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# Personality and Advertising Appeals: A New Look on the Utility of Need for Cognition

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Personality and Advertising Appeals: A New Look on the Utility of Need for Cognition

by

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A Thesis

Submitted to the Graduate Faculty

of

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Thesis Committee:

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## Abstract

According to Chandy et al. (2001), more recent research suggests that both emotions and arguments can be effective, but their effectiveness varies by context. Unfortunately, there wasn't any solid finding when the context of persuasion is dependent on personal variance. While there is a rich literature on how various executional cues of ads affect consumers' responses at different levels of motivation and ability, rarely have these works examined the real-world, behavioral impact of ads (Chandy et al., 2001). Hence, this thesis attempted to bridge this gap. Specifically, drawing from the ELM and Need for Cognition (NFC) theories, this study investigated the relationships between consumer Need for Cognition and preferences for advertising appeals, and how such preferences affected their attitude and behavior toward a product, i.e. purchase intention. Analyzing and looking for statistical differences between subjects' NFC level and self-reported preference on the given brands and their advertisements, inferences on statistical relationship between these variables were drawn. Based on the mentioned theoretical framework, it was postulated that: H1a) individuals with high NFC would have favorable attitudes toward an ad after exposure to an argument-based advertisement; H1b) individuals with low NFC would have favorable attitudes toward an ad after exposure to an emotion-based advertisement; H2a) individuals with high NFC would have greater purchase intention after exposure to an argument-based advertisement than individuals with low NFC; and H2b) individuals with low NFC would have greater purchase intention after exposure to an emotion-based advertisement than individuals with high NFC. Results showed no statistical correlation between individuals with high NFC and preference of argument-based advertisements; H1b was partially supported with a statistical correlation found between individuals with low NFC and preference of emotion-based advertisement. Findings showed there was no statistical correlation between individual's NFC level and purchase intention.

## Acknowledgments

To my parents, siblings, friends, and mentors, who have put my life  
into meaningful perspectives.

I'd imagine the whole world was one big machine. Machines never come with any extra parts, you know. They always come with the exact amount they need. So I figured, if the entire world was one big machine, I couldn't be an extra part. I had to be here for some reason. And that means you have to be here for some reason, too.

~ Hugo Cabret

*Hugo*, 2011

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## Chapter I

### CONCEPTUAL DEVELOPMENT AND LITERATURE REVIEW

#### Introduction

It's been just well over a century since advertising emerged as a discipline of study in the higher education context. In 1905, Walter Dill Scott published the earliest handbook for advertising scholars and practitioners, *The Psychology of Advertising in Theory and Practice: A Simple Exposition of the Principles of Psychology in Their Relation to Successful Advertising*. It is apparent that psychology has played a vital role in the development of the advertising field of study since its inception. However, the utility of personality variables for understanding effectiveness of advertisements and consumer behaviors has rather been considered disappointing (Haugtvedt, Petty, Cacioppo, & Steidly, 1988). Central criticisms argue that such studies are equivocal (Kassarjian & Sheffet, 1981) and that personality studies carried out by consumer behavior researchers "tended to employ shot-gun like approaches" in which predictions were based on few or no specific hypotheses or theoretical frameworks (Haugtvedt et al., 1988).

Nonetheless, personality variables can be an effective aid to understanding how individual differences can systematically influence the formation of attitudes toward specific advertising appeal modes. Cacioppo and Petty (1982) proposed that just as there

are situational differences which can enhance or decrease the consumer motivation to engage in issue-relevant thinking when forming attitudes, so too could individual differences in “chronic tendencies” be factored into their motivation to engage in issue-relevant thinking when exposed to persuasive (i.e., advertising) appeals. Cacioppo and Petty (1982) posited that a personality variable is a dispositional variable that can be used to provide a stronger test of hypothesis to assess the impact of issue-relevant thinking on attitude change and attitude-behavior correspondence research, such as this study.

### The Elaboration Likelihood Model

Petty and Cacioppo (1981, 1986) defined a framework for organizing, categorizing, and understanding the effectiveness of persuasive communication. According to this framework – the Elaboration Likelihood Model of Persuasion (ELM) – persuasiveness is shaped by an argument’s position on a continuum formed by in two distinctive routes: the central route and peripheral route.

The ELM is based upon the premise that attitudes are important because attitudes drive decisions and human behaviors. The ELM accounts for the differences in persuasive impact produced by arguments that contain ample information and cogent reasons as compared to messages that rely on simplistic associations of negative and positive attributes to some object, action or situation. A key variable in this process is involvement. When an individual is motivated and able to think about the content of the message, elaboration is high. When elaboration is high, the central persuasive route is likely to occur; conversely, the peripheral route is the likely result of low elaboration. In low elaboration, the individual decides to follow a principle or a decision-rule that is

derived from the persuasion situation. The following shows the differences between the two processing routes:

Central-route processes require the audience to think more. To determine the merit of an argument, central-route processes scrutinize persuasive communications such as political speeches, advertisements, or other media messages. A person's cognitive response to the message determines its persuasive outcome. If the individual evaluates a message as reliable, well constructed and convincing, it may be received favorably even if it contrasts with the individual's original position on the message. If favorable thoughts result from the elaboration process, the message will probably be accepted; an attitude that matches the message's position will emerge. If unfavorable thoughts are generated while considering the merits of presented arguments, the message will probably be rejected.

