

*Affirmative Disclosure in Fast Food Advertisements: Its Effect on Attitudes Toward the Ad,  
Attitudes Toward the Brand, and Purchase Intention*

*Lynda M. Maddox, PhD*  
*Professor of Marketing and Advertising*  
*The George Washington University*  
*Washington, DC 20052*  
[maddox@gwu.edu](mailto:maddox@gwu.edu)  
*Phone: 1-301-526-4343*

*Lea PrevelKatsanis, PhD*  
*Professor of Marketing*  
*Concordia University*  
*Montreal, Quebec, Canada QC H3G 1M8*  
[leap@jmsb.concordia.ca](mailto:leap@jmsb.concordia.ca)  
*514 848-2424 ext 2770*

*Dennis A. Pitta, PhD*  
*Professor of Marketing*  
*University of Baltimore*  
*Baltimore, MD 21201*  
[dpitta@ubalt.edu](mailto:dpitta@ubalt.edu)  
*410-837-4891*

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**Key Words**

Advertising, disclosure, brand attitude, purchase intention, obesity.

**Abstract**

The obesity problem has now spread nearly worldwide, and more people are exposed to video commercials through multiple media. Marketers are being encouraged by regulators, consumers, and self-interest to help educate and warn consumers about the dangers of unhealthy eating. A number of studies have looked at the effects on consumers of these messages and have found mixed but usually negligible effects. Few have considered the structure of the message (one-sided versus two-sided) or the effects these types of messages might have on differently perceived advertisers/brands.

This study, which is part of a large-scale US survey, looks at the effect of one-sided and two-sided messages on fast food brands that are perceived as "healthy" or "not healthy" by consumers. 1533 random U.S. respondents evaluated 21 fast food restaurants, selecting Burger King as "least healthy" and Subway as "most healthy." Employing a 3 x 2

experiment, 6 videos were designed to investigate the effects of the messages on attitudes toward the advertiser and the brand, as well as purchase intention. A disclosure in which consumers were advised to eat healthier and exercise more was compared with one that also acknowledged the taste benefits of unhealthy ingredients along with the health advice. The control group got no disclosure. Data for this study were from a subset of 300 respondents.

One-sided versus two-sided affirmative disclosure was analyzed using a two-way analysis of variance (ANOVA) with sidedness disclosure (no disclosure vs. one-sided vs. two-sided) and fast food (Subway vs. Burger King). Results showed that search behavior actually increased for both healthy and unhealthy fast food when consumers were exposed to the two-sided message. Those who got no disclosure or a one-sided disclosure in the Subway video had more favorable attitudes toward the brand. On the contrary, respondents who saw the Burger King (unhealthy fast food) two-sided video had more favorable attitudes toward the ad and brand compared to the one-sided message. But, consumers exposed to the Subway (healthy fast food) two-sided ad disclosure did not respond favorably in terms of purchase intention.

Marketing and brand managers should take away several key points from this study as they navigate their own country's regulations and socio-political environment. First, the use of disclosures at all has nebulous effects. Second, when using disclosures, it is crucial to assess consumers' current perception of the brand. Consumers of brands like Subway that are perceived as healthy, have a more positive attitude toward the ad and brand when the message is one-sided; a two-sided disclosure can negatively affect purchase intention. On the other hand, fast food brands perceived as unhealthy, like Burger King, can benefit from two-sided disclosures in terms of attitudes towards the ad and brand. Third, recognize that disclosures may increase consumers' search behavior that can cause disruption in the buying process.

### **Introduction and Objectives**

The obesity problem has now spread nearly worldwide. Paradoxically, the rate of obesity in America has risen despite an increase in the popularity of healthy food choices. As an example, the National Health and Nutrition Examination Survey (NHANES) showed stark differences in obesity rates over time. From 1960-1962, NHANES found 31.5 % of Americans age 20 and over were overweight or obese. In the later 2007-08 NHANES study, 68.3 % of Americans age 20 and over were overweight or obese.

Today, an increasing number of consumers pay more attention to what they eat daily and try to follow what constitutes a healthy diet in general. Consumers show increasing interest in advertisements and nutritional labels on products. Television, versus the other media, is the preferred information choice. Further, according to the HSC Community Tracking Study Household Survey (2007), American adults with health concerns have increased from 38% in 2001 to 56% in 2007. This growth may be due to an increase in the rate of obesity in recent years, not only in America but also in other developed nations. Looking at the growing rate of people's health concerns, and given that obesity is still a national concern, this question arises: what is missing in our advertisements, or, what have we done wrong?

A number of studies have looked at the effects on consumers of these messages and have found mixed but usually negligible effects. Few have considered the structure of the message (one-sided versus two-sided) or the effects these types of messages might have on differently perceived advertisers/brands.

