maladaptive coping responses. First, smokers that are shown counter-advertisements attacking their own brand will perceive the greatest level of threat. That could be explained by the fact that the brand one smokes is a part of their personal identity (Goldberg et al., 1995), which would mean that it is more important to them than any other brand. In addition, the counter-advertisement would not only be threatening their perceptions of their current smoking behaviour, but it would be threatening their current perceptions of that specific brand as well, which increases the proportion of free behaviours being threatened (Brehm, 1966). Second, smokers shown counter-advertisements attacking the industry will report the second greatest level of threat. That is because, the industry includes the brand they smoke (please refer to Figure 3), so they will feel that the same proportion of free behaviours being threatened as the smokers that saw counter-advertisements attacking their own brand. However, the magnitude of the threat and the importance of the threat will be perceived as less. Finally, smokers shown counter-advertisements attacking the brands that they do not smoke will experience the least level of threat, because the importance and the proportion of the free behaviour being eliminated would be lower.

> **H$_2$:** Maladaptive behaviour amongst smokers will be reported in the following decreasing order of magnitude relative to the three different types of ads: (a) an advertisement of their own brand; (b) non-branded advertisement; (c) an advertisement of competing brand.
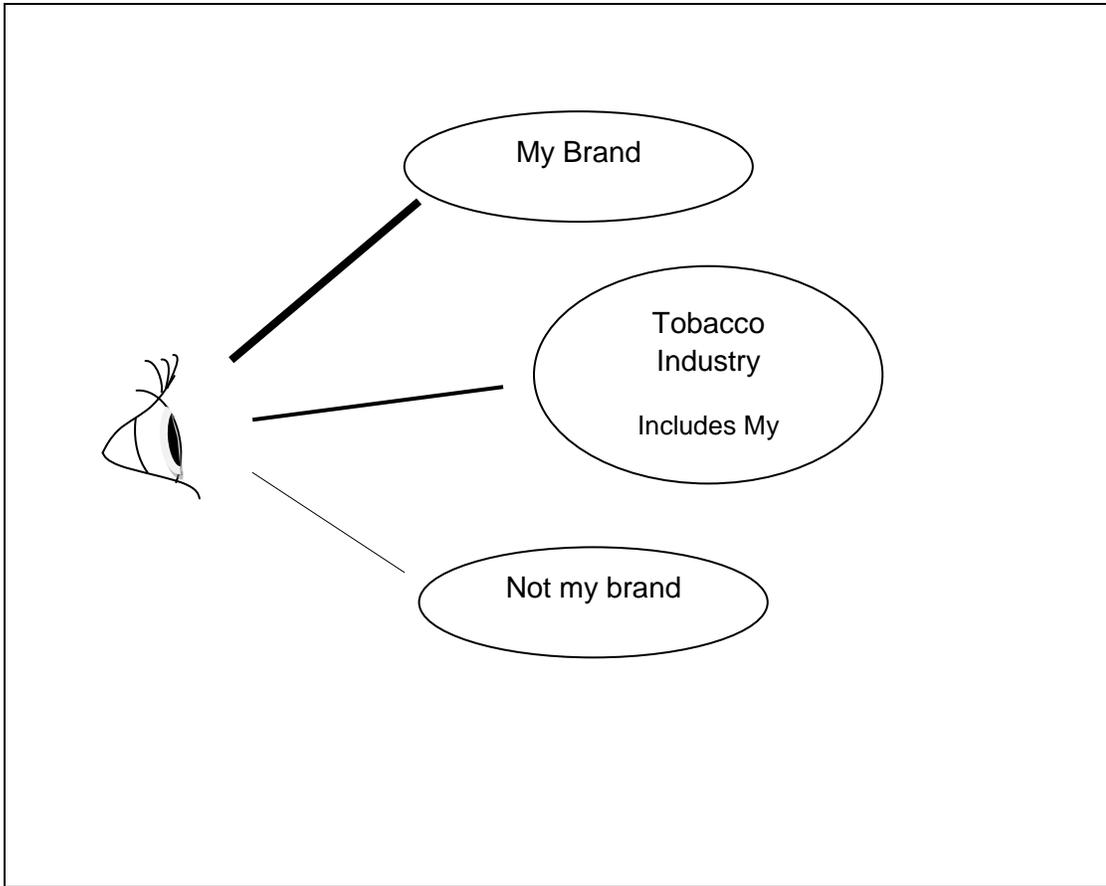
Note: The thickness of the lines is relative to the hypothesized magnitude of maladaptive coping responses

Figure 3. Illustration of hypotheses

Methodology

Design

An experiment was conducted to test the degree of adaptive and maladaptive coping responses amongst smokers versus non-smokers that see different types of tobacco counter-advertisements. It was a 2 x 2 x 2 x 2 nested mixed factorial design, with three manipulated factors and one measured factor (please refer to Figure 4). The first between subjects measured factor, smoker status, had two levels: participants were either smokers or non-smokers. The second between subjects manipulated factor, message target, had two levels as well: the message in the counter-advertisement focused on either the personal level or on the societal level of potential negative outcomes. The third between subjects manipulated factor, counter-advertisement brand, had two levels: participants either saw a branded counter-advertisement, or a non-branded counter-advertisement. Nested within brand and smoker is a fourth between subjects manipulated factor, brand match, which has two levels: participants either saw a counter-advertisement that attacked the brand they smoke (match), or they saw a counter-advertisement that attacked a competing brand (mismatch). The factor, brand match, was operationalized using two of the most popular cigarette brands Marlboro and Camel (please refer to Appendix C).

	Smoker			Non-Smoker	
	Branded	Non-Branded		Branded	Non-Branded
Personal	*Match* 15	15	Personal	20	20
	Mismatch 15				
Social	*Match* 15	15	Social	20	20
	Mismatch 15				

Figure 4. Illustration of experiment design: 2 x 2 x 2 x 2 nested mixed factorial

Participants

A total of 260 participants were recruited, through an online research panel managed by Qualtrics. This panel allowed for specificity of sample characteristics to be achieved. In addition, it was the most appropriate way to collect the data considering the limited time and resources that were available for this research project. Out of 273 people that started the survey, only 13 people did not complete it. As a result there was 95.2% completion rate. There were 80 non-smokers and 180 smokers, which were made up of 90 Camel smokers and 90 Marlboro smokers. The sample consisted of approximately equal numbers of adult males (48.3%) and adult females (51.7%), with the average age range of 42 to 47 years. On average, the participants fell in the income range of $50,000 and $59,999 a year and they had some college education.

Data Collection

Data collection was done through an online experiment that was administered through Qualtrics. Participants were randomly assigned to view one counter-advertisement each. Then, they were asked to fill out a short questionnaire that included a second showing of the counter-advertisement they saw at the top of the page. The

questionnaire included scale item questions relating to the independent and dependent variables (please refer to Appendix D).

Independent Variables

Smoker status was measured to test whether adaptive behaviour is more prominent amongst smokers versus non-smokers. The questionnaire began with a question that asked the participants if they were a smoker or a non-smoker. All participants were randomly assigned to all manipulated variables.

Brand was manipulated by showing participants either a counter-advertisement attacking a specific brand, or by showing them a non-branded counter-advertisement that simply attacked the industry (please refer to Appendix C). Match, which was nested within brand, was manipulated by showing counter-advertisements for the Marlboro brand or the Camel brand. Participants that identified themselves as smokers were asked which brand they smoked, so that the effect of brand match versus mismatch on maladaptive coping responses could be appropriately compared.

The brands Marlboro and Camel were chosen, as part of the branded condition, based on market share ranking and counter-advertisement availability in America. Market share ranking was an important qualifier. The higher a brand's market share was, the more representative the sample was expected to be of the population. Marlboro had the highest market share (CDC, 2011). In addition, a search over the internet yielded many results for counter-advertisements attacking that brand. On the other hand, Camel had the third highest market share (CDC, 2011). It was chosen over Newport, which had the second highest market share (CDC, 2011), because counter-advertisements attacking the Camel brand were more abundant than ones attacking the Newport brand.

Control Variables

Message target. As for the message target, it was manipulated in order to observe the difference in the magnitude of maladaptive coping responses reported amongst both smokers and non-smokers that viewed a counter-advertisement with personal level focus, versus ones that viewed a counter-advertisement with a societal level focus. Hypotheses were not developed for this factor, due to the need to manage the scope of the study. This factor was included as a control variable, because it was not the primary focus of the experiment. The exploratory study revealed that depth interview participants consistently rated counter-advertisements that impact the viewer at a personal level more effective than those that had a societal impact. Moreover, Tyler and Cook (1984) conducted three studies which complemented the latter finding. Results from their research showed that societal level judgments of risk were significantly different than personal level judgments of risk in media messages. In addition, messages including a risk at a societal level did not impact people at a personal level. This suggested that there was a possibility that smokers and non-smokers might perceive threat from counter-advertisements with a personal level focus differently than those with a societal level focus.

Message target was a confounding variable that had to be controlled for, and that was done by manipulating it. There were two versions for each counter-advertisement, one version with a personal level focus and one with a societal level focus. This led to a total of six counter-advertisements, which participants were randomly assigned to (please refer to Appendix C). Five of the counter-advertisements were found after a search over the internet. However, there was no success in finding a Camel

counter-advertisement with a societal level focus. Therefore, a graphic designer assisted in the creation of a brand new counter-advertisement. The new counter-ad was subjected to a pilot test amongst people of different education levels and cultural backgrounds. The majority of the people approached correctly interpreted that the Camel counter-advertisement had a societal level focus.

Demographics and amount smoked. Demographics information, such as age, income, gender, and education were collected and included as control variables as well. Finally, information was collected concerning the amount of cigarettes that previous smokers and current smokers smoked, and it was included in the analysis as a control variable along with smoking history (whether someone was a previous smoker, current smoker, or never smoker).

Dependent Variables

The dependent variables were adaptive coping responses (danger control processes) and maladaptive coping responses (fear control processes). The latter variables were measured using the Risk Behavior Diagnosis (RBD) scale developed and tested by Witte, Cameron, McKeon, and Berkowitz (1996). This scale achieved predictive, content, and construct validity (Witte et al., 1996).

Threat and efficacy. Before directly measuring adaptive and maladaptive coping responses, the other elements in the EPPM (Witte, 1992) were assessed as well (Witte et al., 1996). The RBD scale developed by Witte et al. (1996) included the items that were used to measure each dimension of the model. The items were customized to the topic of this experiment. Also, two sets were created, one that applies to non-smokers and one that applies to smokers. Due to a spelling mistake found in one set of the

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questions, responses to one out of the three items in the susceptibility to threat scale was

excluded from the analysis (please refer to Table 5). All the scales were reliable, since

they had a Cronbach's alpha of 0.70 or greater (please refer to Table 6).

Table 5. *Scale Items Measuring the Dimensions of Perceived Threat and Perceived*

Efficacy (Witte et al., 1996)

Dimension	Perceived Threat Items	
	Smokers	Non-Smokers
Severity of threat	1. I believe that the dangers of smoking are severe 2. I believe that the dangers of smoking are serious 3. I believe that the dangers of smoking are significant	1. I believe that the dangers of smoking are severe 2. I believe that the dangers of smoking are serious 3. I believe that the dangers of smoking are significant
Susceptibility to threat	1. It is likely that I will have poor health from smoking 2. It is possible that I will have poor health from smoking	1. It is likely that smokers will have poor health from smoking 2. It is possible that smokers will have poor health from smoking
Dimension	Perceived Efficacy Items	
	Smokers	Non-Smokers
Self-efficacy	1. I am able to quit smoking to avoid the danger 2. Quitting is easy to do to avoid the dangers of smoking 3. Quitting, to avoid the dangers of smoking, is something I am able to do on my own	1. Smokers are able to quit smoking to avoid the danger 2. Quitting is easy to do to avoid the dangers of smoking 3. Quitting, to avoid the dangers of smoking, is something smokers are able to do on their own without external support
Response-efficacy	1. Quitting works in preventing any of the dangers of smoking 2. Quitting is effective in preventing any of the dangers of smoking 3. If I quit, I am less likely to be at risk of any of the dangers of smoking	1. Quitting works in preventing any of the dangers of smoking 2. Quitting is effective in preventing any of the dangers of smoking 3. If smokers quit, they are less likely to be at risk of any of the dangers of smoking

Table 6. *Perceived Threat and Perceived Efficacy Scale Reliability Results*

Scale	Number of Items	Cronbach's Alpha
Severity of threat	3	0.94
Susceptibility to threat	2	0.90
Self-efficacy	3	0.80
Response efficacy	3	0.87

Viewing time. Both smokers and non-smokers' length of time spent viewing the ad was recorded, to assess extent of message processing. This served as a proxy for adaptive response, which was expected to have a longer viewing time, and maladaptive response, which was expected to have a shorter viewing time as the participant seeks to avoid the message. This measure was taken automatically through the Qualtrics survey software.