Peripheral-route processes do not involve elaboration of the message through cognitive processing of an argument's merits. They rely on a message's environmental characteristics: the perceived credibility of the source, message presentation quality, the source's attractiveness or a catchy slogan, and is frequently used when the argument is weak or lacks evidence. The peripheral route is a mental shortcut that accepts or rejects a message based on external cues, rather than thought. It is used when the audience is unable to process the message due to the message's complexity or the audience's immaturity. The most common influences are rewards such as food, sex or money, which create rapid changes in mind and action. Celebrity status, likability, humor, and expertise are other factors governing the peripheral process. Appearance can gain an individual's attention; while it can create interest in a topic, it will not effect strong change.

## Need for Cognition

The Need for Cognition (NFC) branches out from cognitive psychology theories and is an important feature of the Elaborative Likelihood Model as a personality variable that reflects the extent to which individuals are inclined toward effortful cognitive activities (Cacioppo and Petty, 1982). Cohen, Stotland, and Wolfe (1955) identified individuals' need to organize their experience meaningfully, and to structure relevant situations in integrated ways. People with higher NFC tend to see ambiguity and strive for higher standards of cognitive clarity. High-NFC individuals are also more likely to pay close attention to relevant arguments via central-route processes to persuasion as they form attitudes about an experience. In opposite, low-NFC individuals are more likely to rely on generic stereotypes to form judgment through peripheral cues, such as the attractiveness and credibility of the speaker or message.

Taking the lead from early research conduct by Cohen, Stotland, and Wolfe (1955), Haugtvedt and his colleagues conducted a study to demonstrate the effect of the quality of arguments in an ad on the attitudes formed by individuals with low versus high NFC. Their results suggested that consumers with high NFC are relatively unaffected by irrelevant aspects of the context in which an ad is placed or by low elaboration cues, such as celebrity endorsements. These individuals with high NFC look to process product-relevant information. As for low-NFC consumers, the observations yielded opposite findings from high-NFC consumers. Factors like celebrity endorsements or endorsement by attractive people were considered important features of an ad (Haugtvedt et al., 1988). Further, a recent research showed that consumers with high NFC prefer advertising that

features open-ended comparative advertising that allows them to decide which brand or product is the best (Martin, Sherrard, and Wentzel, 2005).

### Advertising Appeals

At the turn of the century, advertisers began to show interest in the kind of advertising appeals that serve as the best cue for affecting consumer behavior. Laboratory studies revealed that emotional cues (Holbrook & Batra, 1987; Singh & Cole, 1993) and types of argument (Etgar & Goodwin, 1982) are elements of advertising that affect consumers' attitude toward the advertisement and the product being advertised.

Chandy, Tellis, Macinnis, and Thaivanich (2001) in their research of advertising appeals in emerging markets identified two appeal modes that have effects on consumer behavior: argument- and emotion-based persuasions. However, scholars have found conflicting results on effectiveness of the use of arguments versus emotions in persuasion. According to Chandy et al., more recent research suggests that both emotions and arguments can be effective, but their effectiveness varies by context. Unfortunately, there wasn't any solid finding when the context of persuasion is dependent on personal variance. While there is a rich literature on how various executional cues of ads affect consumers' responses at different levels of motivation and ability, rarely have these works examine the real-world, behavioral impact of ads (Chandy et al., 2001). Hence, this thesis attempted to bridge this gap. Specifically, drawing from the ELM and NFC theories, this study sought to investigate the relationships between consumer NFC and preferences for advertising appeals, and how such preferences affected their attitude and behavior toward a product, i.e. purchase intention.

## Chapter II

### RESEARCH DESIGN AND METHOD

Since personality variables might be an effective aid to understanding how individual differences can systematically influence the formation of attitudes toward specific advertising appeal modes, this study sought to examine the relationship between consumers' personality variable and their preference of advertising appeals, as well as their purchase intention after being exposed to both argument- and emotion-based advertisements of a product.

In accordance with the ELM and NFC theories, the factors most influencing the route individuals take in a persuasive situation (i.e., the appeals presented in advertising) are motivation and ability for critical evaluation. Motivation includes the relevance of the message in the ad and a person's need for cognition, their enjoyment of thought. High-NFC individuals should prefer a complex, thought-provoking (argumentative) appeal. In other words, it is predicted that consumers with higher need for thought may be attracted by argument-based persuasions, as they prefer messages that provoke central-route processes. In contrast, individuals with low NFC should be less affected by manipulation of argument quality, but rather may be attracted by affective (emotional) appeals, which stimulates peripheral-route processes.

Drawing on these predictions and previous research on effects of personal relevance, it was hypothesized that:

H1a: Individuals with high NFC would have favorable attitudes toward an ad after exposure to an argument-based advertisement.

H1b: Individuals with low NFC would have favorable attitudes toward an ad after exposure to an emotion-based advertisement.

According to Kuo et al (2012), consumers with better recall of advertisement information have a positive influence on purchase intention. Understanding the potential effects of NFC in influencing purchase intention, this study sought to reinforce the causal-effect relationship from an attitudinal perspective by hypothesizing that:

H2a: Individuals with high NFC would have greater purchase intention after exposure to an argument-based advertisement than individuals with low NFC.

H2b: Individuals with low NFC would have greater purchase intention after exposure to an emotion-based advertisement than individuals with high NFC.

### Subjects and Procedures

Participants of this study were drawn from a comprehensive, Midwestern university's Spring 2014 student body. A pilot study took place in February in the form of a focus group to validate the survey tool and questions. During the pilot study, 26 students were randomly selected to respond to four advertisements – two of which were designed to be argument-based advertisements and two as emotion-based advertisements. These participants were asked to label the pilot advertisements as either argument or emotion-based design. Results from this pilot testing reflected the validity of the advertisement designs and their intended appeals:

Table 1

## Participants' Matching of Advertisement Designs to Intended Appeals

Ads	Response	
	Argument	Emotion
A (Argument)	<b>19</b>	7
B (Emotion)	3	<b>23</b>
C (Argument)	<b>22</b>	4
D (Emotion)	1	<b>25</b>

Then, based on a convenient sampling method, 200 students aged 18-35 were administered a survey questionnaire containing 35 closed-ended questions and advertisement designs verified in the pilot study.