## **Research Question**

The current study has two primary research questions: (1) to discover whether two-sided ads significantly affect consumers' attitude toward the ad and brand; and (2) whether the information in the ad will ultimately affect their purchase intentions. The bulk of the existing literature has focused on either food labels or nutrient claims displayed on restaurant menus (Kozup, Creyer and Burton 2003; Levy, Fein and Schucker 1996; Russo et al. 1986). Furthermore, the effects of nutrient claims have chiefly focused only on the context of package design (Ford et al. 1996; Keller et al. 1997) and print advertising (Andrews, Netemeyer, and Burton 1998). Given the mixed results in the literature, this study examines the specific effects of disclosures in fast food advertising and healthy vs. unhealthy fast food. Further generalization of such effects onto broader markets may be possible given the potential findings of this study. The main questions that will be addressed are as follow: Is there a significant difference in attitudes and behavior when facing one-sided vs. two-sided messages in ads? What is the typical reaction of consumers when they receive health information about a healthy fast food? Is it far from their reaction to the unhealthy one? Do they make a connection between the information they got and the dietary habit they follow?

## **Conceptual Framework**

There is a significant body of research on the importance of health and nutrition disclosures in ads. Despite the research, the effectiveness of disclosing information on decision-making process of consumers (Garde 2008; Drichoutis et al. 2006; Pechman 1992; Viswanathan 1994, 1996; Seiders and Petty 2004) is not clear. Two factors are of importance in the process: 1) attitudes toward the ad and brand, and 2) the effect of two types of affirmative disclosures on attitudes toward the ad and brand. One important possible result of favorable attitudes toward the ad and brand, is consumer intention to purchase the product.

## **Literature Review**

The World Health Organization (WHO) estimated that in 2010, 44.2% of U.S. males and 48.3% of U.S. females aged 15 and above were obese. Efforts to reduce these levels has included providing consumer information including labels. However, the use of this information depends on consumers' age, gender, and education. For example, past studies have found that higher education is positively related to information persuasion (Drichoutis et al. 2005). It is important to address how this information affects the attitudes and behavior of consumers.

Consumer empowerment through regulation as well as the consumer's right to information are among the factors that enable consumers to make health-related decisions. There remains significant controversy over the effectiveness of nutrition information and labeling (Garde 2008; Drichoutis et al. 2006; Pechman 1992; Viswanathan 1994, 1996; Seiders and Petty 2004). Nevertheless, the provision of information is influential in consumer choice (Garde 2008; Seiders and Petty 2004).

Since the 1970s, significant problems related to nutrition, diet, and food intake have been of concern. The incidence of diseases, including heart attack and obesity in both adults and children have increased. Consumer activist groups assigned blame on the marketing practices of the food industry as a whole. Although they do not encourage poor eating per se, food manufacturers emphasized taste over nutrition. By and large, they did not address dietary or nutritional practices.

In reaction to several campaigns critical of food advertising, the Federal Trade Commission (FTC) imposed new regulations on advertising claims in 1971; advertisers were mandated to provide adequate data to support the claims made in their advertising. As a byproduct, the new program delivered more information to help consumers make consumption choices (Coney and Patti 1979). They defined a claim as, “a comparison or promise implied made by an advertiser” (p.227). As it was reported to FTC, only 30% of the findings suggested that advertised claims were strongly supported. According to both Coney and Patti (1979) and Oliver (1979), claims are categorized by either puffery or data claims. Puffery claims usually do not have a strong scientific basis, in contrast with data claims, for which some kind of scientific basis has been provided (Oliver 1979).

Providing information about nutritional content has been shown to affect attitudes and purchase intention (Burton and Creyer, 2004; Kozup, Creyer, and Burton, 2003); however, other studies show that providing nutrition information will result in no changes in intake calories and fat. When information is provided voluntarily, it may be perceived as part of a bigger plan of the company’s marketing strategy for persuading consumers to buy the product (Drichoutis, Lazaridis and Nayga 2006).

As suggested by Tyebjee (1979), these regulations aim to define both the specific wording used in claims and advertising in addition to determining whether there is a need for disclosure of nutrient composition or health-related claims. Currently, the FTC regulates the content of the information disclosure in advertisements. Several studies have evaluated attitudinal and behavioral effects of one sided and two-sided advertisements in which both positive and negative claims are provided. They are aimed at promoting healthier food choices to consumers and reminding them of their options. Kozup et al. (2012) state that this kind of mixture of negative and positive disclosure is helpful in providing alternative decision-making processes to consumers. As the name suggests, one-sided messages only present positive attributes of a product. In case of two-sided messages, in addition to the positive attributes, the advertisement presents positive and negative traits, such as unhealthy ingredients, which in large quantities make the food tastier (Desrochers and Maddox 2013).