Adaptive coping responses. In order to measure smokers' likelihood to engage in adaptive coping responses, Witte et al.'s (1996) assessment techniques were used. Attitudes towards quitting smoking and intentions to quit smoking were assessed for smokers. Attitudes towards smoking and intentions to smoke were assessed for non-smokers.

Attitudes. Participants were asked to rate their attitudes towards quitting or towards smoking, on a seven-point scale, using three semantic differential scales proposed by Witte et al. (1996): bad-good, desirable-undesirable, and unfavourable-favourable. Three different questions were used for each smokers (e.g. "Quitting smoking is") and non-smokers (e.g. "Taking up the act of smoking is"). Both scales attained a Cronbach's alpha of 0.70 or higher, so they were considered reliable (Please refer to Table 7).

Table 7. *Attitudes towards Smoking and Quitting Scale Reliability Results*

Scale	Number of Items	Cronbach's Alpha
Attitudes towards smoking	3	0.70
Attitudes towards quitting	3	0.78

Intentions. Intentions to quit and intentions to smoke were measured by asking participants to rate their level of agreement on a seven-point Likert scale (strongly disagree-strongly agree) with three statements created as per the suggestion of Witte et al. (1996), but customized for the purpose of this experiment (e.g. for non-smokers "I intend to never take up the act of smoking", and for smokers "I intend to quit smoking"). Both of the scales were judged to be reliable, since their Cronbach's alpha was greater than 0.7 (Please refer to Table 8).

Table 8. *Intentions to Smoke and Quit Scale Reliability Results*

Scale	Number of Items	Cronbach's Alpha
Intentions to Smoke	3	0.78
Intentions to Quit	3	0.89

Maladaptive coping responses. Witte et al.'s (1996) techniques were used to assess non-smokers and smokers' degree of maladaptive coping responses. This was done by measuring their degree of defensive avoidance and reactance.

Defensive avoidance. Defensive avoidance was measured by asking a question, with two types of responses, to both smokers and non-smokers, which Witte et al. (1996) also developed. This question was also edited to fit the purpose of this experiment: "When I viewed the ad above, my first instinct was to: (a) want to avoid thinking/want to think about the dangers of smoking and (b) want to avoid doing/want to do something to

protect myself from the dangers of smoking" (Witte et al., 1996). The defensive

avoidance scale had two items and it had a Cronbach's alpha of 0.71. The score was

considered reliable, because it was above 0.7.

   Reactance. Two components of reactance, identified by Witte et al. (1996), were

measured. Perceived manipulation by participants was measured by asking the

participants to rate on a seven-point Likert scale how much they agree (strongly disagree

– strongly agree) with the counter-advertisement they saw being: manipulative,

misleading, and distorted. Also, reactance was measured by finding out to what degree

the participants downplayed the severity of the issue, by asking them to rate on a seven-

point Likert scale how much they agreed (strongly disagree – strongly agree) with the

counter-advertisement being: overblown, exaggerated, and overstated (Witte et al., 1996).

Both scales had a Cronbach's alpha greater than 0.7, and their scores were judged reliable

(Please refer to Table 9).

Table 9. *Reactance – Perceived Manipulation and Derogation of Issue Scale Reliability*

Results

Scale	Number of Items	Cronbach's Alpha
Perceived Manipulation	3	0.85
Derogation of Issue	3	0.97

Results

General

After receiving the results, it was noticed that two smokers mentioned, in the

limitations section, that they were unsure if they correctly defined themselves as smokers.

These smokers reported smoking less than two cigarettes a day. Therefore, the decision

was made to remove all smokers that smoked anything less than 3 cigarettes a day.

Moreover, one participant identified themselves as a non-smoker, but they reported, in

the limitations section, that they smoked around two packs of cigarettes a year. This case

was also deleted from the analyses. This resulted in a total of 238 participants, of whom

159 are smokers and 79 are non-smokers (29 previous smokers and 50 never smokers),

with the same demographic characteristics as the original sample. Current smokers

smoked an average of 16.78 cigarettes per day, and previous smokers smoked an average

of 15.58 cigarettes per day. Seventy-eight (78) participants saw a Camel counter-

advertisement, 82 participants saw a Marlboro counter-advertisement, and 78 participants

saw a non-branded counter-advertisement.

Manipulation Checks

Two manipulation checks were included in the questionnaire. First, to make sure

that the brand manipulations worked, participants were asked if they saw a Marlboro

counter-advertisement, a Camel counter-advertisement, or a non-branded counter-

advertisement. Around ninety-six percent (96.2%) of the people that saw Camel counter-

advertisements, 92.3% of the participants that saw non-branded counter-advertisement,

and 67.1% of the people that saw Marlboro counter-advertisements were correct in

identifying what they saw. Since the percentage of recognition for the Marlboro brand

was not as high, special considerations were put in place where it was thought it would be of concern.

Second, a manipulation check was done to make sure that participants were able to recognize whether the ad was criticizing the smoker (personal level focus) or those around the smoker (societal level focus). Around ninety-nine percent (99.1%) of the participants that saw a counter-advertisement with a personal level focus and 85.1% of the participants that saw a counter-advertisement with a societal level focus were correct in identifying what they saw.

Threat and Efficacy Scales

Several two-way ANCOVAs were conducted to see if there was a difference in smokers and non-smokers' perceived threat and perceived efficacy. The factors in these analyses were smoker status and message target. The covariates were age, gender, income, education, the amount of cigarettes smoked by current smokers, and whether non-smokers were previous smokers or not. The four dependent variables in these analyses were severity of threat, susceptibility to threat, self-efficacy, and response efficacy.

Most of the covariates were not significant, so the decision was made to report the results from the ANCOVA that only controlled for the covariates that had a significant effect. All the descriptive statistics reported for the dependent variables are prior to transformation (whenever transformation was opted for).

Severity of threat. The dependent variable's means and standard deviations for each group are shown in Table 10. There were two missing values, but they were not

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replaced, because they formed less than 5% of the total. There were two outliers (and two others were marginal outliers) and the variable was skewed. Skewness was corrected using reflected inverse transformation, and that got rid of all the outliers.

Table 10. *Descriptive Statistics of Severity of Threat*

| | | Severity of Threat | | |
		n	M	SD
Smoker	Personal	78	5.56	1.47
	Societal	79	5.70	1.34
	Total	157	5.63	1.40
Non-Smoker	Personal	41	6.30	1.15
	Societal	38	6.32	1.22
	Total	79	6.31	1.18

The ANCOVA revealed that education was the only covariate that had a significant main effect, which was controlled for, $F (1, 231) = 8.09$, $p = 0.005$, *partial η^2* = 0.034. Smoker status had a significant main effect, $F (1, 231) = 20.7$, $p < 0.001$, *partial η^2* = 0.082. Non-smokers perceived greater severity of threat than smokers. However, there was no main effect for message target, $F (1, 231) = 0.241$, $p = 0.624$, *partial η^2* = 0.001. There was also no interaction between smoker status and message target, $F (1, 231) = 0.023$, $p = 0.880$, *partial η^2* = 0. R^2 was 0.102.

Susceptibility to threat. The dependent variable's means and standard deviations for each group are shown in Table 11. There were two missing values, but they were not replaced, because they formed less than 5% of the total. There were two outliers and the variable was skewed. Skewness was corrected using reflected inverse transformation, and that got rid of all the outliers.

Table 11. *Descriptive Statistics of Susceptibility to Threat*

		Susceptibility to threat		
		N	*M*	*SD*
Smoker	Personal	78	5.37	1.51
	Societal	79	5.51	1.40
	Total	157	5.44	1.45
Non-Smoker	Personal	41	6.21	1.15
	Societal	38	6.20	1.24
	Total	79	6.20	1.19

Education was the only covariate that had a significant main effect, which was controlled for, $F (1, 231) = 6.64$, $p = 0.011$, *partial* $\eta^2 = 0.028$. The ANCOVA revealed that smoker status had a significant main effect, $F (1, 231) = 21.89$, $p < 0.001$, *partial* $\eta^2 = 0.087$. Non-smokers were more susceptible to threat than smokers. However, there was no main effect for message target, $F (1, 231) = 0.285$, $p = 0.594$, *partial* $\eta^2 = 0.001$. There was also no interaction between smoker status and message target, $F (1, 231) = 0.003$, $p = 0.958$, *partial* $\eta^2 = 0$. R^2 was 0.102.

Self-efficacy. The dependent variable's means and standard deviations for each group are shown in Table 12. There were two missing values, but they were not replaced, because they formed less than 5% of the total. There were no outliers and no skewness issues.

Table 12. *Descriptive Statistics of Self-Efficacy*

		Self-Efficacy		
		N	M	SD
Smokers	Personal	78	3.24	1.46
	Societal	79	3.67	1.91
	Total	157	3.46	1.71
Non-Smokers	Personal	41	3.83	1.59
	Societal	38	4.25	1.71
	Total	79	4.03	1.65

There were no significant covariates. The ANCOVA revealed that smoker status had a significant main effect, $F(1, 232) = 6.33$, $p = 0.013$, *partial* $\eta^2 = 0.027$. This indicates that non-smokers perceived a greater degree of self-efficacy after viewing the counter-advertisement than smokers. However, there was no main effect for message target, $F(1, 232) = 3.37$, $p = 0.068$, *partial* $\eta^2 = 0.014$. There was also no interaction between smoker status and message target, $F(1, 232) = 0$, $p = 0.996$, *partial* $\eta^2 = 0$. R^2 was 0.041.

Response efficacy. The dependent variable's means and standard deviations for each group are shown in Table 13. There was one missing value, but it was not replaced, because it formed less than 5% of the total. There were no outliers, but the variable was skewed. Skewness was corrected using reflected logarithmic transformation, and that got rid of all the outliers.

Table 13. *Descriptive Statistics of Response Efficacy*

		Response Efficacy		
		N	*M*	*SD*
Smokers	Personal	78	4.59	1.71
	Societal	80	5.01	1.53
	Total	158	4.81	1.63
Non-Smokers	Personal	41	4.99	1.53
	Societal	38	5.04	1.60
	Total	79	5.02	1.56

There were no significant covariates. The ANCOVA test did not obtain any significant results. Smoker status had no effect, $F (1, 233) = 0.862$, $p = 0.354$, *partial* $\eta^2 = 0.004$. There also was no main effect for message target, $F (1, 233) = 1.097$, $p = 0.296$, *partial* $\eta^2 = 0.005$, and no interaction between smoker status and message target, $F (1, 233) = 0.486$, $p = 0.487$, *partial* $\eta^2 = 0.002$. R^2 was 0.013.

H1a Adaptive versus Maladaptive Coping Responses

To test whether non-smokers had higher adaptive coping responses and lower maladaptive coping responses than smokers, several two-way ANCOVAs were conducted. The factors in these analyses were smoker status and message target. The covariates were age, gender, income, education, the amount of cigarettes smoked by current smokers, and whether non-smokers were previous smokers or not. The dependent variables were attitudes and intentions, which were measures for adaptive coping responses, and defensive avoidance, reactance – perceived manipulation, and reactance – derogation of issue, which were measures for maladaptive coping responses.

The questions for the attitudes and intentions scales were not exactly the same for smokers and non-smokers. Faced with the need to measure these two variables, the only option was to customize the questions to increase their relevance to each group. Nonetheless, both sets of questions were measuring how positive the participants' intentions and attitudes are towards doing the necessary action (quitting for smokers and never taking up the act of smoking for non-smokers) to protecting themselves from the harms of smoking. Moreover, most of the covariates were not significant. So the decision was made to report the results from the ANCOVA that controlled for the covariates that had a significant effect. Also, all the descriptive statistics reported for the dependent variables are prior to transformation (whenever transformation was opted for).