### Variables

Advertising appeals. All four advertisements used in this survey are intentionally designed for distinctive appeals – two argument-based advertisements (A and C) and two emotion-based advertisements (B and D). These advertisements have been pre-tested in a pilot study and so they are valid and reliable measures for their appeals.

Need for Cognition level/personality variable. The subject's NFC level was measured by using an 18-item Need for Cognition Scale (Cacioppo et al., 1984) used in the Wabash National Study of Liberal Arts Education. The Need for Cognition Scale asks individuals to rate the extent to which they agree with each of 18 statements about the satisfaction they gain from thinking. An individual who has a high score on the Need for Cognition Scale is more likely than someone with a low score to be "a thinker."



Preference of advertisements. Subject's attitude toward an ad was indicated by the subject's self-reported level of favor for all four advertisements on a 5-point Likert Scale.

Purchase intention. Subject's purchase intention was determined by the subject's self-reported choice of restaurant to visit after seeing the advertisements.

Perception of personality. Subject's perception of own personality was determined by the subject's level agreement (on a 5-point Likert Scale) toward the statements, "I consider myself a critical thinker," and "I consider myself an emotional person."

## Chapter III

### FINDINGS

#### Analysis

The tools for data analysis included cross-tabulation chi-square test, and hypothesis testing using analysis of variance (ANOVA), crosstabs and frequencies test via IBM's SPSS 21 software.

#### Demographic Information

With 166 surveys returned, the completion rate for this survey was 83% ( $N=200$ ). Of the all participants, 54.8% were males ( $N=91$ ) and 45.2% were females ( $N=75$ ). The mean age for all the participants was 20.32 years. Tables 2 and 3 show participants' year in school and their college affiliation respectively.

Table 2

#### Participants' Year in School

Year	Freq.	%
Freshman	100	60.2
Sophomore	27	16.3
Junior	19	11.4
Senior	17	10.2
Graduate	3	1.8

Table 3  
Participants' College Affiliation

College	Freq.	%
College of Liberal Arts	27	16.3
College of Science & Engineering	16	9.6
Herberger Business School	42	25.3
School of Education	8	4.8
School of Health and Human Services	21	12.7
School of Public Affairs	7	4.2
Undecided	45	27.1

Table 4 shows the race indicated by the participants and Table 5 shows participants' annual income range.

Table 4  
Participants' Race

Race	Freq.	%
Caucasian	132	79.5
African-American	11	6.6
Hispanic	4	2.4
Asian	11	6.6
Native American	2	1.2
Other	6	3.6

Table 5  
Participants' Annual Income

Income	Freq.	%
Less than \$15,000	126	78.3
\$15,000 or more	35	21.7

### Need for Cognition

A short-form Need for Cognition Scale was used as the assessment instrument to quantitatively measure the tendency for a participant to engage in thinking. The Need for Cognition Scale asks individuals to rate the extent to which they agree with each of 18 statements about the satisfaction they gain from thinking. Sample statements include, "I find satisfaction in deliberating hard and for long hours," "The notion of thinking abstractly is appealing to me," and "Thinking is not my idea of fun." The scale asks participants to describe the extent to which they agree with each statement using a 5-point scale with the following values:

- 1 = extremely uncharacteristic of me
- 2 = somewhat uncharacteristic of me
- 3 = uncertain
- 4 = somewhat characteristic of me
- 5 = extremely characteristic of me

Out of the 18 statements on the Need for Cognition Scale, 9 are supposed to be reverse scored. The final score for each individual is a tally of the individual's points from each of the 18 questions. In this study, the author recorded the negatively framed statements

and took the overall factor mean, then divided it into top and bottom quartiles. The top quartile, which was 3.69 (out of 5) and above, indicates high need for cognition and the bottom quartile, which was 2.76 (out of 5) and below, represents low need for cognition.

The survey instrument also asked participants directly to indicate their perceived need for cognition. Participants were asked to rate from 1 to 5 how much they think they are a critical thinker, with 1 being strongly disagree, 3 being neutral, and 5 being strongly agree. A similar scale was used to assess how much the participants perceive they are an emotional person. Table 6 shows the descriptive statistics for these questions.

Table 6

Participants' Reflection on Their Personal Need for Cognition

	Freq.	Mean	Std. Deviation
I consider myself a critical thinker	166	3.79	0.900
I consider myself an emotional person	165	3.47	1.124

NFC and Preference of Advertising Appeals

To investigate the impacts of NFC on participants' preference of advertising appeals, an ANOVA was run to determine the correlation between the two variables.

Table 7 shows the ANOVA table for this investigation and Table 8 shows the descriptive statistics from the analysis.