Considering the food industry’s competitive environment, it may seem that presenting negative aspects of a product is detrimental to the image of a brand (Eisend 2006). There are mixed results upon the effects of two-sided advertisements on persuasion. Although some studies have presented positive effects (Crowley and Hoyer 1994; Etgar and Goodwin 1982; Kamins, Brand, Hoeke, and Moe 1989), others have obtained non-significant or mixed results (Golden and Alpert 1987; Kamins and Assael 1987). Presenting negative information is risky: while it increases the source's credibility, it may decrease product desirability; this may explain why studies have produced both nonsignificant and mixed results (Crowley and Hoyer 1994). One of the more consistent findings in recent studies has been that presenting at least a small amount of negative information about the product increases advertiser credibility (Bohner et al. 2003; Kamins and Assael 1987). Disclosure of some negative product attributes is less indicative of an advertiser’s motive for profit, making consumers more likely to trust the advertiser. Crowley and Hoyer (1994) reach a similar conclusion, also observing the importance of two-sided advertisement’s persuasive mechanism in consumer attitudes and behaviors.

There are three theoretical approaches to describe how two-sided messages affect consumer’s attitudes and behaviors: Attribution Theory, Optimal arousal Theory, and Inoculation Theory. Each helps explain the advertising disclosure process. Attribution theory suggests that

consumers may decide to relate the claim either to the advertiser selling the product, or to the actual features of the product (Eisend 2006). In this case, providing negative claims helps the consumer to conclude that advertiser is telling the truth and leads to increasing advertiser credibility. However, since the ad contains negative information about the brand, it may have negative effects on the consumer's attitude toward the brand. Two distinct outcomes may occur during the processing of two-sided messages that have an influence on attitude toward the brand. On one hand, consumers perceive high credibility from the source since the information is given voluntarily. On the other hand, when they compare the product with others on the market, they may favor the brand itself or the competitor brands in light of the negative information provided. Furthermore, the product may seem to be unique when a disclosure is unique. This theory has guided most of the existing studies on two-sided messages (Eisend, Hahn and Schuchert-Güler 2004; Eisend 2006).

Optimal arousal theory (Berlyn 1960) suggests that two-sided messages motivate consumers to pay more attention and to process the discrepancy of the message, which results in a favorable attitude toward the ad (Aad). This theory also implies that an optimal level of stimulus exists for maximum effectiveness. This theory is relatively new and has not been widely tested in the context of advertising influence, although it has been suggested as a possible explanation for contradictory results in previous findings (Crowley and Hoyer 1994). For two-sided messages to be effective the level of discrepancy must be low or moderate (Crowley and Hoyer 1994).

Inoculation theory, states that the combination of arguments with counterarguments is the basic mechanism of two-sided messages. Beginning with mild arguments and then countering or refuting such arguments will raise both the awareness and cognition of the subject; which results in an enhanced attitude towards the ad. Advertisers usually present positive and negative information together and try to diminish the negative information effect. Few studies (Karmins and Assael 1987b; Sawyer 1973) have reviewed the effect of refutational appeals of two-sided messages, which is based on Inoculation theory in an advertising context.

Eisend (2006) conducted a meta-analysis to investigate the effects of a series of variables on the effectiveness of two-sided messages. Multiple variables were affected by the two-sidedness of the advertising: 1) the amount of negative information, 2) source credibility (Pechman 1992); 3) the consumer's prior attitude toward the brand (Crowley and Hoyer 1994); and 4) the perceived novelty of the message. Eisend (2006) observed that the level of negativity in an ad affected the degree of message impact on consumers. Discussing a product shortage might increase an ad's credibility, given that it builds trust in the consumer's mind (Crowley and Hoyer 1994). However, emphasizing recurring product shortages does not lead to more credibility for the ad. There is a threshold (optimal level) of negative information presented in an advertisement; beyond this point negative information will reverse the positive effects on attitudes and the resulting behavior. If the prior attitude of the consumer is negative or neutral, ads have a greater effect on changing evaluations and attitudes; consequently they foster purchase intentions (Crowley and Hoyer 1994). In case of prior positive attitudes, the negative side of an ad may generate counterarguments in the minds of consumers. Negative information motivates consumers to process the ad, this may still lead to unfavorable attitude changes. Consumers may consider previously unperceived additional counterarguments.

Disclosure of information provides consumers with both useful information and confidence, which may assure them that they are not being deceived (Burton et al. 2000). Burton and his

colleagues also suggested that negative information makes consumers consider information that they might not have otherwise considered, which may lead to less favorable consumer attitudes toward both the ad and the brand. This will negatively affect ultimate purchase intentions. They concluded that Aad and PI were lowered in presence of negative information. In general Aad, Ab and PI are significant when there is affirmative disclosure.