Attitudes. Non-smokers' responses to the first two questions of the attitudes scale were reflected, so that the largest number represented the more positive attitude. This had to be done to allow for better comparison with smokers' responses. Attitude had two missing values, but they were not replaced, because they formed less than 5% of the total. It had no outliers, but it was skewed. Its skewness was corrected using reflected square root transformation. The means and standard deviations for each group are shown in Table 14.

Table 14. *Descriptive Statistics of Attitude*

		Attitudes		
		N	*M*	*SD*
Smoker	Personal	78	4.96	1.39
	Societal	79	4.78	1.68
	Total	157	4.87	1.54
Non-Smoker	Personal	41	5.12	2.33
	Societal	38	5.53	2.06
	Total	79	5.32	2.20

There were no significant covariates. The ANCOVA revealed a significant effect for smoker status, $F (1, 232) = 6.51$, $p = 0.011$, *partial* $\eta^2 = 0.027$. Non-smokers had more positive attitudes than smokers. This finding supports the predictions made in the first hypothesis. However, there was no effect for message target, $F (1, 232) = 0.242$, $p = 0.623$, *partial* $\eta^2 = 0.001$. There was also no interaction between smoker status and message target, $F (1, 232) = 1.05$, $p = 0.306$, *partial* $\eta^2 = 0.005$. R^2 was 0.031.

Intentions. Intentions had no missing values. The variable had one outlier, and it was skewed. Skewness was enhanced using reflected inverse transformation, and that got rid of the outlier. The means and standard deviations for each group are found in Table 15.

Table 15. *Descriptive Statistics of Intentions*

		Intentions		
		N	M	SD
Smokers	Personal	79	5.16	1.52
	Societal	80	5.13	1.92
	Total	159	5.14	1.73
Non-Smokers	Personal	41	6.54	0.951
	Societal	38	6.39	1.20
	Total	79	6.47	1.07

There was one covariate, whether a non-smoker was a previous smoker or not, which was close to being significant, and was left in the analysis to be controlled for, $F (1, 233) = 3.60$, $p = 0.059$, *partial η^2* $= 0.015$. The ANCOVA revealed a significant effect for smoker status, $F (1, 233) = 52.9$, $p < 0.001$, *partial η^2* $= 0.185$. As was predicted, non-smokers had more positive intentions than smokers. However, there was no effect for message target, $F (1, 233) = 0.141$, $p = 0.707$, *partial η^2* $= 0.001$. There was also no interaction between smoker status and message target, $F (1, 233) = 0.326$, $p = 0.569$, *partial η^2* $= 0.001$. R^2 was 0.205.

Defensive avoidance. This variable was re-coded. It was reflected so that the greater number would represent a greater degree of defensive avoidance. It had one missing value, which was not replaced because it forms less than 5% of the total number of cases. It had no outliers and no skewness issues. Table 16 includes the means and standard deviations for all groups.

Table 16. *Descriptive Statistics of Defensive Avoidance*

		Defensive Avoidance		
		n	*M*	*SD*
Smokers	Personal	79	3.72	1.56
	Societal	80	3.59	1.40
	Total	159	3.66	1.48
Non-Smokers	Personal	40	3.36	1.77
	Societal	38	3.04	2.06
	Total	78	3.21	1.91

There were no significant covariates. The ANCOVA revealed a significant effect for smoker status, $F (1, 233) = 4.08$, $p = 0.044$, *partial* $\eta^2 = 0.017$. As was predicted, smokers had greater degrees of defensive avoidance than non-smokers. However, there was no effect for message target, $F (1, 233) = 0.994$, $p = 0.320$, *partial* $\eta^2 = 0.004$, or interaction effect between smoker status and message target, $F (1, 233) = 0.187$, $p = 0.666$, *partial* $\eta^2 = 0.001$. R^2 was 0.021.

Reactance – perceived manipulation. This variable had no skewness issues, no outliers. It had 3 missing values, but they were not replaced because they were less than 5% of the total. Table 17 contains the descriptive statistics for this variable.

Table 17. *Descriptive Statistics of Reactance – Perceived Manipulation*

		Reactance – Perceived Manipulation		
		n	*M*	*SD*
Smoker	Personal	77	3.32	1.70
	Societal	79	3.84	1.67
	Total	156	3.58	1.70
Non-Smoker	Personal	41	2.60	1.54
	Societal	38	2.91	1.71
	Total	79	2.75	1.62

There were no significant covariates. The ANCOVA revealed a significant main effect for smoker status, $F (1, 231) = 12.8$, $p < 0.001$, *partial* $\eta^2 = 0.053$. Smokers reported greater degrees of perceived manipulation than non-smokers. This finding supports the first hypothesis's predictions. There was no effect for message target, $F (1, 231) = 3.325$, $p = 0.070$, *partial* $\eta^2 = 0.014$. Finally, there was no interaction between smoker status and message target, $F (1, 231) = 0.223$, $p = 0.637$, *partial* $\eta^2 = 0.001$. R^2 was 0.071.

Reactance – derogation of issue. Reactance – derogation of issue had no skewness issues, no outliers. There were two missing values that did not need to be replaced, because they formed less than 5% of the total. The means and standard deviations for all the groups are included in Table 18.

Table 18. *Descriptive Statistics of Reactance – Derogation of Issue*

		Reactance – Derogation of Issue		
		N	M	SD
Smoker	Personal	77	3.39	1.92
	Societal	80	3.84	2.04
	Total	157	3.62	1.99
Non-Smoker	Personal	41	2.41	1.52
	Societal	38	3.11	1.90
	Total	79	2.75	1.74
Total	Personal	118	3.05	1.85
	Societal	118	3.61	2.01

There were no significant covariates. The ANCOVA yielded a significant effect for smoker status, $F (1, 232) = 10.6$, $p = 0.001$, *partial η^2* = 0.044. As was predicted, smokers downplayed the severity of the issue more than non-smokers. The test also revealed a significant effect for message target, $F (1, 232) = 4.95$, $p = 0.027$, *partial η^2* = 0.021. Participants that saw a counter-advertisement with a societal level focus downplayed the severity of the issue more than those that saw a counter-advertisement with a personal level impact. However, there was no interaction between smoker status and message target, $F (1, 232) = 0.230$, $p = 0.632$, *partial η^2* = 0.001. R^2 was 0.065.

H$_{1b}$ Viewing Time

A two-way ANCOVA was run to evaluate whether smokers had shorter ad viewing time than non-smokers. The factors in this analysis were smoker status and message target. The covariates were age, gender, income, education, whether non-smokers were previous smokers or not, and the amount of cigarettes smoked by current

smokers. Results from the ANCOVA that controlled for the covariates that had a significant effect were reported. All the descriptive statistics reported for the dependent variables are prior to transformation (whenever transformation was opted for).

The dependent variable, viewing time was highly skewed. The data were cleaned by deleting all incorrect values, which were timings of zero seconds that indicated that the timer on the page did not work. Also, extreme values were deleted. Skewness still existed, so standardized scores were created for the dependent variable. A visual examination of the data showed a natural break at 3.29. Therefore, all cases with a Z-value above 3.29 were deleted. This left 228 cases for analysis, with no missing values and no outliers. Unfortunately, viewing time was still skewed, but its skewness was corrected using logarithmic transformation. Means and standard deviations for all groups are found in Table 19.

Table 19. *Descriptive Statistics of Viewing Time*

		Viewing Time		
		n	*M*	*SD*
Smoker	Personal	78	8.21	5.26
	Societal	75	9.68	6.07
	Total	153	8.93	5.70
Non-Smoker	Personal	38	9.92	7.43
	Societal	37	9.99	6.99
	Total	75	9.95	7.17

All the covariates, except for amount of cigarettes smoked by current smokers and income, were significant, so they were controlled for (please refer to Table 20).The ANCOVA did not yield a significant effect for smoker status, $F(1, 219) = 0.039$, $p =$

0.843, *partial η^2* = 0, or for message target, F (1, 219) = 1.02, p = 0.314, *partial η^2* =

0.005. It also did not reveal an interaction between smoker status and message target, F

(1, 219) = 1.14, p = 0.287, *partial η^2* = 0.005. R^2 was 0.169.

Table 20. *Main Effects for Covariates in ANCOVA with Viewing Time as Dependent*

Variable

Covariate	df	F	p	Partial η^2
Gender	1	4.00	0.047	0.018
Age	1	19.7	< 0.001	0.082
Education	1	11.1	0.001	0.048
Previous Smoker or Not	1	4.14	0.043	0.019
Error	219			

H$_{2a}$ Maladaptive Coping Responses in Brand Match versus Non-Branded

Several two-way ANCOVAs were conducted to see if smokers that viewed

counter-advertisements that attacked their brand reported more maladaptive coping

responses than smokers that viewed non-branded counter-advertisements. The factors in

these analyses were counter-advertisement type (brand match versus non-branded) and

message target. The covariates were age, gender, income, education, and the amount of

cigarettes smoked by current smokers. The three dependent variables were defensive

avoidance, reactance – perceived manipulation, and reactance – derogation of issue,

which are all measures of maladaptive coping responses.

A total of 102 smokers were included in the following analyses. There were 56

smokers that saw a counter-advertisement that attacked a brand they smoked (brand

match) and 46 smokers that saw a non-branded counter-advertisement. Most of the

covariates were not significant, so the decision was made to report the results from the

ANCOVA that controlled for the covariates that had a significant effect. All the

descriptive statistics reported for the dependent variables are prior to transformation

(whenever transformation was opted for).

Defensive avoidance. This dependent variable was re-coded so that the greater

number would represent a greater degree of defensive avoidance. This was also done to

allow for a better comparison with the results from the other dependent variables.

Defensive avoidance did not have any skewness issues, no outliers, and no missing

values. The means and standard deviations for each group are shown in Table 21.

Table 21. *Descriptive Statistics for Defensive Avoidance*

		Defensive Avoidance		
		n	*M*	*SD*
Brand Match	Personal	30	3.00	1.37
	Societal	26	3.77	1.48
	Total	56	3.36	1.46
Non-Branded	Personal	23	3.35	1.30
	Societal	23	2.78	1.51
	Total	46	3.07	1.42

Income was the only significant covariate, $F(1, 97) = 5.95$, $p = 0.017$, *partial* $\eta^2 =$

0.058. There was no significant main effect for counter-advertisement type (brand match

versus non-branded), $F(1, 97) = 1.23$, $p = 0.270$, *partial* $\eta^2 = 0.013$, and no significant

main effect for message target, $F(1, 97) = 0.106$, $p = 0.745$, *partial* $\eta^2 = 0.001$. However,

there was a significant interaction effect for counter-advertisement type (brand match

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versus non-branded) and message target, $F(1, 97) = 5.33$, $p = 0.023$, *partial* $\eta^2 = 0.052$. R^2 was 0.121.

Follow-up t-tests were conducted, in order to identify where the difference lied in the interaction between counter-advertisement type (brand match versus non-branded) and message target. There was a significant difference for message target within smokers that saw a counter-advertisement attacking a brand they smoked, $t(54) = 2.02$, $p = 0.048$ (two-tailed). Smokers that saw the counter-advertisement with a societal level focus (M = 3.7; SD = 1.48) reported greater degrees of defensive avoidance than those that saw the counter-advertisement with a personal level focus (M = 3.00; SD = 1.47). In addition, there was a significant difference for counter-advertisement type (brand match versus non-branded) within smokers that saw counter-advertisements with a societal level focus, $t(47) = 2.31$, $p = 0.025$ (two-tailed). Smokers that saw a counter-advertisement attacking a brand they smoked with a societal level focus (M = 3.7; SD = 1.48) reported greater degrees of defensive avoidance than smokers that saw a non-branded counter-advertisement with a societal level focus (M = 2.78; SD = 1.51).

Reactance – perceived manipulation. Reactance – perceived manipulation did not have any skewness issues, and it did not have any outliers. It had two missing values, which were not replaced, because they formed less than 5% of the total. The means and standard deviations for each group are shown in Table 22.

Table 22. *Descriptive Statistics of Reactance – Perceived Manipulation*

		Reactance – Perceived Manipulation		
		N	*M*	*SD*
Brand Match	Personal	30	3.03	1.38
	Societal	25	3.36	1.63
	Total	55	3.18	1.49
Non-Branded	Personal	23	3.48	1.50
	Societal	22	3.86	1.94
	Total	45	3.67	1.72

There were no significant covariates. The ANCOVA did not reveal an effect for counter-advertisement type (brand match versus non-branded), $F (1, 96) = 2.16$, $p = 0.145$, *partial* $\eta^2 = 0.022$, or for message target, $F (1, 96) = 1.21$, $p = 0.273$, *partial* $\eta^2 = 0.012$. There was also no interaction effect between counter-advertisement type and message target, $F (1, 96) = 0.008$, $p = 0.928$, *partial* $\eta^2 = 0$. R^2 was 0.035.