Table 7

ANOVA of NFC and Participants' Preference of Advertising Appeals

		Sum of Squares	df	Mean Square	F	P-value (Sig.)
Argument Ad 1	Between Groups	0.000	1	0.000	0.000	1.000
	Within Groups	87.220	80	1.090		
	Total	87.220	81			
Emotional Ad 1	Between Groups	1.646	1	1.646	0.979	0.325
	Within Groups	136.210	81	1.682		
	Total	137.855	82			
Argument Ad 2	Between Groups	1.048	1	1.048	0.647	0.424
	Within Groups	131.169	81	1.619		
	Total	132.217	82			
Emotional Ad 2	Between Groups	7.921	1	7.921	6.338	0.014
	Within Groups	101.236	81	1.250		
	Total	109.157	82			

Table 8

Descriptive Data of ANOVA of NFC and Participants' Preference of Advertising Appeals

		Freq.	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min.	Max.
						Lower Bound	Upper Bound		
Argument Ad 1	Low NFC	41	2.90	1.020	0.159	2.58	3.22	1	5
	High NFC	41	2.90	1.068	0.167	2.57	3.24	1	5
	Total	82	2.90	1.038	0.115	2.67	3.13	1	5
Emotional Ad 1	Low NFC	42	2.55	1.152	0.178	2.19	2.91	1	5
	High NFC	41	2.83	1.430	0.223	2.38	3.28	1	5
	Total	83	2.69	1.297	0.142	2.40	2.97	1	5
Argument Ad 2	Low NFC	42	3.21	1.317	0.203	2.80	3.62	1	5
	High NFC	41	3.44	1.226	0.191	3.05	3.83	1	5
	Total	83	3.33	1.270	0.139	3.05	3.60	1	5
Emotional Ad 2	Low NFC	42	2.67	1.004	0.155	3.35	3.98	1	5
	High NFC	41	3.05	1.224	0.191	2.66	3.44	1	5
	Total	83	3.36	1.154	0.127	3.11	3.61	1	5

Results show that there was no statistical significance observed between participants' NFC and their preference of advertising appeals in Argument Ad 1, Emotional Ad 1, and Argument Ad 2. However, statistical significance was found for Emotional Ad 2.

### NFC and Purchase Intention

A chi-square test and cross-tabulation were used to examine the possible correlations between participants' NFC and their purchase intention after viewing all the advertisements. Table 9 shows results from the chi-square test and Table 10 shows participants' purchase intention after exposure to both argument- and emotion-based advertisements in relations to their NFC levels. No statistical significance was observed between these variables.

Table 9  
Chi-square Test

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.727*	3	0.293
Likelihood Ratio	3.761	3	0.288
Linear-by-Linear Association	3.186	1	0.074
N of Valid Cases	83		

\*0 cells (.0%) have expected count less than 5. The minimum expected count is 7.90.



Table 10

Participants' NCF Level and Purchase Intention After Exposure to Advertisements

			Argument Ad 1	Emotional Ad 1	Argument Ad 2	Emotional Ad 2	Total
High & low NFC	Low NFC	Count	7	6	17	12	42
		% within high & low NFC	16.7	14.3	40.5	28.6	100
	High NFC	Count	11	10	13	7	41
		% within high & low NFC	26.8	24.4	31.7	17.1	100
Total	Count		18	16	30	19	83
	% within high & low NFC		21.7	19.3	36.1	22.9	100

### NFC and Perception of NFC

As described previously, participants were asked to indicate their perception of their own NFC as framed in the questions below:

- I consider myself a critical thinker.
- I consider myself an emotional person.

A correlation test was run to determine the correlations between participants' NFC level (as indicated via the short form Need for Cognition Scale) and the reported perception of their own NFC. Table 11 shows that there was a positive and significant correlation between average NFC and participants who considered themselves a critical thinker. No significant correlation was found between average NFC and those who considered themselves an emotional person.

Table 11

Correlations Between Participants' Average NFC and Perceived NFC

		Consider myself a critical thinker	Consider myself an emotional person	Average NFC
Consider myself a critical thinker	Pearson Correlation	1	0.061	0.580**
	Sig. (2-tailed)		0.440	0.000
	N	166	165	166
Consider myself an emotional person	Pearson Correlation	0.061	1	0.067
	Sig. (2-tailed)	0.440		0.396
	N	165	165	165
Average NFC	Pearson Correlation	0.580**	0.067	1
	Sig. (2-tailed)	0.000	0.396	
	N	166	165	166

## Chapter IV

### DISCUSSIONS

This study aimed to investigate how consumers' personality variable, as quantitatively defined by the Need for Cognition Scale, correlates with their preference of advertising appeals in a product. Results showed that there was no statistical significance observed between participants' NFC and their preference of advertising appeals in Argument Ad 1, Emotional Ad 1, and Argument Ad 2. However, statistical significance was found for Emotional Ad 2. As such, H1a was not supported while H1b was partially supported. This means there was no statistical correlation between consumers' need for critical thinking and their preference of either an argument-based or emotion-based advertisement, except for Emotional Ad 2, which featured three young children enjoying their food, with a copy, "Food your family loves." According to the pilot study results, Emotional Ad 2 received the most votes from the participants – 25 out of 26 agreed that Emotional Ad 2 exerted an emotional appeal – which made this ad the most precise ad-to-appeal matching among the four advertisements pre-tested in the pilot study. The second closest matching was Emotional Ad 1, followed by Argument Ad 2, and Argument Ad 1.

It is worth noting that during the pilot study, the author did experience some hardship while finalizing the argument-based advertisements. The author found it challenging to design advertisements with strong argument appeals without using phrases

and images that might appeal too much to the consumers' emotion. In order to make the argument-based advertisements distinguishable from the emotion-based advertisements, the author tried to emphasize the prices and materiality of the product, using copy such as "85% people in St. Cloud prefer our burgers," and, "It doesn't take a genius to make the right choice." In the argument-based advertisements, the author also avoided the use of people and showed only the products, which are burgers.

The fact that the findings were somewhat but not fully supportive of H1a and H1b might suggest that participants in this study could not tell an argument-based advertisement from an emotion-based argument, due to the following possibilities:

- The use of images and striking colors may evoke certain emotions regardless of the nature of the images used – whether human or non-human subjects.
- Still/print advertisements may not be the best mode of presentation to use in measuring consumers' preference of appeals – video commercials may lead to different or more desirable results.
- Argument-based advertisements for a food product could evoke an affective response due to the nature of the food product.