Despite the existing work on two-sided messages, the findings concerning the effects on consumers' evaluations are mixed. There are multiple studies that support the effectiveness of two-sided communications (Crowley and Hoyer 1994; Eisend 2006; Etgar and Goodwin 1982; Kamins and Assael 1987; Pechmann 1992); other studies have reached mixed or nonsignificant results. Golden and Alpert (1987) reported that consumers perceive two-sided ads to be more honest and useful. As a result, such ads are trusted more when compared to those that only use positive attributes to describe products. Kamins and Assael (1987) found that counterarguments are less effective when consumers have been previously exposed to two-sided messages. Although consumers appreciate the honesty and disclosure of ads, they do not evaluate the advertised product more positively after seeing two-sided versus one-sided messages (Golden and Alpert 1987). Additional studies indicate that two-sided messages decrease product evaluation. This may be explained by the negative effect of two-sided advertising on ad credibility. The mention of product shortcomings may offset the positive effects of two-sided ads on product evaluations. This may be the reason for the lower level of source credibility when consumers are exposed exclusively to negative content (Eisend 2006). The study of claims specifically related to fat and fibers determined that consumers have an overreliance on nutrient fact panels. On the other hand, additional studies suggest that labeling will have varying effects depending on both the relevant consumer and product, however the effect is not homogeneous (e.g., Burton, Howlett, and Tangari 2009; Howlett et al. 2009).

Although Etgar and Goodwin (1982) found that two-sided messages increase purchase intentions, more recent studies indicate that two-sided ads are not always more persuasive than one-sided ads (Crowley and Hoyer 1994, Eisend 2006). Although presenting product shortcomings and negative claims may increase source credibility, such candor can also negatively affect final decision-making (Crowley and Hoyer 1994). Also the importance of the negative message may have a contrary effect on attitudes and purchase intentions. If the negative message is not important for the consumer, it may not necessarily be more effective than a one-sided message (Eisend 2006).

### **Research Model**

The research was undertaken to evaluate the effects of different types of messages in fast food ads on three dependent variables (Aad, Ab and PI). A questionnaire was developed to assess the three dependent measures.

**Attitude Toward the Ad Scale.** First, there is measure of attitude toward the ad that assesses the extent of favorable or unfavorable manner to a particular advertising. Initially the scale was comprised of twenty-four items that ask about the level of agreement or disagreement of participant with the statements about the previously watched ad. The scale demonstrated excellent reliability ( $\alpha = .96$ ,  $M = 80.50$ ,  $SD = 19.57$ ).

**Attitude Toward the Brand Scale.** This seventeen-item scale assesses the internal evaluations of the brand in participants; items are adopted from the Mitchell and Olson study (1981). Participants are asked to rate their level of agreement with the statements on five-

point Likert scale to show how they feel about the brand and how they think the brand is performing in regard to the level of healthiness and other brands. The scale showed excellent reliability ( $\alpha = 0.96$ ,  $M = 57.76$ ,  $SD = 13.37$ ).

**Purchase Intention Scale.** This scale is made up of 14 items that assessed action tendencies relating to the brand (Bagozzi et al. 1979). Questions are based on further action that consumers might choose, like wanting to buy more of the brand, exercising, dieting or sharing information with others. The scale demonstrated good reliability ( $\alpha = 0.89$ ,  $M = 43.72$ ,  $SD = 10.08$ ).

### **Hypotheses**

Previous studies indicate that two-sided messages lead to more credibility perceptions and less counterargument (Bohner et al. 2003; Kamins and Assael 1987). Presenting negative attributes of product is against an advertiser's self-interest. Thus, consumers may deem the advertiser to be more trustworthy than if the ad only presents positive attributes. Pechmann (1992) emphasizes two-sided ads are more effective than one-sided ads when they are presenting attributes that are negatively correlated.

However, the literature notes that presenting negative attributes is risky. Providing negative information helps consumers in trusting the source, but it jeopardizes the process of evaluating the product in the consumer's mind (Pechman 1992). Also it has been stated that although the negative information motivates consumers to process the ad, this may still lead to unfavorable attitude changes due to counterarguments (Crowley and Hoyer 1994). Eisend also stated that two-sided ads decrease product evaluation and it is likely that decrease in product evaluation will lead to unfavorable changes in purchase intentions.

Therefore:

***H1a.** Ads with one-sided messages lead to more favorable attitudes toward the ad than those with two-sided messages.*

***H1b.** Ads with one-sided messages lead to more favorable attitudes toward the brand than those with two-sided messages.*

***H1c.** Ads with one-sided messages lead to more favorable purchase intentions than those with two-sided messages.*

The interactions between fast food perception and the effect of affirmative disclosures were also considered. As previously stated, if a consumer has a prior negative attitude toward the brand, the ad will have greater effect (Crowley and Hoyer 1994). Also consumers expect unhealthy fast foods to have negative attributes and easily accept those attributes. In contrast, it is hard for them to accept the shortcomings of healthy fast food (Burton et al. 2009).