Reactance – derogation of issue. Reactance – derogation of issue did not have any skewness issues, and it did not have any outliers. It had two missing values, which were not replaced, because they formed less than 5% of the total. The means and standard deviations for each group are shown in Table 23.

Table 23. *Descriptive Statistics of Reactance – Derogation of Issue*

| | | Reactance – Derogation of Issue | | |
		N	M	SD
Brand Match	Personal	30	3.47	1.83
	Societal	25	3.64	2.02
	Total	55	3.55	1.90
Non-Branded	Personal	23	3.26	1.86
	Societal	22	3.64	2.08
	Total	45	3.44	1.96

There were no significant covariates. The analysis revealed no main effect for counter-advertisement type (brand match versus non-branded), $F(1, 96) = 0.072$, $p = 0.790$, *partial* $\eta^2 = 0.001$, or for message target, $F(1, 96) = 0.491$, $p = 0.485$, *partial* $\eta^2 = 0.005$. There was also no interaction effect between counter-advertisement type and message target, $F(1, 96) = 0.067$, $p = 0.797$, *partial* $\eta^2 = 0.001$. R^2 was 0.006.

H2b Maladaptive Coping Responses in Non-Branded versus Brand Mismatch

Several two-way ANCOVAs were conducted to see if smokers that viewed non-branded counter-advertisements reported more maladaptive coping responses than smokers that viewed counter-advertisements attacking a competing brand. The factors in these analyses were counter-advertisement type (non-branded versus brand mismatch) and message target. The covariates were age, gender, income, education, and the amount of cigarettes smoked by current smokers. The three dependent variables were defensive avoidance, reactance – perceived manipulation, and reactance – derogation of issue, which are all measures of maladaptive coping responses.

A total of 97 smokers were included in the following analyses. There were 51 smokers that saw a counter-advertisement that attacked a competing brand (brand mismatch) and 46 smokers that saw a non-branded counter-advertisement. Most of the covariates were not significant, so the decision was made to report the results from the ANCOVA that controlled for the covariates that had a significant effect. All the descriptive statistics reported for the dependent variables are prior to transformation (whenever transformation was opted for).

Defensive avoidance. This dependent variable was re-coded so that the greater number would represent a greater degree of defensive avoidance. This was also done to allow for a better comparison with the results from the other dependent variables. Defensive avoidance did not have any skewness issues, no outliers, and no missing values. The means and standard deviations for each group are shown in Table 24.

Table 24. *Descriptive Statistics of Defensive Avoidance*

		Defensive Avoidance		
		n	*M*	*SD*
Non-Branded	Personal	23	3.35	1.30
	Societal	23	2.78	1.51
	Total	46	3.07	1.42
Mismatch	Personal	22	3.36	1.56
	Societal	29	3.62	1.32
	Total	51	3.51	1.42

None of the covariates were significant. There was no main effect for counter-advertisement type (non-branded versus brand mismatch), $F(1, 93) = 2.17$, $p = 0.144$, *partial* $\eta^2 = 0.023$, or for message target, $F(1, 93) = 0.283$, $p = 0.596$, *partial* $\eta^2 = 0.003$.

There also was no interaction for counter-advertisement type (non-branded versus brand mismatch) and message target, $F(1, 93) = 2.01$, $p = 0.159$, *partial η^2* = 0.021. R^2 was 0.047.

Reactance – perceived manipulation. Reactance – perceived manipulation did not have any skewness issues, and it did not have any outliers. It had two missing values, which were not replaced, because they formed less than 5% of the total. The means and standard deviations for each group are shown in Table 25.

Table 25. *Descriptive Statistics of Reactance – Perceived Manipulation*

		Reactance – Perceived Manipulation		
		N	*M*	*SD*
Non-Branded	Personal	23	3.48	1.50
	Societal	22	3.86	1.94
	Total	45	3.67	1.72
Brand	Personal	21	3.52	1.69
Mismatch	Societal	29	3.83	1.85
	Total	50	3.70	1.78

There were no significant covariates. The ANCOVA did not reveal any effect for counter-advertisement type (non-branded versus brand mismatch), $F(1, 91) = 0$, $p = 0.990$, *partial η^2* = 0, or for message target, $F(1, 91) = 0.897$, $p = 0.346$, *partial η^2* = 0.010. There was also no interaction effect between counter-advertisement type and message target, $F(1, 91) = 0.013$, $p = 0.911$, *partial η^2* = 0. R^2 was 0.010.

Reactance – derogation of issue. Reactance – derogation of issue did not have any skewness issues, and it did not have any outliers. It had two missing values, which

were not replaced, because they formed less than 5% of the total. The means and standard

deviations for each group are shown in Table 26.

Table 26. *Descriptive Statistics of Reactance – Derogation of Issue*

		Reactance – Derogation of Issue		
		N	M	SD
Non-Branded	Personal	23	3.26	1.86
	Societal	22	3.64	2.08
	Total	45	3.44	1.96
Brand	Personal	21	3.48	1.81
Mismatch	Societal	29	3.48	1.94
	Total	50	3.48	1.87

There were no significant covariates. The analysis revealed no main effect for

counter-advertisement type (non-branded versus brand mismatch), $F(1, 91) = 0.006$, $p = 0.938$, *partial* $\eta^2 = 0$, or for message target, $F(1, 91) = 0.230$, $p = 0.633$, *partial* $\eta^2 = 0.003$. There was no interaction effect between counter-advertisement type and message

target, $F(1, 91) = 0.214$, $p = 0.645$, *partial* $\eta^2 = 0.002$. R^2 was 0.005.

H$_{2c}$ Maladaptive Coping Responses in Brand Match versus Brand Mismatch

Several two-way ANCOVAs were conducted to see if smokers that viewed

counter-advertisements attacking the brand they smoked reported more maladaptive

coping responses than smokers that viewed counter-advertisements attacking a competing

brand. The factors in these analyses were counter-advertisement type (brand match versus

brand mismatch) and message target. The covariates were age, gender, income,

education, and the amount of cigarettes smoked by current smokers. The three dependent

variables were defensive avoidance, reactance – perceived manipulation, and reactance –

derogation of issue, which are all measures of maladaptive coping responses.

A total of 107 smokers were included in the following analyses. There were 51

smokers that saw a counter-advertisement that attacked a competing brand (brand

mismatch) and 56 smokers that saw a counter-advertisement that attacked a brand they

smoked (brand match). Most of the covariates were not significant, so the decision was

made to report the results from the ANCOVA that controlled for the covariates that had a

significant effect. All the descriptive statistics reported for the dependent variables are

prior to transformation (whenever transformation was opted for).

Defensive avoidance. This dependent variable was re-coded so that the greater

number would represent a greater degree of defensive avoidance. This was also done to

allow for a better comparison with the results from the other dependent variables.

Defensive avoidance did not have any skewness issues, no outliers, and no missing

values. The means and standard deviations for each group are shown in Table 27.

Table 27. *Descriptive Statistics of Defensive Avoidance*

		Defensive Avoidance		
		n	*M*	*SD*
Brand Match	Personal	30	3.00	1.37
	Societal	26	3.77	1.48
	Total	56	3.36	1.46
Brand Mismatch	Personal	22	3.36	1.56
	Societal	29	3.62	1.32
	Total	51	3.51	1.42

There were no significant covariates. There was no significant main effect for counter-advertisement type (brand match versus brand mismatch), $F(1, 103) = 0.151$, $p = 0.699$, *partial η^2* $= 0.001$, or for message target, $F(1, 103) = 3.429$, $p = 0.067$, *partial η^2* $= 0.032$. There was also no interaction between counter-advertisement type (brand match versus brand mismatch) and message target, $F(1, 103) = 0.854$, $p = 0.358$, *partial η^2* $= 0.008$. R^2 was 0.044.

Reactance – perceived manipulation. Reactance – perceived manipulation did not have any skewness issues, and it did not have any outliers. It had two missing values, which were not replaced, because they formed less than 5% of the total. The means and standard deviations for each group are shown in Table 28.

Table 28. *Descriptive Statistics of Reactance – Perceived Manipulation*

		Reactance – Perceived Manipulation		
		N	*M*	*SD*
Brand Match	Personal	30	3.03	1.38
	Societal	25	3.36	1.63
	Total	55	3.18	1.49
Brand Mismatch	Personal	21	3.52	1.69
	Societal	29	3.83	1.85
	Total	50	3.70	1.78

There were no significant covariates. The ANCOVA did not reveal a main effect for counter-advertisement type (brand match versus brand mismatch), $F(1, 101) = 2.19$, $p = 0.142$, *partial η^2* $= 0.021$. There was also no effect for message target, $F(1, 101) = 0.949$, $p = 0.332$, *partial η^2* $= 0.009$, and no interaction effect between counter-

advertisement type and message target, $F (1, 101) = 0.001$, $p = 0.972$, $partial\ \eta^2 = 0$. R^2 was 0.034.

Reactance – derogation of issue. Reactance – derogation of issue did not have any skewness issues, and it did not have any outliers. It had two missing values, which were not replaced, because they formed less than 5% of the total. The means and standard deviations for each group are shown in Table 29.

Table 29. *Descriptive Statistics of Reactance – Derogation of Issue*

		Reactance – Derogation of Issue		
		N	*M*	*SD*
Brand Match	Personal	30	3.47	1.83
	Societal	25	3.64	2.02
	Total	55	3.55	1.90
Brand Mismatch	Personal	21	3.48	1.81
	Societal	29	3.48	1.94
	Total	50	3.48	1.87

There were two significant covariates. Age remained significant after it was controlled for in the second ANCOVA, $F (1, 98) = 6.19$, $p = 0.015$, $partial\ \eta^2 = 0.059$, but amount of cigarettes smoked was marginally significant in the initial ANCOVA, and became non-significant after it was controlled for in the second ANCOVA, $F (1, 98) = 2.96$, $p = 0.088$, $partial\ \eta^2 = 0.029$. The analysis revealed a non-significant main effect for counter-advertisement type (brand match versus brand mismatch), $F (1, 98) = 0$, $p = 0.985$, $partial\ \eta^2 = 0$, and a non-significant main effect for message target, $F (1, 98) = 0$, $p = 0.992$, $partial\ \eta^2 = 0$. The interaction effect between counter-advertisement type and message target was also non-significant, $F (1, 98) = 0.141$, $p = 0.708$, $partial\ \eta^2 = 0.001$.

H_{2a} Maladaptive Coping Responses in Brand Match versus Non-Branded - Successful Manipulation Check

The previous tests for the second hypothesis were repeated with the only the smokers that were successful in the manipulation check. That was done, in order to see if there would be any changes in the results, when people were able to recognize the brand or lack thereof that they were looking at. Several two-way ANCOVAs were conducted again, in order to see if smokers that viewed counter-advertisements attacking their own brand reported more maladaptive coping responses than smokers that viewed non-branded counter-advertisements. The factors in these analyses were counter-advertisement type (brand match versus non-branded) and message target. The covariates were age, gender, income, education, and the amount of cigarettes smoked by current smokers. The three dependent variables were defensive avoidance, reactance – perceived manipulation, and reactance – derogation of issue, which are all measures of maladaptive coping responses.

A total of 90 smokers were included in the following analyses. There were 50 smokers that saw a counter-advertisement that attacked their own brand (brand match) and 40 smokers that saw a non-branded counter-advertisement. Most of the covariates were not significant, so the decision was made to report the results from the ANCOVA that controlled for the covariates that had a significant effect. All the descriptive statistics reported for the dependent variables are prior to transformation (whenever transformation was opted for).

Defensive avoidance. This dependent variable was re-coded so that the greater number would represent a greater degree of defensive avoidance. This was also done to allow for a better comparison with the results from the other dependent variables. Defensive avoidance did not have any skewness issues, no outliers, and no missing values. The means and standard deviations for each group are shown in Table 30.