The author was interested in studying the correlations between consumers' need for cognition and their purchase intention after being exposed to both argument- and emotion-based advertisements. Results from this study showed no statistical correlation between these variables. This means that consumers' NFC level did not affect their purchase intention after viewing the advertisements. Therefore, both H2a and H2b were rejected. The author suspected that this could be due to the fact that the participants were

exposed to each advertisement only once. Repeated exposure may be needed to affect purchase intention.

Finally, the study also looked into the possible correlations between consumers' perceived need for cognition and their actual, quantified need for cognition level. Results showed that there was a positive and significant correlation between average NFC and participants who considered themselves a critical thinker. However, no significant correlation was found between average NFC and those who considered themselves an emotional person. This means that participants who perceived themselves to be a critical thinker were more accurate in their perceptions than when they perceived themselves as an emotional person. The author believed that this phenomenon might be due to the participants' lack of understanding of their own need for cognition, or they might not even have had to think about their own need for engaging in deep thinking before this survey.

## Chapter V

### LIMITATIONS AND CONCLUSION

While surveys are easy to develop and administer, the ability to collect accurate, honest answers from the participants have been a challenge for many researchers. Participants may not feel comfortable providing answers that present themselves in an unfavorable manor. Moreover, participants may not be fully aware of their reasons for any given answer because of lack of memory on the subject, or even boredom. In this case, participants of this study might not have fully understood all the statements in the short form Need of Cognition Scale, which could impose data errors due to participants' uncertainty.

As foreshadowed in the previous chapter, a robust pilot study is necessary to ensure the validity and reliability of the materials used in the survey questionnaire, i.e. the designs of advertisement appeals. Future studies may consider using existing advertisements or commercials to add legitimacy and increase credibility of the appeals, be it argument or emotion based.

Nevertheless, this study has investigated the relationships between consumer NFC and preferences for advertising appeals, and how consumer NFC affected consumer's purchase intention. Although the hypotheses were not fully supported, the findings from this study have shed new light unto the utility of need for cognition theory in advertising persuasion, attempting to investigate how persuasion may be dependent on personal

variance. This study has also looked at how executional cues of advertisements affect consumers' responses by examining the real-world, behavioral impact these advertisements on consumer purchase behavior. Given so, this study has revitalized the ELM and NFC models in observing the impact of personality on preference of persuasion in the advertising context. Future research may consider focusing on a wider spectrum of dimensions relating to advertising persuasion using pointers from ELM and NFC models to explore new ways to determine best practices in engaging consumers today.



## REFERENCES

## REFERENCES

- Cacioppo, J. T., & Petty, R. E. (1982) The need for cognition. *Journal of Personality and Social Psychology*, 42, 116-131.
- Cacioppo, J. T., Petty, R. E., & Kao, C. F. (1984) The efficient assessment of need for cognition. *Journal of Personality Assessment*, 48, 306-307.
- Chandy, R. K., Tellis, G. J., Macinnis, D. J., & Thaivanich, P. (2001) What to say when: Advertising appeals in evolving markets. *Journal of Marketing Research*, 39, 399-414.
- Cohen, A.R., Stotland, E., & Wolfe, D.M., (1955) An Experimental Investigation of Need for Cognition. *Journal of Abnormal and Social Psychology*, 51(2), 291–294.
- Etgar, M. & Goodwin, S. A. (1982) One-sided versus two-sided comparative message appeals for new brand introductions. *Journal of Consumer Research*, 8, 460-464.
- Hagtvedt, C. P, Petty, R. E., Cacioppo, J. T., & Steidley, T. (1988) Personality and ad effectiveness: Exploring the utility of Need for Cognition. *Advances in Consumer Research*, 15.
- Holbrook, M. B., & Batra, R. (1987) Assessing the role of emotion as mediators of consumer responses to advertising. *Journal of Consumer Research*, 14, 404-420.
- Kassarjian, H., & Sheffet, M. J. (1981) Personality and consumer behavior. An update. In H. Kassarjian and T. Robertson (Eds.) *Perspectives in Consumer Behavior*, Glenview, III.: Scott, Foresman and Company.

- Kuo, J-C, Horng, D-J, & Lin, C-L (2012) The causal relationship between need for cognition and advertising recall. *Social Behavior and Personality*, 40(6), 1025-1032.
- Martin, B. A. S., Sherrard, M., & Wentzel, D. (2005) The role of sensation seeking and need for cognition on web site evaluations: A resource matching perspective. *Psychology & Marketing*, 22(2), 109 - 126.
- Petty, R. E., & Cacioppo, J. T. (1981) Attitudes and persuasion: Classic and contemporary approaches. Dubuque, IA: Brown.
- Petty, R. E., & Cacioppo, J. T. (1986) Communication and persuasion: Central and peripheral routes to attitude change. New York: Springer-Verlag.
- Singh, S. N., & Cole, C. A. (1993) The effects of length, content, and repetition on television commercial effectiveness. *Journal of Marketing Research*, 30, 91-104.

## APPENDIXES

## APPENDIX A

### Pilot Study Questionnaire

## **A Survey of Personality and Advertising Appeals**

Researcher: Jason Tham  
SCSU IRB Approval: 1081-1534

### **Two Types of Appeal Mode**

- **Argument-based appeals:** Seek to elaborate or assess product-relevant information
- **Emotion-based appeals:** Seek to stir up certain emotions/affections toward a product

The following pages will show four different advertisements. Please answer the questions to the best of your ability. Thank you!

A.