Therefore, the following hypotheses are proposed:

***H2a.** Healthier fast food choice has a positive effect on attitude toward the ad when a one-sided message is disclosed.*

***H2b.** Healthier fast food choice has a positive effect on attitude toward the brand when a one-sided message is disclosed.*

***H2c.** Healthier fast food choice has a positive effect on purchase intention when a one-sided message is disclosed.*

### **Method**

A pool of 1533 respondents answered the survey published in iResearch in Washington D.C., and evaluated each fast food on three item scale that shows perceived healthiness from fast food. Using the average score obtained from these items, the least healthy restaurant is Burger King, and the healthiest is Subway. Data were collected from a different set of 300 respondents that were taken from same online survey and randomly selected and US Census stratified. 152 participants were male (50.6%) and 148 were females (49.3%).

The experimental design is a 3 (Disclosure: No disclosure vs. one-sided disclosure vs. two-sided disclosure) × 2 (Fast food: Subway vs. Burger King).

**Procedure**

Participants were randomly assigned to one of four research conditions. They were asked to answer a questionnaire after watching one of the six advertisements. After watching ads (ads duration was 40 seconds), the ad was removed from the screen. The questionnaire first asked about their attitudes toward the watched ad and the advertised brand; then asked about their intended behavior to purchase the product. There were then items asking about their eating habits and their willingness to follow a healthy lifestyle. Each item on the questionnaire was measured on a 5-point Likert scale from strongly disagree to strongly agree, with 3 as neutral. Regarding the demographic questions, respondents were asked to answer regular questions related to age, gender, education, income, height and weight.

The normality assumption was tested and the scales were analyzed for skewness and kurtosis. Each variable met the normality assumption; therefore, they were used in subsequent analyses without transformation.

In order to verify for univariate outliers, standardized z-scores were created from the raw scores. Following Tabachnick and Fidell (2007), outliers were defined as any z-score above or below 3.29 standard deviations from the mean. Results of this analysis identified no outliers in our measures. In addition, the z-score indicates that there were no outliers in our measures.

**Results**

**Preliminary Analysis**

**Data Reduction**

A factor analysis of all the three scales was undertaken in order to reduce the number of items being used for further analysis. A principal component analysis with oblimin rotation was conducted on the all the scales separately.

**Aad**

Results showed that for Aad, 8 items had cross loadings on three factors and after omitting those items only the first factor was needed to explain the variation of this variable (eigenvalue = 11.39, 71.19% of variance explained). Therefore, for the following analyses the Aad variable was tested using only the results from the factor analysis.

*Table 1: Factor analysis of Aad scale*

	Factor 1*
<b>Total eigenvalue</b>	11.390

<b>% Of variance</b>	71.19
<b>Cumulative % of variance</b>	71.19
<b>KMO = 0.966</b>	

\* *Factor 1 = Attitude toward the ad*

### **Ab**

For Ab there were no items with cross loadings and most of the variance was explained by first two factors (eigenvalue for Factor One = 11.350, eigenvalue for factor Two = 1.271, 74.239% of total variance explained).

**Table 2: Factor analysis of Ab scale**

	<b>Factor 1*</b>	<b>Factor 2**</b>
<b>Total eigenvalue</b>	11.350	1.271
<b>% Of variance</b>	66.762	7.477
<b>Cumulative % of variance</b>	66.762	74.239
<b>KMO = 0.957</b>		

\* *Factor 1 = Brand trust*

\*\* *Factor 2 = Relationship to brand*

### **PI**

Regarding Purchase Intention (PI), results showed that after omitting 3 items, the remaining items loaded on three factors with no cross loading (eigenvalues = 5.571, 1.976, 1.121. 78.316% of total variance explained).

**Table 3: Factor analysis of PI scale**

	<b>Factor 1*</b>	<b>Factor 2**</b>	<b>Factor 3***</b>
<b>Total eigenvalue</b>	5.571	1.976	1.121
<b>% Of variance</b>	50.155	17.968	10.194
<b>Cumulative % of variance</b>	50.155	68.122	78.316
<b>KMO = 0.885</b>			

\* *Factor 1 = Purchase decision*

\*\* *Factor 2 = Healthiness of decision*

\*\*\* *Factor 3 = Search behavior*

## **Findings and Discussion**

The present study investigated the effects of affirmative disclosure in advertisements on consumer attitudes and behaviors comparing a healthy and an unhealthy fast food. In addition, consumer eating habits are considered for their potential effects on the attitudes and behaviors towards the fast foods and advertisements. The following is a discussion of the study results.

*Ab- Factor 1 (Brand Trust)*

The means and standard deviations for the variables used in the post-analysis (Ab-Factor1) are shown in following table. 112 participants out of 300 were neutral so they were taken out of the follow up analysis.