Table 30. *Descriptive Statistics of Defensive Avoidance*

		Defensive Avoidance		
		n	*M*	*SD*
Brand Match	Personal	28	3.00	1.39
	Societal	22	3.86	1.55
	Total	50	3.38	1.51
Non-Branded	Personal	21	3.43	1.25
	Societal	19	2.89	1.56
	Total	40	3.18	1.41

None of the covariates were significant. There was no significant main effect for counter-advertisement type (brand match versus non-branded), $F (1, 86) = 0.780$, $p = 0.380$, *partial* $\eta^2 = 0.009$, and no significant main effect for message target, $F (1, 86) = 0.290$, $p = 0.591$, *partial* $\eta^2 = 0.003$. However, there was a significant interaction effect for counter-advertisement type (brand match versus non-branded) and message target, $F (1, 86) = 5.22$, $p = 0.025$, *partial* $\eta^2 = 0.057$. R^2 was 0.068.

Follow-up t-tests were conducted, in order to identify where the difference lied in the interaction between counter-advertisement type (brand match versus non-branded) and message target. There was a significant difference for message target within smokers that saw a counter-advertisement attacking their brand, $t (48) = 2.07$, $p = 0.044$ (two-

tailed). Smokers that saw the counter-advertisement with a societal level focus reported greater degrees of defensive avoidance than those that saw the counter-advertisement with a personal level focus. In addition, there was a marginal significant difference for counter-advertisement type (brand match versus non-branded) within smokers that saw counter-advertisements with a societal level focus, $t(39) = 1.99$, $p = 0.054$ (two-tailed). Smokers that saw a counter-advertisement attacking a brand they smoked with a societal level focus reported greater degrees of defensive avoidance than smokers that saw a non-branded counter-advertisement with a societal level focus.

Reactance – perceived manipulation. Reactance – perceived manipulation did not have any skewness issues, it did not have any outliers, and it did not have any missing values. The means and standard deviations for each group are shown in Table 31.

Table 31. *Descriptive Statistics of Reactance – Perceived Manipulation*

		Reactance – Perceived Manipulation		
		N	*M*	*SD*
Brand Match	Personal	28	3.00	1.41
	Societal	22	3.59	1.56
	Total	50	3.26	1.50
Non-Branded	Personal	21	3.48	1.57
	Societal	19	3.89	2.03
	Total	40	3.68	1.79

There were no significant covariates. The ANCOVA did not reveal any significant main effect for counter-advertisement type (brand match versus non-branded), $F(1, 86) = 1.26$, $p = 0.264$, *partial* $\eta^2 = 0.014$, or for message target, $F(1, 86) = 2.12$, $p = 0.149$, *partial* $\eta^2 = 0.024$. It also did not reveal a significant interaction effect between

counter-advertisement type and message target, $F (1, 86) = 0.062$, $p = 0.804$, *partial η^2 =* 0.001. R^2 was 0.041.

Reactance – derogation of issue. Reactance – derogation of issue did not have any skewness issues, and it did not have any outliers. It also had no missing values. The means and standard deviations for each group are shown in Table 32.

Table 32. *Descriptive Statistics of Reactance – Derogation of Issue*

		Reactance – Derogation of Issue		
		N	*M*	*SD*
Brand Match	Personal	28	3.43	1.89
	Societal	22	3.86	1.98
	Total	50	3.62	1.93
Non-Branded	Personal	21	3.29	1.93
	Societal	19	3.58	2.22
	Total	40	3.43	2.05

The covariate, amount of cigarettes smoked, was significant in the initial ANCOVA, so it was controlled for, $F (1, 85) = 3.43$, $p = 0.067$, *partial η^2* = 0.039. The analysis revealed a non-significant main effect for counter-advertisement type (brand match versus non-branded), $F (1, 85) = 0.139$, $p = 0.710$, *partial η^2* = 0.002, and a non-significant main effect for message target, $F (1, 85) = 1.04$, $p = 0.310$, *partial η^2* = 0.012. The interaction effect between counter-advertisement type and message target was also non-significant, $F (1, 85) = 0.061$, $p = 0.805$, *partial η^2* = 0.001. R^2 was 0.050.

H$_{2b}$ Maladaptive Coping Responses in Non-Branded versus Brand Mismatch –

Successful Manipulation Check

Several two-way ANCOVAs were conducted again, in order to see if smokers that viewed non-branded counter-advertisements reported more maladaptive coping responses than smokers that viewed counter-advertisements attacking a competing brand. The factors in these analyses were counter-advertisement type (non-branded versus brand mismatch) and message target. The covariates were age, gender, income, education, and the amount of cigarettes smoked by current smokers. The three dependent variables were defensive avoidance, reactance – perceived manipulation, and reactance – derogation of issue, which are all measures of maladaptive coping responses.

A total of 79 smokers were included in the following analyses. There were 39 smokers that saw a counter-advertisement that attacked a competing brand (brand mismatch) and 40 smokers that saw a non-branded counter-advertisement. Most of the covariates were not significant, so the decision was made to report the results from the ANCOVA that controlled for the covariates that had a significant effect. All the descriptive statistics reported for the dependent variables are prior to transformation (whenever transformation was opted for).

Defensive avoidance. This dependent variable was re-coded so that the greater number would represent a greater degree of defensive avoidance. This was also done to allow for a better comparison with the results from the other dependent variables. Defensive avoidance did not have any skewness issues, no outliers, and no missing values. The means and standard deviations for each group are shown in Table 33.

Table 33. *Descriptive Statistics of Defensive Avoidance*

		Defensive Avoidance		
		n	*M*	*SD*
Brand	Personal	14	3.64	1.01
Mismatch	Societal	25	3.68	1.38
	Total	39	3.67	1.24
Non-Branded	Personal	21	3.43	1.25
	Societal	19	2.89	1.56
	Total	40	3.18	1.41

There were no significant covariates. There was no significant main effect for counter-advertisement type (non-branded versus brand mismatch), $F (1, 75) = 2.65$, $p = 0.108$, *partial* $\eta^2 = 0.034$. There was also no significant main effect for message target, $F (1, 75) = 0.654$, $p = 0.421$, *partial* $\eta^2 = 0.009$, and no significant interaction effect for counter-advertisement type (brand mismatch versus non-branded) and message target, $F (1, 75) = 0.865$, $p = 0.355$, *partial* $\eta^2 = 0.011$. R^2 was 0.054.

Reactance – perceived manipulation. Reactance – perceived manipulation did not have any skewness issues, and it did not have any outliers. It had one missing value, but it was not replaced because it formed less than 5% of the total. The means and standard deviations for each group are shown in Table 34.

Table 34. *Descriptive Statistics of Reactance – Perceived Manipulation*

		Reactance – Perceived Manipulation		
		N	*M*	*SD*
Brand	Personal	13	3.46	1.76
Mismatch	Societal	25	3.76	1.92
	Total	38	3.66	1.85
Non-Branded	Personal	21	3.48	1.57
	Societal	19	3.89	2.03
	Total	40	3.68	1.79

None of the covariates were significant. The ANCOVA did not reveal any significant main effect for counter-advertisement type (non-branded versus brand mismatch), $F (1, 74) = 0.031$, $p = 0.862$, *partial* $\eta^2 = 0$, or for message target, $F (1, 74) = 0.704$, $p = 0.404$, *partial* $\eta^2 = 0.009$. It also did not reveal a significant interaction effect between counter-advertisement type and message target, $F (1, 74) = 0.020$, $p = 0.889$, *partial* $\eta^2 = 0$. R^2 was 0.010.

Reactance – derogation of issue. Reactance – derogation of issue did not have any skewness issues, and it did not have any outliers. It had one missing value, but it was not replaced, because it formed less than 5% of the total. The means and standard deviations for each group are shown in Table 35.

Table 35. *Descriptive Statistics of Reactance – Derogation of Issue*

| | | Reactance – Derogation of Issue | | |
		N	M	SD
Brand	Personal	13	3.38	1.71
Mismatch	Societal	25	3.28	1.88
	Total	38	3.32	1.80
Non-Branded	Personal	21	3.29	1.93
	Societal	19	3.58	2.22
	Total	40	3.43	2.05

There were no significant covariates. The analysis revealed a non-significant main effect for counter-advertisement type (non-branded versus brand mismatch), $F(1, 74) = 0.048$, $p = 0.827$, *partial* $\eta^2 = 0.001$, and a non-significant main effect for message target, $F(1, 74) = 0.043$, $p = 0.837$, *partial* $\eta^2 = 0.001$. The interaction effect between counter-advertisement type and message target was also non-significant, $F(1, 74) = 0.191$, $p = 0.664$, *partial* $\eta^2 = 0.003$. R^2 was 0.004.

H_{2c} Maladaptive Coping Responses in Brand Match versus Brand Mismatch – Successful Manipulation Check

Several two-way ANCOVAs were conducted again, in order to see if smokers that viewed counter-advertisements attacking their own brand reported more maladaptive coping responses than smokers that viewed counter-advertisements attacking a competing brand. The factors in these analyses were counter-advertisement type (brand match versus brand mismatch) and message target. The covariates were age, gender, income, education, and the amount of cigarettes smoked by current smokers. Three dependent

variables were defensive avoidance, reactance – perceived manipulation, and reactance –

derogation of issue, which are all components of the maladaptive scale.

A total of 89 smokers were included in the following analyses. There were 50

smokers that saw a counter-advertisement that attacked their own brand (brand match)

and 39 smokers that saw a counter-advertisement attacking a competing brand (brand

mismatch). Most of the covariates were not significant, so the decision was made to

report the results from the ANCOVA that controlled for the covariates that had a

significant effect. All the descriptive statistics reported for the dependent variables are

prior to transformation (whenever transformation was opted for).

Defensive avoidance. This dependent variable was re-coded so that the greater

number would represent a greater degree of defensive avoidance. This was also done to

allow for a better comparison with the results from the other dependent variables.

Defensive avoidance did not have any skewness issues, no outliers, and no missing

values. The means and standard deviations for each group are shown in Table 36.

Table 36. *Descriptive Statistics of Defensive Avoidance*

		Defensive Avoidance		
		n	*M*	*SD*
Brand Match	Personal	28	3.00	1.39
	Societal	22	3.86	1.55
	Total	50	3.38	1.51
Brand Mismatch	Personal	14	3.64	1.01
	Societal	25	3.68	1.38
	Total	39	3.67	1.24

None of the covariates were significant. There was no significant main effect for counter-advertisement type (brand match versus brand mismatch), F (1, 85) = 0.577, p = 0.450, *partial η^2* = 0.007. There was also no significant main effect for message target, F (1, 85) = 2.22, p = 0.140, *partial η^2* = 0.025, and no significant interaction effect for counter-advertisement type (brand mismatch versus non-branded) and message target, F (1, 85) = 1.87, p = 0.175, *partial η^2* = 0.022. R^2 was 0.064.

Reactance – perceived manipulation. Reactance – perceived manipulation did not have any skewness issues, and it did not have any outliers. It had one missing value, but it was not replaced because it formed less than 5% of the total. The means and standard deviations for each group are shown in Table 37.

Table 37. *Descriptive Statistics of Reactance – Perceived Manipulation*

		Reactance – Perceived Manipulation		
		N	*M*	*SD*
Brand Match	Personal	28	3.00	1.41
	Societal	22	3.59	1.56
	Total	50	3.26	1.50
Brand Mismatch	Personal	13	3.46	1.76
	Societal	25	3.76	1.92
	Total	38	3.66	1.85

There were no significant covariates. The ANCOVA did not reveal any significant main effect for counter-advertisement type (brand match versus brand mismatch), F (1, 84) = 0.730, p = 0.395, *partial η^2* = 0.009, or for message target, F (1, 84) = 1.45, p = 0.232, *partial η^2* = 0.017. It also did not reveal a significant interaction

effect between counter-advertisement type and message target, F (1, 84) = 0.157, $p =$ 0.693, *partial η^2* = 0.002. R^2 was 0.035.

Reactance – derogation of issue. Reactance – derogation of issue did not have any skewness issues, and it did not have any outliers. It had one missing value, but it was not replaced, because it formed less than 5% of the total. The means and standard deviations for each group are shown in Table 38.

Table 38. *Descriptive Statistics of Reactance – Derogation of Issue*

		Reactance – Derogation of Issue		
		N	*M*	*SD*
Brand Match	Personal	28	3.43	1.89
	Societal	22	3.86	1.98
	Total	50	3.62	1.93
Brand Mismatch	Personal	13	3.38	1.71
	Societal	25	3.28	1.88
	Total	38	3.32	1.80

There were three significant covariates, gender, F (1, 79) = 8.30, p = 0.005, *partial η^2* = 0.095, age, F (1, 79) = 7.50, p = 0.008, *partial η^2* = 0.087, and amount smoked currently, which was significant in the first ANCOVA and controlled for as well, F (1, 79) = 3.67, p = 0.059, *partial η^2* = 0.044. The analysis revealed a non-significant main effect for counter-advertisement type (brand match versus brand mismatch), F (1, 79) = 0.135, p = 0.715, *partial η^2* = 0.002, and a non-significant main effect for message target, F (1, 79) = 0.007, p = 0.935, *partial η^2* = 0. The interaction effect between counter-advertisement type and message target was also non-significant, F (1, 79) = 0.087, p = 0.769, *partial η^2* = 0.001. R^2 was 0.206.

Discussion

Perceived Efficacy and Perceived Threat

Non-smokers perceived a greater degree of threat and efficacy than smokers. They were more susceptible to the threat and they perceived it to be more severe. Even though there was no difference in the levels of response efficacy, non-smokers did show greater degrees of self efficacy than smokers.

H1$_a$ Adaptive versus Maladaptive Coping Responses

Hypothesis 1a was fully supported. It was predicted that smokers would have fewer adaptive coping responses that non-smokers, but that they would also have greater maladaptive coping responses than non-smokers. Non-smokers' attitudes towards protecting themselves from the dangers of smoking, after viewing the counter-advertisement, were more positive than those of smokers. In addition, non-smokers had greater intentions to protect themselves from the dangers of smoking afterwards than smokers did. As for maladaptive coping responses, defensive avoidance and the two types of reactance, perceived manipulation and derogation of issue, they were greater for smokers than they were for non-smokers. As Brehm (1966) explained, when an individual's free behaviour is threatened they will experience reactance by attempting to re-claim it. Smokers were more likely to report that they did not want to do something to protect themselves from the dangers of smoking. They were also more likely to agree with the statements describing the counter-advertisement as manipulative. Moreover, smokers were more likely than non-smokers to downplay the severity of the dangers of smoking depicted in the counter-advertisements.

H_{1b} Viewing Time

It was also predicted that smokers would have shorter viewing times than non-smokers, because they would be more prone to avoid processing the message in the counter-advertisement. However, this hypothesis was not supported. It was found that there was an insignificant difference in advertisement viewing time between non-smokers and smokers.

H_{2a, b, & c} Maladaptive Coping Responses among Different Counter-Advertisements

The second hypothesis was not supported. It was predicted that maladaptive coping responses among smokers will be the greatest for those that see a counter-advertisement attacking their brand, than for those that see a non-branded counter-advertisement, and the least for those that see a counter-advertisement attacking a competing brand. The results show that smokers had approximately similar degrees of maladaptive coping responses across all conditions.

In order to see if the low recognition percentage in the brand manipulation check could have affected the results in the initial tests for the second hypothesis, those that answered the manipulation check incorrectly were excluded from the analysis. However, even then, the hypothesis was not supported. The results from these tests were similar to the previous. Maladaptive coping responses were almost similar for all conditions.

The reason no significant differences were found between one condition and the other could be due to varying brand loyalty levels, which were not measured in this study. Smokers who are loyal to their brand would have a greater degree of self identification with it (Goldberg et al., 1995). In addition, smokers with greater brand

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loyalty levels could relate to the brand's icon a lot more, which could also lead to greater

brand-smoker identification when viewing the counter-advertisement. Goldberg et al.

(1995) explained that smokers adopt the characteristics of the brand they smoke. The

branded counter-advertisements used for this study focused on a play on the brand icon

rather than the brand in general. The low percentages of correct identification of the

Marlboro brand in the manipulation check may be linked to a possible lack of icon

recognition. Perhaps the Marlboro cowboy is no longer the brand's identifying symbol, as

it used to be in the past.

Message Target

H_{1a}.Whereas smoker status had an impact on all the measures of adaptive and

maladaptive coping responses, message target only had an impact on issue derogation

(reactance). Participants agreed more strongly with the statement that the counter-

advertisement they saw was overblown, exaggerated, and overstated, when the counter-

advertisement had a societal-level focus than when it had a personal-level focus.

H_{2a}. In addition, tests done for H_{2a} revealed that smokers that saw counter-

advertisements with a societal-level focus reacted in the predicted direction of the

hypothesis. Degrees of defensive avoidance were greater amongst smokers that saw a

counter-advertisement attacking the brand they smoked with a societal-level impact, than

those that saw a non-branded counter-advertisement with a societal-level impact. It was

also found that smokers that saw a counter-advertisement with a societal impact reported

greater degrees of defensive avoidance than smokers that saw counter-advertisements

with a personal impact. These results were the same for the tests done for H_{2a} that excluded the smokers that were not able to correctly identify the brand they saw.

Insights. These were interesting findings, since Brehm (1966) explained that the degree of reactance was a function of the importance of the free behaviours being threatened, the proportion of free behaviours being threatened, and the magnitude of the threat. The greater degree of reactance reported by participants assigned to the societal condition would imply that the threat in the counter-ad with a societal-level focus was either more important or was of greater magnitude than the threat in the counter-advertisement with a personal-level focus. Moreover, it could be that the ads representing a societal risk also carried a personal risk, since each person could be affected by the other person's smoking. This suggests that ads depicting a risk at the societal level are threatening a greater proportion of free behaviours than the other ads. Nonetheless, Tyler and Cook's (1984) argument that a message including a risk at a societal level did not impact people at a personal level could be re-examined with tobacco counter-advertisements.

Other Findings

The final question in the survey was an open-ended one that asked the participants if they had faced any difficulties completing the survey. Most of the people did not have a problem with the survey and a lot of them left positive comments. However, some of the smokers (9.4%) actually took the opportunity to explain their reasons for smoking, their failed attempts to quit, and how careful they are with their smoking habit. Some said that the counter-advertisements were over exaggerated and that there was no actual proof

of second-hand smoking having any negative effects on non-smokers. Others simply admitted that smoking was bad. On the other hand, not as many non-smokers (5.1%), including the previous smokers, did as such. A one-group chi-square test was done, and it revealed a significant difference between smokers and non-smokers, χ^2 (2, N = 238) = 6.2, $p = 0.02$.

Limitations and Future Research

Online research panels have been considered by many researchers to be a reliable source of data collection. However, one disadvantage associated with using these panels is the inability to be fully certain that participants are who they claim to be. This shortcoming had to be forsaken, in order to meet the time and financial constraints imposed on this research. In addition, it should be noted that in real life smokers and non-smokers may not be able to take their time to process the counter-advertisement. In the online setting, participants were allowed to look at the counter-advertisement until they felt they were ready to answer questions about it. This could have led to a difference in reactions from a real life setting.

Another limitation is the use of one counter-advertisement per condition. It could not be determined whether the results were due to the ad in particular or to the condition that they were assigned to. Moreover, the counter-advertisements used in this study contained a similar brand attack tactic, and that was a play on the brand's icon. This study did not measure smokers' identification with the brands' iconic figures, such as Joe Camel and the Marlboro man. It also did not include any measures of brand loyalty. As a result, future research could include counter-advertisements that attack the brand's icon and other characteristics of the brand that smokers closely identify with. It could be, for example, the brand's colours or the brand's logo. Also, future research could measure brand loyalty amongst smokers.

In addition, future research could add a control group, where participants are asked to answer questions without having viewed any counter-advertisements at all.

Finally, the efficacy and threat variables, which were only measured in this study, could be manipulated to observe their impact on smokers and non-smokers and their adaptive and maladaptive coping responses.

Conclusion

This study aimed at understanding the difference in maladaptive coping responses among the three types of counter-advertisements: ones attacking a smoker's brand, ones attacking a competing brand, and non-branded ones. Maladaptive coping responses were expected to be greater among smokers that viewed counter-advertisements that attacked a brand they smoked than any of the other types of counter-advertisements. However, the counter-advertisements focused on brand icons and more care should have been taken to understand more about the parts of a brand that smokers mostly identified with. Avoiding counter-advertisements that trigger high levels of reactance could enhance social marketers' communication efforts with smokers.

Social marketers could enhance their anti-smoking communication efforts by recognizing that smokers and non-smokers are two different target audiences. Each audience needs to be approached in a different way. The existing counter-advertisements result in more adaptive changes among non-smokers than they do among smokers. The study conducted revealed that smokers report higher levels of reactance and other maladaptive coping responses when they are shown the same tobacco counter-advertisements as non-smokers. The existence of reactance should be of concern to social marketers that have the increase of quitting rates as an ultimate objective. Experiencing reactance leads a smoker to shun or ridicule the counter-advertisement (Brehm, 1966). This acts as noise that impedes the message from effectively reaching the smoker. Consequently, the current counter-advertising tactic is not effective with smokers.

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Ad 1

Ad 2

Ad 3

Ad 4
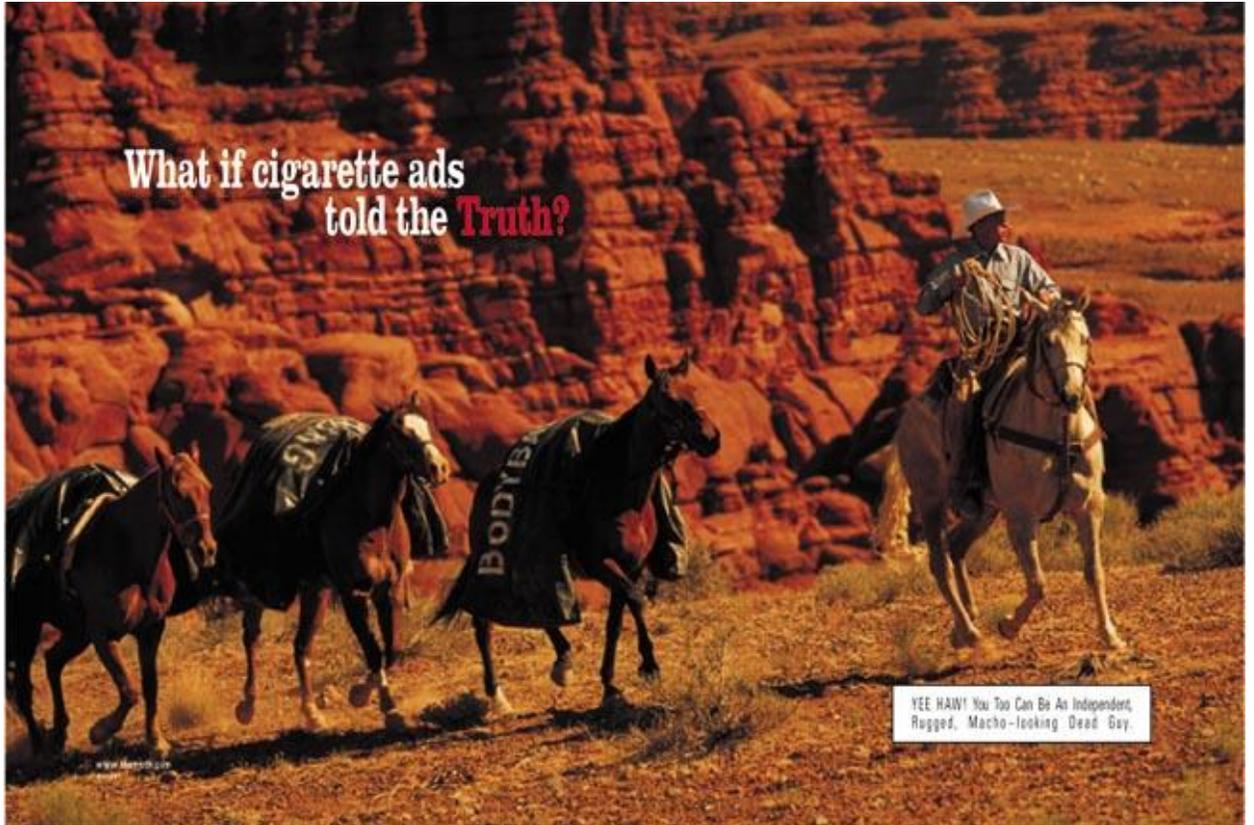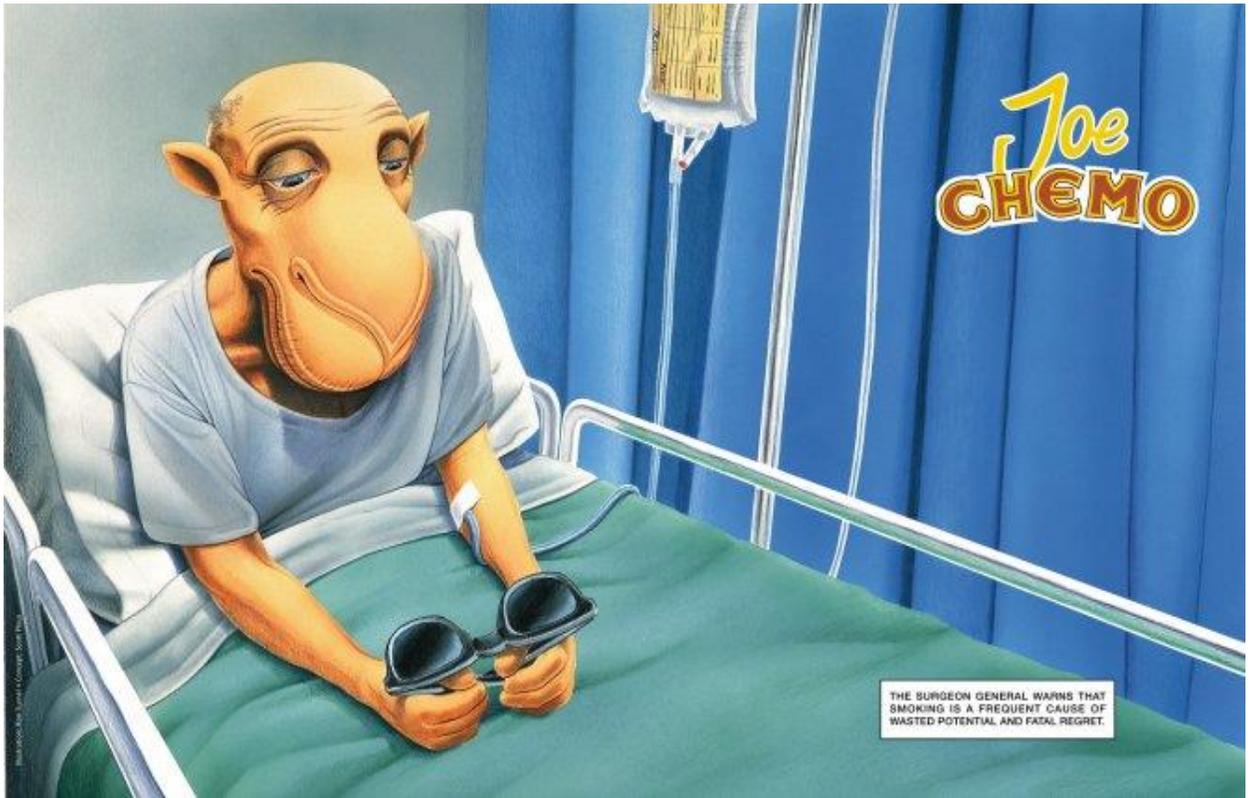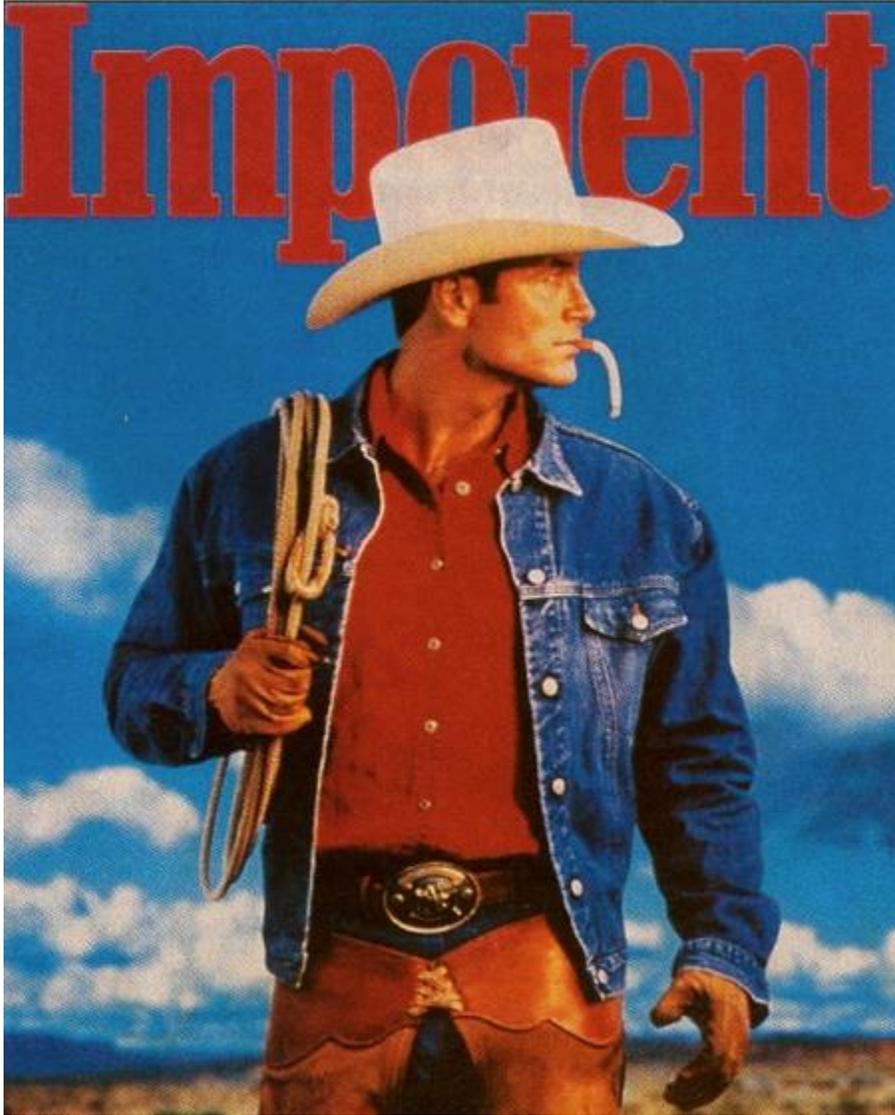
Interview Questions

Please take a look at the following advertisement.

1. What do you think about the message in the ad? (Probe)
2. How does it make you feel? (Probe)
3. Do you agree with the message? (Probe)

Letter of Consent – Depth Interviews

Dear participant:

You are being invited to take part in research that is being done on the effectiveness of tobacco counter advertisements. In specific, an interview will be conducted to find out more about smokers' insights and perspectives about tobacco counter advertisements.

Participation in this interview is voluntary. It will last for 45 minutes at most. You will be awarded "Management-2030" credit for your participation, as per your course outline. If there are any questions you do not wish to answer, please say so and we will proceed to the next one.

Please note that you can withdraw from the interview at any point, even after you have begun answering questions. If you do withdraw, any information obtained from you will be destroyed. Also, please note that there are no potential risks to you of any kind associated with participating in this study and there is no anticipated discomfort.

Every effort will be made to ensure confidentiality of the information that is obtained from you for the purpose of this study. Under no circumstances will your name be revealed to anyone. In addition, no one other than the researcher and her supervisors will see your answers. With your permission the interview will be recorded, and the researcher herself will transcribe the answers, in order to maintain confidentiality. The recorded and transcribed answers will be stored in a secure location on the researcher's password-protected computer. The results of this research will be available on defense of the researcher's thesis, in October 2012. If you wish to receive a copy of the results please contact Michelle Wehbe at michelle.wehbe@uleth.ca.

Finally, if you have any questions about this study, please feel free to call Michelle Wehbe at 403-393-2789, at the University of Lethbridge. If you have any other questions regarding your rights as a participant in this research, you may also contact the Office of Research Services at the University of Lethbridge at 403-329-2747 or research.services@uleth.ca.

I have read (or have been read) the above information regarding this research study on the effectiveness of tobacco counter advertisements, and I consent to participate in this study.
_____ (Printed Name)
_____ (Signature)
_____ (Date)

I agree to have my interview recorded.
_____ (Signature)

If you wish to receive a copy of the results please provide your e-mail address below.
_____ (E-mail Address)

Letter of Consent – Short Interviews

Dear participant:

You are being invited to take part in research that is being done on the effectiveness of tobacco counter advertisements. In specific, an interview will be conducted to find out more about smokers' insights and perspectives about tobacco counter advertisements.

Participation in this interview is voluntary. It will be very concise and will take 10 minutes at most. If there are any questions you do not wish to answer, please say so and we will proceed to the next one.

Please note that you can withdraw from the interview at any point, even after you have begun answering questions. If you do withdraw, any information obtained from you will be destroyed. Also, please note that there are no potential risks to you of any kind associated with participating in this study and there is no anticipated discomfort.

Every effort will be made to ensure confidentiality of the information that is obtained from you for the purpose of this study. Under no circumstances will your name be revealed to anyone. In addition, no one other than the researcher and her supervisors will see your answers. The answers will be stored in a secure location on the researcher's password-protected computer.

The results of this research will be available on defense of the researcher's thesis, in October 2012. If you wish to receive a copy of the results please contact Michelle Wehbe at michelle.wehbe@uleth.ca.

Finally, if you have any questions about this study, please feel free to call Michelle Wehbe at 403-393-2789, at the University of Lethbridge. If you have any other questions regarding your rights as a participant in this research, you may also contact the Office of Research Services at the University of Lethbridge at 403-329-2747 or research.services@uleth.ca.

I have read (or have been read) the above information regarding this research study on the effectiveness of tobacco counter advertisements, and I consent to participate in this study.

_____ (Printed Name)
_____ (Signature)
_____ (Date)

If you wish to receive a copy of the results please provide your e-mail address below.

_____ (E-mail Address)

Appendix C

## Marlboro Counter-Advertisement with a Societal Level Focus

Second hand smoke kills

Marlboro Counter-Advertisement with a Personal Level Focus
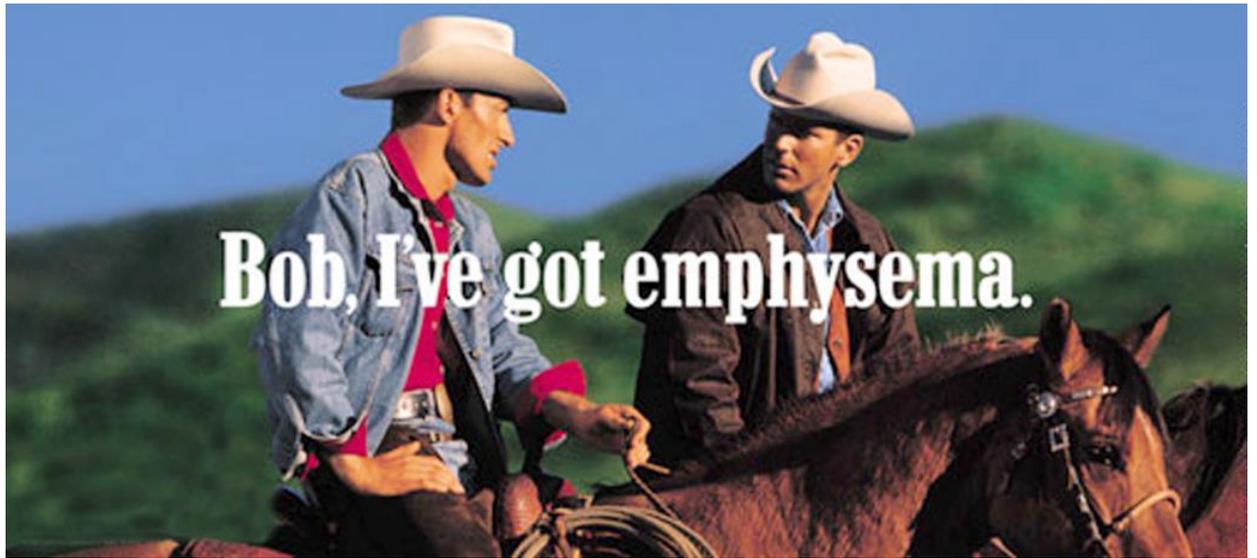
Camel Counter-Advertisement with a Societal Level Focus
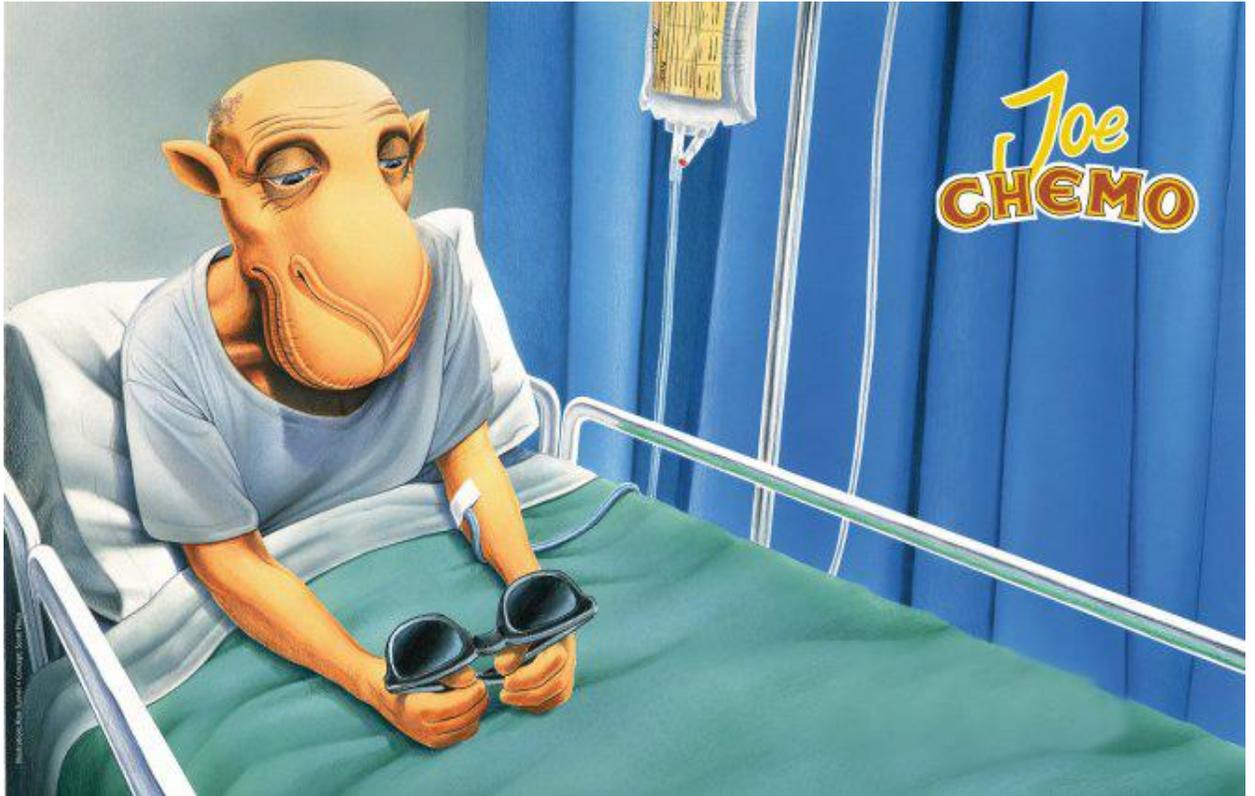
Camel Counter-Advertisement with a Personal Level Focus

Non-Branded Counter-Advertisement with a Societal Level Focus

Children of parents who smoke, get to heaven earlier.

Non-Branded Counter-Advertisement with a Personal Level Focus

Smoking Kills

Consent Form for Experiment

University of
Lethbridge

Thank you for taking the time to participate in this survey!

This survey is an integral part of my Master's thesis at the University of Lethbridge.
Its main aim is to gather information about smokers and non-smokers' reactions to tobacco counter advertisements. This will not take much of your time, as the questions are easy and quick to answer.

This research has been developed by:

Graduate Student: Michelle Wehbe

Co-supervisors: Dr. Debra Basil & Dr. Michael Basil

Reader: Dr. Richard Perlow

Please choose "Yes" below, if you wish to begin.

Dear participant:

You are being invited to take part in a research that is being done on the effectiveness of tobacco counter advertisements. In specific, you will be asked to fill out a questionnaire based on a counter advertisement shown to you. That is done, in order to find out more about smokers' insights and perspectives about tobacco counter advertisements.

Participation in this research is voluntary. Filling out the questionnaire will require 15 minutes at most. You will be rewarded for your participation, through Qualtrics.

Please note that you may withdraw from the research at any point. If you decide to withdraw after you have begun answering questions, then simply close your browser. In this case, any information obtained from you will be destroyed. Also, please note that the degree of psychological discomfort that you may experience from participating in this study is minor, and it does not exceed the degree that you may feel when viewing a warning label on a cigarette pack, in your day-to-day life.

Every effort will be made to ensure confidentiality of the information that is obtained from you for the purpose of this research. No one other than the researcher and her supervisors will see your answers. The answers will be stored in a secure location on the researcher's password-protected computer.

The results of this research will be available on defense of the researcher's thesis, in November 2012. If you wish to receive a copy of the results please contact Michelle Wehbe at michelle.wehbe@uleth.ca.

Finally, if you have any questions about this study, please feel free to call Michelle Wehbe at 403-393-2789, at the

University of Lethbridge. If you have any other questions regarding your rights as a participant in this research, you may also contact the Office of Research Services at the University of Lethbridge at 403-329-2747 or research.services@uleth.ca.

I have read (or have been read) the above information regarding this research on the effectiveness of tobacco counter advertisements, and I agree to participate in this survey:

- Yes
- No (End of Survey message if chosen)

Questionnaire for Smokers

1. **Are you a smoker?**
- Yes
- No (End of Survey message if chosen)

2. **Which brand do you smoke?**
- Camel
- Marlboro
- Other (End of Survey message if chosen)

3. **You will now be shown an advertisement which will be followed by a series of questions, when you are ready to start answering questions about the ad, please click continue below.**

4. **Ad**

5. **When I viewed the ad above, my first instinct was to:**
- Strongly want to avoid thinking about the dangers of smoking (1)
- …
- Strongly want to think about the dangers of smoking (7)

6. **When I viewed the ad above, my first instinct that I:**
- Strongly do not want to do something to protect myself from the dangers (1)
- …
- Strongly want to do something to protect myself from the dangers (7)

7. **Rate the degree to which you agree with the following statements (Strongly Disagree = 1 – Strongly Agree = 7).**
The message shown to me in the advertisement was:
- Manipulative
- Misleading
- Distorted
- Overblown
- Exaggerated
- Overstated

8. **Please indicate your level of agreement with the following statements (Strongly Disagree = 1 – Strongly Agree = 7):**

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- I believe that the dangers of smoking are severe
- I believe that the dangers of smoking are serious
- I believe that the dangers of smoking are significant
- I am at risk for ruining my health from smoking (removed from analysis)
- It is likely that I will have poor health from smoking
- I am able to quit smoking to avoid the danger
- Quitting is easy to do to avoid the dangers of smoking
- Quitting to avoid the danger from smoking is something I am able to do on my own
- Quitting works in preventing any of the dangers of smoking
- Quitting is effective in preventing any of the dangers of smoking
- If I quit I am less likely to be at risk of any of the dangers of smoking

9. Quitting smoking is:
- Extremely Undesirable (1)
- …
- Extremely Desirable (7)

10. I find quitting smoking to be:
- Extremely Bad (1)
- …
- Extremely Good (7)

11. As a smoker, I feel quitting smoking is:
- Extremely Unfavourable (1)
- …
- Extremely Favourable (7)

12. I intend to quit smoking
- Strongly Disagree (1) – Strongly Agree (7)

13. Quitting smoking is a goal
- Strongly Disagree (1) – Strongly Agree (7)

14. I would be very happy if I were able to quit smoking
- Strongly Disagree (1) – Strongly Agree (7)

15. You are a(n):
- Heavy smoker

- Occasional smoker
- Rare smoker

16. How many cigarettes do you smoke (fill in one option)
- _____ per day
- _____ per week
- _____ per month

17. The ad I viewed was for:
- Camel
- Marlboro
- No specific brand

18. The ad I viewed was:
- Criticizing the tobacco industry
- Showing how smoking will harm the smoker
- Showing how smoking will harm those around the smoker

19. Your gender:
- Male
- Female
- I prefer not to say

20. Your age range:
- 18 – 23
- 24 – 29
- 30 – 35
- 36 – 41
- 42 – 47
- 48 – 53
- 54 – 59
- 60 – 65
- 66 – 71
- 72 & more
- I prefer not to say

21. Your income level per year:
- Under $10,000
- $10,000 - $19,999

- $20,000 - $29,999
- $30,000 - $39,999
- $40,000 - $49,999
- $50,000 - $59,999
- $60,000 - $69,999
- $70,000 - $79,999
- $80,000 - $89,999
- $90,000 - $99,999
- $100,000 - $150,000
- More than $150,000
- I prefer not to say

22. Your education level:
- Less than high school
- High school/GED
- Some college
- 2-year college degree
- 4-year college degree
- Master's degree
- Doctoral degree
- Professional degree (MD, JD)
- I prefer not to say

Questionnaire for Non-Smokers

1. **Are you a smoker?**
- Yes (End of Survey message if chosen)
- No

2. **You will now be shown an advertisement which will be followed by a series of questions, when you are ready to start answering questions about the ad, please click continue below.**

3. **Ad**

4. **When I viewed the ad above, my first instinct was to:**
- Strongly want to avoid thinking about the dangers of smoking (1)
- …
- Strongly want to think about the dangers of smoking (7)

5. **When I viewed the ad above, my first instinct that I:**
- Strongly do not want to do something to protect myself from the dangers (1)
- …
- Strongly want to do something to protect myself from the dangers (7)

6. **Rate the degree to which you agree with the following statements (Strongly Disagree = 1 – Strongly Agree = 7).**
   The message shown to me in the advertisement was:
- Manipulative
- Misleading
- Distorted
- Overblown
- Exaggerated
- Overstated

7. **Please indicate your level of agreement with the following statements (Strongly Disagree = 1 – Strongly Agree = 7):**
- I believe that the dangers of smoking are severe
- I believe that the dangers of smoking are serious
- I believe that the dangers of smoking are significant
- Smoker are at risk for ruining my health from smoking (removed from analysis)

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- It is likely that smokers will have poor health from smoking
- Smokers are able to quit smoking to avoid the danger
- Quitting is easy to do to avoid the dangers of smoking
- Quitting to avoid the danger from smoking is something smokers are able to do on their own
- Quitting works in preventing any of the dangers of smoking
- Quitting is effective in preventing any of the dangers of smoking
- If smokers quit they are less likely to be at risk of any of the dangers of smoking

8. Taking up the act of smoking is:
- Extremely Undesirable (1)
- …
- Extremely Desirable (7)

9. I find the idea of being a smoker to be:
- Extremely Bad (1)
- …
- Extremely Good (7)

10. I find remaining as a non-smoker to be:
- Extremely Unfavourable (1)
- …
- Extremely Favourable (7)

11. I intend to never take up the act of smoking:
- Strongly Disagree (1) – Strongly Agree (7)

12. Remaining as a non-smoker is a goal:
- Strongly Disagree (1) – Strongly Agree (7)

13. I would be very happy if I remain a non-smoker:
- Strongly Disagree (1) – Strongly Agree (7)

14. Have you smoked previously?
- Yes
- No (End of Survey message if chosen)

15. You were a(n):
- Heavy smoker

- Occasional smoker
- Rare smoker

16. How many cigarettes did you smoke previously (fill in one option)?
- _____ per day
- _____ per week
- _____ per month

17. How long ago did you quit smoking (fill in one option)?
- _____ Number of Weeks
- _____ Number of Months
- _____ Number of Years

18. The ad I viewed was for:
- Camel
- Marlboro
- No specific brand

19. The ad I viewed was:
- Criticizing the tobacco industry
- Showing how smoking will harm the smoker
- Showing how smoking will harm those around the smoker

20. Your gender:
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- Female
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21. Your age range:
- 18 – 23
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- 48 – 53
- 54 – 59
- 60 – 65
- 66 – 71
- 72 & more

- I prefer not to say

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- $80,000 - $89,999
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- More than $150,000
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23. Your education level:
- Less than high school
24. High school/GED
25. Some college
26. 2-year college degree
27. 4-year college degree
28. Master's degree
29. Doctoral degree
30. Professional degree (MD, JD)
31. I prefer not to say