**You have  
10,000 tastebuds.  
Use all of them.**

Find us in your neighborhood today.  
[www.tropicana.com](http://www.tropicana.com)

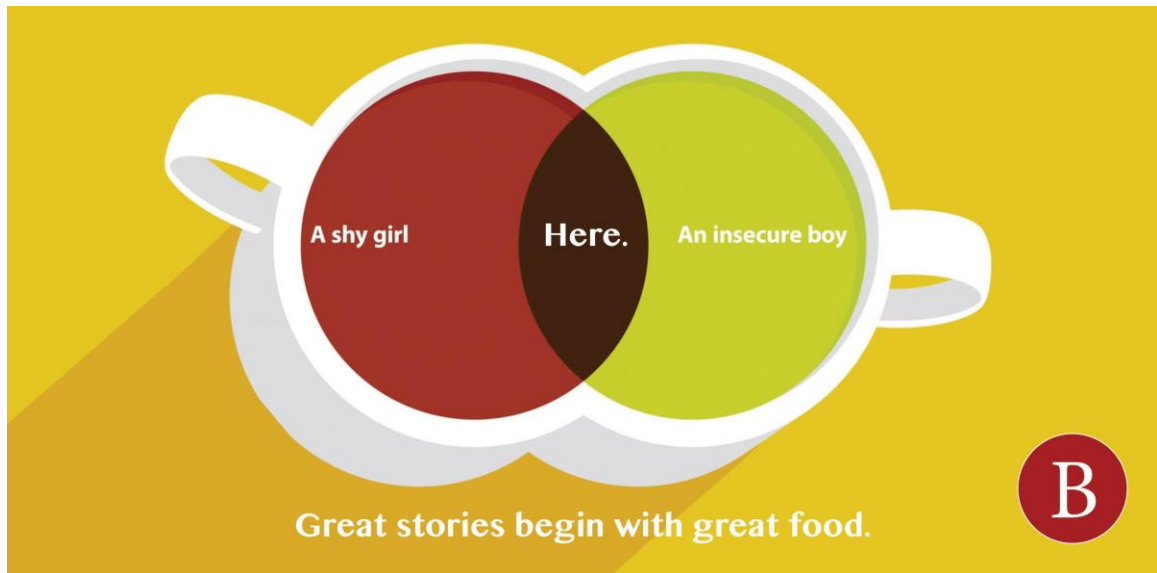


Is this advertisement argument based or emotion based? (Circle one)

1. Argument based
2. Emotion based

What is the major claim of this ad? (Please write)

B.



Is this advertisement argument based or emotion based? (Circle one)

1. Argument based
2. Emotion based

What is the major claim of this ad? (Please write)



C.

The advertisement features a red background with two burgers side-by-side. On the left is a McDonald's burger with a plain bun, priced at \$6.99. On the right is a burger with a sesame seed bun, lettuce, tomato, and cheese, priced at \$4.99. The word 'or' is centered between them. Below the burgers, the text reads: 'It doesn't take a genius to make the right choice.' and 'Choose for yourself.' A circular logo with the letter 'C' is in the bottom right corner.

McDonald's reality.      Our reality.

\$6.99      or      \$4.99

**It doesn't take a genius to  
make the right choice.**

Choose for yourself.

C

Is this advertisement argument based or emotion based? (Circle one)

1. Argument based
2. Emotion based

What is the major claim of this ad? (Please write)

D.



Is this advertisement argument based or emotion based? (Circle one)

1. Argument based
2. Emotion based

What is the major claim of this ad? (Please write)

## APPENDIX B

### Survey Questionnaire

## A Survey of Personality and Advertising Appeals

### CONSENT FORM

The purpose of this research project is to study the relationships between personality and preference of advertising appeals. This research project is being conducted by **Jason Tham**, a graduate student at St. Cloud State University. His advisor is **Dr. Roger Rudolph** ([rrudolph@stcloudstate.edu](mailto:rrudolph@stcloudstate.edu)).

Your participation in this research study is voluntary. You may choose not to participate. If you decide to participate in this research survey, you may withdraw at any time. If you decide not to participate in this study or if you withdraw from participating at any time, you will not be penalized.

The procedure involves filling survey questionnaire that will take approximately 10 minutes. Your responses will be confidential and we do not collect identifying information such as your name or email address. We will do our best to keep your information confidential. All data is stored in a password protected electronic format. To help protect your confidentiality, the surveys will not contain information that will personally identify you. The results of this study will be used for scholarly purposes only. To protect subject's identity, results will be presented in aggregate form with no more than 1-2 descriptors presented together.

If you have any questions about the research study or would like the survey results, please contact **Jason Tham** at [thja0905@stcloudstate.edu](mailto:thja0905@stcloudstate.edu).

This research has been reviewed according to St. Cloud State University Institutional Review Board (IRB) procedures for research involving human subjects.

Completing and returning this questionnaire indicates that:

- you have ready the above information
- you voluntarily agree to participate
- you are at least 18 years of age

Thank you for your time and cooperation in helping to make this study successful.