**Table 4: Descriptive Statistics for Participants and Measures**

	<b>Total Sample</b> ( <i>N for Ab factor1</i> = 188) ( <i>N for Ab factor2</i> = 166)		<b>Subway</b> ( <i>N for Ab factor1</i> = 106) ( <i>N for Ab factor2</i> = 79)		<b>Burger King</b> ( <i>N for Ab factor1</i> = 82) ( <i>N for Ab factor2</i> = 87)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
<b>Ab Factor 1 on Aad</b>	3.604	0.908	3.681	0.828	3.504	1.136
<b>Ab Factor 2 on Aad</b>	3.405	1.141	3.576	1.046	3.250	1.206
<b>Ab Factor 1 on PI</b>						
Purchase Decision	3.0930	0.984	4.100	0.735	3.712	1.205
Healthiness of Decision	3.312	0.983	3.320	0.930	3.300	1.053
Search Behavior	2.629	1.069	2.575	0.964	2.699	1.195
<b>Ab Factor 2 on PI</b>						
Purchase Decision	3.603	1.217	3.858	1.068	3.372	1.301
Healthiness of Decision	3.202	1.120	3.261	1.097	3.149	1.144
Decision						
Search Behavior	2.530	1.136	2.510	1.063	2.547	1.205

The analysis confirmed the results of main analysis and showed that there was no significant difference between one-sided or two-sided message on Aad. Among three factors of PI, the effect of sidedness of message on second factor (Healthiness of Decision) was significant ( $p = .012$ ). The difference between high and low Ab-Factor1 (Brand Trust) was significant (all  $p$ -values  $>.000$ ).

**Table 5: Effect of Ab-Factor1 (F-values)**

	<b>Main Model</b>	<b>P-value</b>	<b>Fast food</b>	<b>P-value</b>	<b>Sidedness</b>	<b>P-value</b>	<b>Ab-Factor1</b>	<b>P-value</b>
<b>Effects on Aad</b>	12.585	0.000**	0.615	0.434	2.273	0.106	49.235	0.000**
<b>Effect on PI</b>								
Purchase Decision	15.048	0.000**	0.143	0.706	1.394	0.251	61.062	0.000**
Healthiness of Decision	2.746	0.004**	6.394	0.012**	0.416	0.660	16.704	0.000**

Search Behavior	3.593	0.000**	1.548	0.215	1.187	0.308	13.551	0.000**
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When comparing one-sided with two-sided message the change in attitudes was not noteworthy. Although Eisend (2006) emphasized that the proper amount of disclosure in the right place may lead to a favorable Aad and Ab, the present study did not show significant differences between one-sided and two-sided message. With regard to the effect of fast food choice, in the condition of the unhealthier fast food, consumers showed more favorable Aad, Ab and search behavior in response to the two-sided message compared to one-sided. In the case of the relationship to the brand, a two-sided message showed a stronger effect on respondents to the unhealthy fast food ad than the one-sided message. For the healthy fast food, a one-sided message has a stronger effect on Ab than a two-sided message. The results also confirmed that although a two-sided message has a negative effect on purchase decisions and the healthiness of decision (first two factors of PI), it has a favorable effect on search behavior. This may be due to the fact that negative information causes consumers to seek out more information to see whether the presented claims are trustworthy. These findings parallel the results of Eisend (2006), who concluded that although presenting negative product claims increases source credibility, such honesty also negatively affects consumers' final perceptions and decision-making. The importance of negative messages may have a contrary effect on attitudes and PI (Eisend 2006). If a message is not important for a consumer, the two-sided message may not necessarily be more effective than a one-sided message. According to consumers' pre-perception of Subway as a healthy fast food, it may be posited that health disclosures are not as important for these consumers as for the consumers of unhealthier fast food (Burger King). Eisend (2006) also stated that placing positive attributes of a product in the beginning of the ad leads to a bias in consumer's perception from further negative information. This explanation may apply to this study, since the negative claims were placed at the end of the ads and consumers may have prejudged the product due to previous information they were exposed to.

Those participants that viewed Burger King ads showed less favorable attitudes toward the ad, brand, and purchase intentions. However, results show that disclosure in general is more effective for the healthier fast food (Subway) since there was a greater difference between the conditions of disclosure versus non-disclosure for Subway respondents.

### **Conclusions**

The findings of this study support previous research on the effects of affirmative disclosure, specifically two-sided messages; but they also show that these results are different for healthy and unhealthy fast food. These findings provide a more comprehensive understanding of the consumers' approaches toward two-sided messages. Disclosing the right information in the right place may have favorable expected results for both consumers and marketers.

### **Limitations**

When considering the results of this study, there are a number of limitations that are noteworthy. As mentioned previously, negative information that is placed at the end of the ad leads to biased results (Eisend 2006); however, there may be more effective methods such as amount of negative messaging presented in an ad. Being familiar with a brand may lead to not paying attention to the rest of the ad and consequently not reading the two or one-sided message embedded at the end (Eisend 2006). Also Rotfeld (2008) stated that some changes on attitudes are hard to explore since some consumers intentionally choose to ignore the provided information. This can be studied in future research.

To understand the effects of two-sided advertisements, it is important to consider the factors that measure the impact of an ad's negativity. The impact of a product's shortcoming depends on the buyers' reason for buying that product (Florack, Ineichen, and Bieri 2008). If they are buying it for taste, they may not view a high amount of sugar as a shortcoming. This phenomenon can be investigated in future studies as another potential variable in disclosure research.

### **Future Research**

There are other studies that show the effect of age, income and working status on nutritional labeling and information provisions; specifically some studies have suggested that education and gender (being female) have positive effects on using or seeking out information. This may be the case for negative information, and an area for future study. In addition, consumers who naturally have healthy or unhealthy eating habits may differ in terms of their reaction to two sided disclosure and/or healthy or unhealthy products advertised. People who have free time may spend more time thinking and even researching the information in the ads, and this may lead to more favorable results in attitudes and future purchase decision. For instance, previous research suggested that females are generally more likely to intend to use nutritional labels and information. This is because females find this information important and useful for their health (Hieke and Taylor 2012). There are also differences in their actions and their approaches to size change. Girls appear to be more health conscious and therefore, follow healthier habits. This behavior needs further study from several dimensions: whether females are more affected by affirmative disclosures, or whether the impact of negativity is more intense for females.

Finally, the disclosure presented in ads provides consumers with a website for further information. Future research can be undertaken to investigate consumers' intentions in searching for more information to see whether the messages encourage them to look for more information on healthy habits.

### **Managerial Implications**

Mandatory changes in menus and advertisements have been in effect in several major North American locations (2011 in California and New York). Consequently, the findings of this study may help improve the decision-making process of brand managers and advertisers within the fast food industry as they adapt to new rules and developments.

There is always the threat of government-mandated warnings in advertising, and this is reality in countries like France. Strategically timed voluntary disclosures may avoid pending legislation. Marketers are also assuming a socially responsible role and including health information in advertising; however, firms often have little understanding of the effect this information will have on consumers' attitudes toward the advertising and the brand.

Providing information about positive perceptions of the food along with warnings about health may have a very different effect on consumers and on the brand than simply warning them about health issues.

Marketing and brand managers should take away several key points from this study as they navigate their own country's regulations and socio-political environment. First, the use of disclosures at all has nebulous effects. Second, when using disclosures, it is crucial to assess consumers' current perception of the brand. Consumers of brands like Subway that are

perceived as healthy, have a more positive attitude toward the ad and brand when the message is one-sided; a two-sided disclosure can negatively affect purchase intention. On the other hand, fast food brands perceived as unhealthy, like Burger King, can benefit from two-sided disclosures in terms of attitudes towards the ad and brand. Third, recognize that disclosures may increase consumers' search behavior that can cause disruption in the buying process.

There have been contradictory results on the use of two-sided messages in advertisements. For marketers, based on consumer perception of the fast foods in this study, providing a two-sided message may have different effects for different brands and this should be taken into consideration when designing ad campaigns. As a result, marketers and brand managers are advised to test the structure of their advertising claims carefully, using members of their target audiences. Mixed advertising claims, containing both positive and negative disclosures may be structured to maximize the effect of positive claims and minimize the effect of negative disclosures. As mentioned above, specific consumer groups will respond differently to positive and negative information. As a result, testing is vital to maximize the positive impact of the ad on the brand. The results show the differential effectiveness of a one or two sided message on attitude toward the brand. Such information will allow the brand manager to choose the more advantageous message structure for the brand.

## **Bibliography**

Andrews, J. C., Netemeyer, R. G., & Durvasula, S. (1991). Effects of consumption frequency on believability and attitudes toward alcohol warning labels. *Journal of Consumer Affairs*, 25(2), 323-338.

Bagozzi, R. P., Tybout, A. M., Craig, C. S., & Sternthal, B. (1979). The construct validity of the tripartite classification of attitudes. *Journal of Marketing Research*, 88-95.

Berlyne, D. E. (1960). Conflict, arousal, and curiosity.

Bohner, G., Einwiller, S., Erb, H., & Siebler, F. (2003). When small means comfortable: Relations between product attributes in two-sided advertising. *Journal of Consumer Psychology*, 13(4), 454-463.

Burton, S., Creyer, E. H., Kees, J., & Huggins, K. (2006). Attacking the obesity epidemic: The potential health benefits of providing nutrition information in restaurants. *Journal of Information*, 96(9).

Burton, S., Howlett, E., & Tangari, A. H. (2009). Food for thought: How will the nutrition labeling of quick service restaurant menu items influence consumers' product evaluations, purchase intentions, and choices? *Journal of Retailing*, 85(3), 258-273.

Coney, K. A., & Patti, C. H. (1979). Advertisers' responses to requests for substantiation of product claims: Differences by product category, type of claim and advertising medium. *Journal of Consumer Affairs*, 13(2), 224-235.

Crowley, A. E., & Hoyer, W. D. (1994). An integrative framework for understanding two-sided persuasion. *Journal of Consumer Research*, 561-574.

Desrochers, D. M., & Maddox, L. M. (2013). Effects of health guidelines on fast food restaurant advertising.

Drichoutis, A. C., Lazaridis, P., & Nayga, R. M. (2005). Nutrition knowledge and consumer use of nutritional food labels. *European Review of Agricultural Economics*, 32(1), 93-118.

Drichoutis, A., Lazaridis, P., & Nayga Jr, R. M. (2006). Consumers' use of nutritional labels: A review of research studies and issues. *Academy of Marketing Science Review*, 10(9).

Eisend, M. (2006). Two-sided advertising: A meta-analysis. *International Journal of Research in Marketing*, 23(2), 187-198.

Eisend, M., Hahn, K., & Schuchert-Güler, P. (2004). Effects of consumer's prior awareness and marketer's voluntariness of negative disclosures in two-sided messages. *34rd Conference of the European Marketing Academy, Milan*.

Etgar, M., & Goodwin, S. A. (1982). One-sided versus two-sided comparative message appeals for new brand introductions. *The Journal of Consumer Research*, 8(4), 460-465.

Florack, A., Ineichen, S., & Bieri, R. (2008). The Impact of Regulatory Focus on the Effect of Two-sided Advertising. *Advances In Consumer Research*, 35:947-949.

Ford, G. T., Hastak, M., Mitra, A., & Ringold, D. J. (1996). Can consumers interpret nutrition information in the presence of a health claim? A laboratory investigation. *Journal of Public Policy & Marketing*, 16-27.

Garde, A. (2008). Food advertising and obesity prevention: What role for the European Union? *Journal of Consumer Policy*, 31(1), 25-44.

Golden, L. L., & Alpert, M. I. (1987). Comparative analysis of the relative effectiveness of one-and two-sided communication for contrasting products. *Journal of Advertising*, 16(1), 18-68.

Heike, S., & Taylor, C. R. (2012). A Critical Review of the Literature on Nutritional Labeling. *Journal of Consumer Affairs*, 46(1), 120-156.

Kamins, M. A., & Assael, H. (1987). Two-sided versus one-sided appeals: A cognitive perspective on argumentation, source derogation, and the effect of disconfirming trial on belief change. *Journal of Marketing Research*, 29-39.

Kamins, M. A., Brand, M. J., Hoeke, S. A., & Moe, J. C. (1989). Two-sided versus one-sided celebrity endorsements: The impact on advertising effectiveness and credibility. *Journal of Advertising*, 18(2), 4-10.

Keller, S. B., Landry, M., Olson, J., Velliquette, A. M., Burton, S., & Andrews, J. C. (1997). The effects of nutrition package claims, nutrition facts panels, and motivation to process nutrition information on consumer product evaluations. *Journal of Public Policy & Marketing*, 256-269.

Kozup, J., Taylor, C. R., Capella, M. L., & Kees, J. (2012). Sound disclosures: Assessing when a disclosure is worthwhile. *Journal of Public Policy & Marketing*, 31(2), 313-322.

Kozup, J. C., Creyer, E. H., & Burton, S. (2003). Making healthful food choices: The influence of health claims and nutrition information on consumers' evaluations of packaged food products and restaurant menu items. *Journal of Marketing*, 19-34.

Levy, A. S., Fein, S. B., & Schucker, R. E. (1996). Performance characteristics of seven nutrition label formats. *Journal of Public Policy & Marketing*, 1-15.

Mitchell, A., and Olson, J. (1981). Are product attribute beliefs the only mediator of advertising effects on brand attitude? *Journal of Marketing Research*, 18 (August), 318-332.

Oliver, R. L. (1979). An interpretation of the attitudinal and behavioral effects of puffery. *Journal of Consumer Affairs*, 13(1), 8-27.

Pechmann, C. (1992). Predicting when two-sided ads will be more effective than one-sided ads: The role of correlational and correspondent inferences. *Journal of Marketing Research*, 441-453.

Rotfeld, H. J. (2008). Can You Really Say That? *Journal of Consumer Affairs*. 484-487.

Russo, J. E., Staelin, R., Nolan, C. A., Russell, G. J., & Metcalf, B. L. (1986). Nutrition information in the supermarket. *Journal of Consumer Research*, 48-70.

Seiders, K., & Petty, R. D. (2004). Obesity and the role of food marketing: A policy analysis of issues and remedies. *Journal of Public Policy & Marketing*, 153-169.

Stewart, D. W., & Martin, I. M. (2004). Advertising disclosures: Clear and conspicuous or understood and used? *Journal of Public Policy & Marketing*, 183-192.

Tyebjee, T. T. (1979). Affirmative disclosure of nutrition information and consumers' food preferences: A review. *Journal of Consumer Affairs*, 13(2), 206-223.

Viswanathan, M. (1994). The influence of summary information on the usage of nutrition information. *Journal of Public Policy & Marketing*, 48-60.

Viswanathan, M. (1996). A comparison of the usage of numerical versus verbal nutrition information by consumers. *Advances in Consumer Research*, Vol 23, 23, 277-281.