## A Survey of Personality and Advertising Appeals

### Need for Cognition Scale

**For each of the statements below, please indicate whether or not the statement is characteristics of you or of what you believe. You should use the following scale as you rate each of the statements below:**

1	2	3	4	5
extremely uncharacteristic of me	somewhat uncharacteristic of me	uncertain	somewhat characteristic of me	extremely characteristic of me

1	I prefer complex to simple problems.	1	2	3	4	5
2	I like to have the responsibility of handling a situation that requires a lot of thinking.	1	2	3	4	5
3	Thinking is not my idea of fun.	1	2	3	4	5
4	I would rather do something that requires little thought than something that is sure to challenge my thinking abilities.	1	2	3	4	5
5	I try to anticipate and avoid situations where there is a likely chance I will have to think in depth about something.	1	2	3	4	5
6	I find satisfaction in deliberating hard and for long hours.	1	2	3	4	5
7	I only think as hard as I have to.	1	2	3	4	5
8	I prefer to think about small daily projects to long term ones.	1	2	3	4	5
9	I like tasks that require little thought once I've learned them.	1	2	3	4	5
10	The idea of relying on thought to make my way to the top appeals to me.	1	2	3	4	5
11	I really enjoy a task that involves coming up with new solutions to problems.	1	2	3	4	5
12	Learning new ways to think doesn't excite me very much.	1	2	3	4	5
13	I prefer my life to be filled with puzzles I must solve.	1	2	3	4	5
14	The notion of thinking abstractly is appealing to me.	1	2	3	4	5
15	I would prefer a task that is intellectual, difficult, and important to	1	2	3	4	5

	one that is somewhat important but does not require much thought.					
16	I feel relief rather than satisfaction after completing a task that requires a lot of mental effort.	1	2	3	4	5
17	It's enough for me that something gets the job done; I don't care how or why it works.	1	2	3	4	5
18	I usually end up deliberating about issues even when they do not affect me personally.	1	2	3	4	5

### Preferred Advertisements

**The following pages will show four different billboard advertisements, represented by four individual brands: Brand A, B, C, and D.**

**They are food-related businesses and are not associated with any existing brand.**

**Refer to the advertisements and answer the questions that follow.**

A.

**HOW MUCH OF EACH INGREDIENT IS CONSUMED ANNUALLY?**  
 \* U.S. PRODUCTION AND VALUE FOR EACH INGREDIENT ANNUALLY

**FAVORITE TYPES OF BURGERS**  
 41.3 MILLION POUNDS OF WHEAT VALUED AT \$18.0 BILLION  
 20.0 POUNDS PER PERSON  
 7.4 BILLION POUNDS OF CHEESE VALUED AT \$843 MILLION  
 20.0 POUNDS PER PERSON  
 9 BILLION POUNDS OF LETTUCE VALUED AT \$2.2 BILLION  
 20.0 POUNDS PER PERSON  
**FAVORITE BURGER SIZE**  
 7.42 LB KING (35%)  
 6.52 LB REGULAR (28%)  
 5.52 LB SMALL (22%)  
 4.52 LB CHILD (15%)

**HOW MUCH U.S. CONSUMPTION?**  
 61.2 POUNDS PER PERSON  
 16.26 BILLION POUNDS OF BEEF PRODUCED VALUED AT \$2.2 BILLION ANNUALLY (CONSUMED BY THE PERSON ON BEEF EACH YEAR)

**134.6 POUNDS PER PERSON**  
 ONE BILLION BOTTLES OF SODA FOR A TOTAL VALUE OF \$6.64 BILLION

**70 POUNDS PER PERSON**  
 12 BILLION TONS OF RECTOR VALUED AT \$901 MILLION

**20.3 POUNDS PER PERSON**  
 14 MILLION TONS OF TOMATOES VALUED AT \$1.2 BILLION

**FAVORITE CHEESE**  
 CHEDDAR 35%  
 MONTERO JACK 15%  
 SWISS 15%  
 AMERICAN 10%  
 PARMESAN 10%  
 PEPPER JAC 10%  
 PROVEDAL 10%  
 BLUE CHEESE 5%  
 BACON 5%

**22.4 POUNDS PER PERSON**  
 16.1 BILLION POUNDS OF CORN VALUED AT \$14 BILLION

**85% of people in St. Cloud prefer our burgers.**  
 Because we use real ingredients and never cut corners.

\*We surveyed 1,500 customers in this neighborhood in 2013.

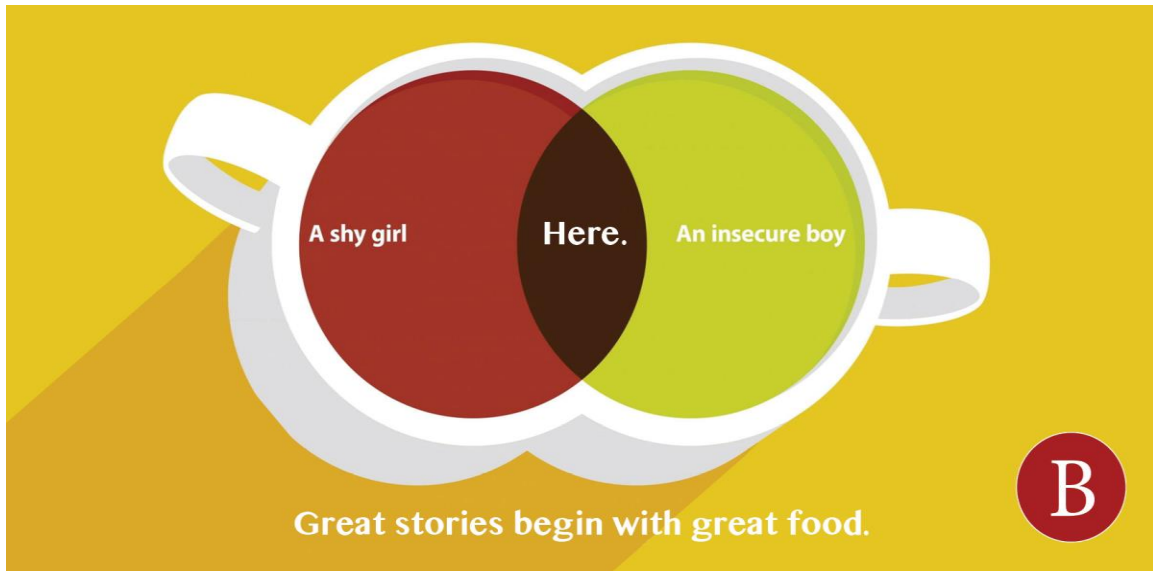
19. On a scale of 1-5, how much do you like this ad? (Circle one)

- 1                    2                    3                    4                    5  
 least                    neutral                    most  
 favorite                    favorite

20. What do you think is the major claim of this ad? (Circle one)

1. We are a family-friendly dining place
2. People in St. Cloud like us more compared to other brands
3. Our burgers look and taste better than other brands
4. You will meet someone special here

B.



21. On a scale of 1-5, how much do you like this ad? (Circle one)

1	2	3	4	5
least		neutral		most
favorite				favorite

22. What do you think is the major claim of this ad? (Circle one)

1. We are a family-friendly dining place
2. People in St. Cloud like us more compared to other brands
3. Our burgers look and taste better than other brands
4. You will meet someone special here



C.

McDonald's reality.      Our reality.

\$6.99      or      \$4.99

**It doesn't take a genius to  
make the right choice.**

Choose for yourself.      C

23. On a scale of 1-5, how much do you like this ad? (Circle one)

1	2	3	4	5
least		neutral		most
favorite				favorite

24. What do you think is the major claim of this ad? (Circle one)

1. We are a family-friendly dining place
2. People in St. Cloud like us more compared to other brands
3. Our burgers look and taste better than other brands
4. You will meet someone special here

D.



25. On a scale of 1-5, how much do you like this ad? (Circle one)

1	2	3	4	5
least favorite		neutral		most favorite

26. What do you think is the major claim of this ad? (Circle one)

1. We are a family-friendly dining place
2. People in St. Cloud like us more compared to other brands
3. Our burgers look and taste better than other brands
4. You will meet someone special here

27. Which restaurant would you choose to visit? (Circle one)

1. A
2. B
3. C
4. D

28. I consider myself a critical thinker. (Circle one)

1. Strongly disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly Agree

29. I consider myself an emotional person. (Circle one)

1. Strongly disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly Agree

Demographic Information (All information are confidential)

30. Age (write actual age): \_\_\_\_\_

31. Year in school: (Circle one)

1. FR
2. SO
3. JR
4. SR
5. GR

32. Which college/school are you enrolled in: (Circle one)

1. College of Liberal Arts / School of the Arts
2. College of Science & Engineering / School of Computing, Engineering, and Environment
3. Herberger Business School
4. School of Education
5. School of Health and Human Services
6. School of Public Affairs
7. I don't know / undecided

33.. Race: (Circle one)

1. Caucasian/White
2. African-American/Black
3. Hispanic
4. Asian
5. Native American/Alaska Native
6. Other: \_\_\_\_\_

34. Gender: (Circle one)

1. Male
2. Female

35. Annual income: (Circle one)

1. Less than \$15,000
2. \$15,000 - \$29,999
3. \$30,000 - \$44,999
4. \$45,000 - \$59,999
5. \$60,000 - \$74,999
6. \$75,000 - \$89,999
7. \$90,000 - \$104, 999
8. \$105,000 - \$119,999
9. More than \$120,000

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*Thank You for Your Participation!*

## APPENDIX C

Institutional Review Board (IRB) Approval



## Institutional Review Board (IRB)

OFFICE OF RESEARCH AND  
SPONSORED PROGRAMS  
ST. CLOUD STATE UNIVERSITY

Administrative Services 210  
Website: [stcloudstate.edu/osp](http://stcloudstate.edu/osp) Email: [osp@stcloudstate.edu](mailto:osp@stcloudstate.edu)  
Phone: 320-308-4932

**Name:** Jason Tham  
**Address:** 706 6th Avenue South Apt 105  
St. Cloud, MN 56301  
**Email:** [thja09025@stcloudstate.edu](mailto:thja09025@stcloudstate.edu)

**IRB APPLICATION  
DETERMINATION:  
EXEMPT**

**Co-Investigator:**

**Project Title:** Survey of Personality and Advertising Appeal  
**Advisor:** Roger Rudolph

The Institutional Review Board has reviewed your application to conduct research involving human subjects. Your project has been: **EXEMPT**

We are pleased to advise you that your project has been deemed as exempt in accordance with federal regulations. The IRB has found that your research project meets the criteria for exempt status and the criteria for protection of human subjects in exempt research. Please note the following items concerning our exempt policy:

- Principal Investigator assumes the responsibilities for the protection of human subjects in this project
- Exempt protocols DO NOT need to be renewed.
- Exempt protocols DO NOT require revisions. However, if changes are made to a protocol that may no longer meet the exempt criteria, a new initial application will be required.
- Adverse events (research related injuries or other harmful outcomes) must be reported to the IRB as soon as possible.
- The IRB reserves the right to review the research while it is in progress or when it is completed.

Good luck on your research. If we can be of further assistance, please contact the Office of Sponsored Programs at 320-308-4932 or email [lidonnay@stcloudstate.edu](mailto:lidonnay@stcloudstate.edu). Please use the SCSU IRB number listed on any of the forms submitted which relate to this project, or on any correspondence with the IRB.

**For the Institutional Review Board:**

**For St. Cloud State University:**

Linda Donnay  
IRB Administrator  
Office of Sponsored Programs

Patricia Hughes,  
Interim Associate Provost for  
Research Dean of Graduate Studies

OFFICE USE ONLY

SCSUIRB# 1081 - 1534  
Type of Review:

Today's Date: 1/30/2014  
EXEMPT: 1/30/2014  
Expiration Date: