The effectiveness of various green print advertising strategies for budget and luxury hotel segments

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THE EFFECTIVENESS OF VARIOUS GREEN PRINT ADVERTISING
STRATEGIES FOR BUDGET AND LUXURY HOTEL SEGMENTS

by

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ABSTRACT

The Effectiveness Of Various Green Print Advertising Strategies
For Budget And Luxury Hotel Segments
by

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This study aims to broaden knowledge about the effectiveness of the green (environmentally responsible) print advertising in the context of hotel industry. The development of green advertising and relevant studies in general marketing literature is discussed. After the gap of research in hospitality field is highlighted, the current study is introduced. Five by two between subjects experimental design is developed to understand if green advertisements perform better than non-green ones, and whether hotel segment (budget versus luxury) influences the effectiveness. Another goal of the study is to identify the best strategy or medium (text, logos, visual images, or a combination of all) to communicate green messages. Five levels used to manipulate the green status and greening strategy of each advertisement are non-green, green with textual cues, green with certification logos, green with visual cues, and green with combination of text-logos-visual images altogether. Two levels used to manipulate the segment of the hotel are budget versus luxury. The study reveals whether green advertising is more effective in hotel advertising, whether the effectiveness vary by hotel segments. Various strategies of greening an advertisement (using text, logos, visual image or a combination of all) is also tested to understand their comparative effectiveness.
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Oh well… It was not easy to get to this point so I could write my acknowledgements. I would like to thank everyone who contributed to my experience of life as a human being, including but not limited to my friends at all ages, my family members, and relatives.

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CHAPTER 1

INTRODUCTION

The negative impact of modern society on the environment is increasing and the consequences are becoming more serious. The impact comes in various forms such as higher demand and depletion of natural resources, polluting the air and water, loss of natural habitat areas to industrial and urban development, and deforestation of rainforests. Consequences come in the form of a thinner layer of ozone, global warming, the lack of enough clean water, air pollution, and the possibility of breaking the vital balance of sustainability of life on earth for many species, including mankind.

Negative impact and the grave toll of this impact on the environment is being discussed by media and educational institutions at an increasing rate. This increases the awareness and the concern of public opinion. It is not hard to establish the link between consumption culture and the damage caused on the environment, which is encouraged by businesses that traditionally aim to produce, sell and profit more. That is probably why fixing something is often more costly than buying a new one. Thus, the businesses and the industries are often associated with environmental deterioration and they feel a higher need to respond to and address the environmental concerns of the public.

To address the increasing concern in public opinion, many businesses in various industries initiated efforts to minimize or eliminate their negative impact on nature with varying motivations and degrees. Motivations range from cost cutting to creating positive corporate image, from increasing sustainability of operations to simply abiding with the emerging trends to look nice to customers and various publics. While some companies genuinely got engaged in greening efforts, some others did so superficially and yet sought
ways to benefit from this rising trend, by means of false (or vague) green advertisements and claims.

Many companies, in various industries communicate their environmentally friendly products or efforts via advertising to create a more positive image and gain more financial returns out of this rising trend. The goal is to make customers feel good about buying from them and believe that this is the right thing to do even in some cases this might mean having to pay more (Levin, 1990).

The concern about environmental issues has been reflected by scholars for much longer time than one would think. Kilbourne (2004) traces the first example of environmental concern in the literature as far back as Locke’s work in 1690 and Mill’s work in 1872. Both studies discussed “the potential resource shortages and the limitations to economic growth” (Kilbourne, 2004, p. 188). During the 1970s, modern marketing literature started to investigate the consumer concern for the environmental issues (Kassarjian, 1971; Kinnear & Taylor, 1973; Kinnear, Taylor, & Ahmed, 1974; Kohan, DeMille, & Myers, 1972). The studies evolved over the years with varying topics, methods and frequencies and continued as far as today. Literature review in the following section will present more about this evolution and certain research streams in green advertising literature.

Although the topic of green marketing and advertising has been under investigation for over four decades in general marketing and advertising literature, there are only two studies in hospitality context that investigated green advertising (Chan, Leung, & Wang, 2006; Hu, 2012). Given the apparent differences between the marketing of tangible products and intangible hospitality services, hospitality practitioners and scholars should
not operate or teach only based on the findings from the general marketing literature. Moreover, even the studies in the general advertising literature fall short of being complete and conclusive in their findings. However, hospitality industry is experimenting with new concepts such as certified green hotels, green destinations, and low carbon emitting airlines. Many hotels ask their patrons to reuse their towels and linen, have installed water and energy saving devices, and actively participate in recycling. Even though many hospitality operators are engaged in greening initiatives, hospitality literature has not yet devoted adequate attention to study the effectiveness of the green advertising.

Advertising is seen as a way to stimulate sales, build and maintain positive corporate image in many industries. Each year, billions of dollars are being spent on advertising to promote companies, products and services. Hospitality is no exception and advertising is widely used by hospitality companies. According to a report by the Nielsen Company (2009), hospitality companies spent more than $3.89 billion on advertising in 2008. Thirty-four percent of this amount is spent on print media; twenty-two percent is specifically spent on magazine advertising, making it the largest medium. It is important for hospitality advertisers to know the most efficient ways of print advertising and reflect the rising trends among consumers such as greening in their advertising. Thus, the study of green print advertising for hospitality industry deserves adequate academic attention.

Problem Statement

The issue of environmental responsibility is even more pressing for hospitality businesses as the clean, healthy and attractive environment is one of the most important aspects of the industry. Accordingly, many hospitality operators have started initiatives to
protect the environment or minimize the negative impact while at the same time reducing
costs in many cases. Even though greening initiatives are very popular among hotels,
only a few studies in hospitality literature (Chan et al., 2006; Hu, 2012) studied green
advertising. Chan et al. (2006) found that environmental claims, especially the
substantive ones, enhance the effectiveness of advertising both for hotels and restaurants.
Similarly, Hu (2012) also concluded that substantive environmental claims with self-
expressive benefits to consumers provided the most effective combination of green
advertising for highly involved customers with environment. These two studies took the
crucial very first steps in studying the effectiveness of the green advertising in hospitality
literature. However more empirical studies are needed to understand the way how green
advertising works in the hospitality industry thoroughly.

Both of the above-mentioned empirical studies were conducted in Asia among
Asian participants. Thus, it is necessary to carry out similar studies among other settings
and cultures, such as U.S. (United States) consumers, to increase the external validity of
the findings. Moreover, Hu’s study (2012) assumed green advertisement to be more
effective in a hospitality context; thus, he did not contrast the difference between a green
and non-green advertisement. Then Chan et al.’s (2006) study remains as the only
empirical study that compared the effectiveness of the green and non-green advertising in
hospitality literature. However this study failed to control environmental involvement of
the respondents, which turned out to be an important factor, as highly involved
consumers tend to respond more positively to green advertisements (Hu, 2012).

Neither of these studies examined the relative effectiveness of textual versus
visual cues in communicating green claims. Chan et al. (2006) used textual cues, while
Hu (2012) used both textual and visual cues in communicating green messages. However, neither of these studies attempted to measure whether there is any difference between the effectiveness of textual or visual cues in communicating green messages. It is also not known yet whether green advertising will perform the same across all market segments (budget versus luxury for example) in hospitality. Thus, the goal of the current study is to fill in these gaps and expand the understanding of green advertising in the hotel industry.

**Purpose of the Study**

The current study aims to explore the effectiveness of the green hotel advertisements for both budget and luxury segments over non-green ones, and the relative effectiveness of various cues (i.e., textual; visual logo; visual image; or all of these combined) used in advertising over each other. The environmental involvement of the respondents will be controlled to clear any possible confounding effect so that the real effect of the advertisement is isolated for a valid conclusion.

**Research Questions**

The following research questions are explored in this study:

1. Is there any significant difference between the effectiveness of a green and non-green hotel print advertisement?

2. Is there any significant difference between the three message cues (textual information, logo, graphic images) used in green advertisements?

3. Is it the most effective strategy to use a combination of text-logos-visual images altogether in the same advertisement?

4. Does the effectiveness of the green advertisements vary with hotel segments?
5. Does environmental involvement influence the effectiveness of the green advertisements?

**Significance of the Study**

This study is taking one of the first important steps in filling the gap in green hospitality advertisement literature by attempting to test the assumption that green advertisement is more effective in hospitality while controlling the environmental involvement. No such study has been conducted among U.S. consumers in hospitality literature. Two prior studies mentioned above (Chan et al., 2006; Hu, 2012) were limited with respondents from Taiwan and Shanghai, respectively. One study in the general marketing literature (Tang, Fryxell, & Chow, 2004) and no study in the hospitality literature investigated the relative effectiveness of various green message mediums used in advertisements. Any potentially significant difference between green and non-green advertisement and across various message mediums used in green advertisements, any potential influence of hotel segment on green advertisement effectiveness may lead to further investigations to find out how these factors influence advertisement effectiveness for hotels. This will hopefully pave the road for a theory development regarding how green advertising works, what makes one message medium work better than others or what is the best combination of message mediums for green advertisements in hospitality. The current study contributes to the field on a practical level as well, since the findings will be guiding the practitioners in designing effective advertisements for distinct hotel segments.
Delimitations

The current study is inherently limited regarding its scope in order to focus the research attention on a certain area of interest and generate more accurate results on this narrowly defined scope. The study is specifically designed to compare the effectiveness of the green versus non-green hotel advertisements for budget and luxury properties. Thus, the findings may not be generalized to other hospitality and non hospitality operations. The effectiveness of various message cues used in the tested green advertisements may not be the same for other types of advertisements. The advertising medium specifically chosen for testing the hypotheses is print advertising. Although the results of the study may be generalized to similar green hospitality advertising using billboards and internet as a medium both of which utilize static textual and visual cues, no generalization is suggested for TV (Television), radio or other types of advertising.

The sample used in this study is limited with people living in the United States and includes only those who stayed at a hotel in the last two years. Thus, any generalization beyond them is not warranted. The respondents in this study have been forced to view the advertisement which is different from real life. Thus, the results are not any indication of advertisement’s ability to catch the attention of potential audience.

Definition of Key Terms

The following terms are defined as they are among the important variables measured in the study or frequently mentioned throughout the dissertation:

Advertising Effectiveness

It refers to the ability of advertising to reach its intended goals such as creating a positive attitude toward the advertised product, and a desire among the viewers to
purchase (Okazaki, Charles, & Zou, 2006). Based on the relevant studies in literature (Biehal, Stephens, & Curlo, 1992; Brown & Stayman, 1992; Bruner, 1998; Goldsmith & Lafferty, 1999; Goldsmith, Lafferty, & Newell, 2000; Mitchell & Olson, 1981; Muehling & McCann, 1993; Percy & Rossiter, 1980; Rossiter & Percy, 1982; Shimp, 1981) this study operationalizes the effectiveness with three measures described below: attitude toward advertisement, attitude toward the advertised hotel, and intention to purchase.

**Attitude Toward the Advertisement (AAd)**

It refers to the subjective evaluation of the advertisement by the viewers on a continuum ranging from positive to negative. MacKenzie and Lutz (1989) defined it “as a learned predisposition to respond in a consistently favorable or unfavorable manner toward advertising in general” (p. 53-54).

**Attitude Toward the Advertised Hotel (AHot)**

It can be defined as the subjective evaluation of the hotel promoted in the advertisement by the viewers on a continuum ranging from positive to negative. In other words, it is the affective reaction of viewers to the advertised hotel (Lutz, MacKenzie, & Belch, 1983; Najmi, Atefi, & Mirbagheri, 2012).

**Purchase Intention (PI)**

It refers to the stated intention of the respondents to purchase the product or service promoted in the advertisement (Bailey, 2005; Goldsmith & Lafferty, 1999; Hu, 2012; Yi, 1990).

**Environmental Involvement (EI)**

It refers to the level of concern by people regarding the condition of the
environment and how this concern is reflected as certain behaviors to protect environment (Schuhwerk & Lefkoff-Hagius, 1995).

**Segment**

It refers to the market that the advertised hotel specifically aims to serve as a target market. Two segments are compared in this study: budget and luxury segments.

**Message Medium or Type of Message Cue**

It refers to the way how the advertisement communicates the green attributes or claims: By text, certification logo, visual image or a combination of all three.

**Greenness Status**

It refers to the advertising being green or non-green.

**Green Consumerism**

It refers to the actions of environmentally concerned consumers to purchase from companies that are indeed or perceived to be environmentally friendly (Chase & Smith, 1992), while avoiding others that are not environmentally friendly or even protesting those that are environmentally detrimental. This is an example of consumers using their purchasing power to support the environmental sustainability. It also refers to consumers’ willingness to pay more, change existing brands, buy or use less, and recycle more.

**Green Advertisement**

Any advertisement that claims that advertiser is consciously trying to minimize or eliminate the negative impact of their products, services or operations on the natural and physical environment. This could be achieved by means of limiting the use of natural resources, decreasing waste, increasing recycling, taking corrective action such as offsetting carbon footprint or supporting environmental causes, or other environmentally
responsible behaviors. Banerjee, Gulas, and Iyer (1995) defined green advertisement in a less stringent way as one that fits into at least one of the following criteria:

1. Explicitly or implicitly addresses the relationship between a product/service and the biophysical environment; 2. Promotes a green life style with or without highlighting a product/service; and, 3. Presents a corporate image of environmental responsibility (p. 22).

Their definition seems more prone to include greenwashed advertisements. Green advertising is also referred as environmental advertising in the marketing literature.

**Greenwashing**

Greenwashing refers to companies or their advertisements or other communications claiming to be environmentally responsible when in fact they are not. Jay Wester, a biologist from New York coined the term greenwashing in 1986 (Orange & Cohen, 2010). Ironically, he was criticizing the hotels claiming to be green by asking guests to reuse their towels, which is a common practice today. Even companies that spend money on greening can be accused of greenwashing if they spend more money or sources on advertising this fact than they spend on actual greening.

**Advertisement Copy or Copy**

It refers to a print advertisement, usually a full page one in the context of this study. It might be a green or non-green advertisement copy.

**Organization of the Dissertation**

This dissertation is organized into five chapters. Chapter 1 provides an introduction to the topic that is being investigated and describes the purpose of the study along with definitions of key terms. Chapter 2 reviews the relevant literature of green
advertising in general and identifies major trends and research streams. Green marketing studies in hospitality literature are also described in this section. Chapter 3 describes the methodology. The experimental design, data collection and data analysis methods, the sample, independent and dependent variables are introduced and stimulus and measurement scales are explained in methodology. Chapter 4 provides the results of the data analysis and hypothesis testing. Chapter 5 discusses the findings, provides practical implications for the industry, and states a conclusion. It also highlights the limitations and addresses the future research in the area.
CHAPTER 2
LITERATURE REVIEW

The literature review is organized into six sections to give a historical and developmental perspective to green advertising. The first section describes how green consumerism and green advertising started. The second section reviews the period when green advertising became very popular to the point of getting out of control. This increased the concerns about greenwashing in public and reduced the credibility of green advertising. A legislative effort was initiated by U.S. Federal Trade Commission (FTC), to regulate green advertising at this period. The third section describes the current situation of green advertising. Fourth section provides a discussion about main research streams in green advertising in general. Fifth section presents the few studies available in hospitality literature about green marketing. The hypotheses proposed in this study flow from the literature review, and are stated throughout this section following the relevant discussions in the literature.

The Start of Green Consumerism and Advertising

How Green Marketing Started

The first examples of studies that link the environmental concern of the consumers with marketing started to emerge during the early and mid 1970s (Henion, 1976; Kassarjian, 1971; Kinnear & Taylor, 1973; Kinnear, Taylor, & Ahmed, 1974). However these studies were not specifically about green advertising. Most scholars during the early periods of green consumerism first focused on establishing a link between the environmental concern of public and the purchasing behavior (Henion, 1976; Kassarjian, 1971; Kinnear & Taylor, 1973). A second stream of research focused on
identifying the customer segments whose decisions and behaviors are more likely to be influenced by environmental concerns (Davis, 1993; Ellen, Wiener, & Cobb-Wagren, 1991; Granzin & Olsen, 1991; Iyer & Banerjee, 1993; Kinnear et al., 1974; Manrai, Manrai, Lascu, & Ryans, 1997; Pilling, Crosby, & Ellen, 1991; Schwepker & Cornwell, 1991; Shrum, McCarty, & Lowrey, 1995). For example Ellen et al. (1991) found that consumers with higher efficacy or locus of control are more likely to show environmentally friendly behaviors because they think that their individual behavior is going to contribute to well being of the environment.

**Slow Down and Rebound: Increasing Environmental Concerns**

There was a period of slowing after the 1970s (Granzin & Olsen, 1991) in terms of green studies and green marketing. However, consumer concern for the environmental issues increased during the 1990s. A poll by CBS News and The New York Times (1990) showed that 75% and 80% of the respondents are concerned that air and water, respectively, are more polluted compared to 20 years ago. Forty one percent of the people further thought that it will get even worse in the next 20 years. According to Davis (1993), the concern for the environment which was initially seen as a marginal attitude during the 1980s, was embraced by mainstream consumers during the 1990s. More and more people started to worry about the environment. Eighty percent of the public was concerned about the environment and half of the public believed that the problem was growing more serious (Dunlap & Scarce, 1991; Gutfield, 1991). The rise of environmental concern and the resulting greening activity in the 1990s was so high that this period is called as the environmental decade by both practitioners and academicians (Kangun, Carlson, & Grove, 1991).
The Switch from Concern to Action

According to Davis (1993) some surveys reported that majority of consumers used their purchasing power to choose or ignore products based on their environmental attributes (U.S. Environmental Protection Agency (EPA), 1991; Dunlap & Scarce, 1991). Some were even willing to pay more for environmentally friendly options (Dunlap & Scarce, 1991). The trend of green consumerism appeared to be increasing steadily (Bremner, 1989) and reached a mature size to attract many marketers (Iyer & Banerjee, 1993). However, it is not only the size that attracts marketers, but also the affluence (Iyer & Banerjee, 1993), as a result of higher education and higher income (Schwartz & Miller, 1991) among green customers.

The level of environmental concern among consumers was high and increasing. The green consumer segment appeared to be a lucrative one. There was evidence that consumers are willing to act upon their concerns by using their purchasing power to favor environmentally friendly choices. Everything was set to trigger practitioners’ and academicians’ interest in the topic (Kangun et al., 1991; Manrai et al., 1997). This increased interest was evident in many businesses moving in the direction of green advertising (Manrai et al., 1997) and the special green advertising issue of Journal of Advertising in the summer of 1995. The second section of literature review is going to discuss the uncontrolled growth of green advertising and its unintended consequences.

Uncontrolled Growth of Green Advertising and Lack of Credibility

The increasing trend of green advertising quickly turned into a bandwagon that everyone wanted to jump disregarding the fact that a truthful green advertising requires substantial commitment and consideration from a strategic management and marketing
perspective (Davis, 1993). As a result, many companies got involved with green advertising, even when their products/services, manufacturing processes, or simply their overall intention were not in fact environmentally friendly (Carlson, Grove, Kangun, 1993; Garfield, 1991; Kangun et al., 1991). Mobil Chemical Company misrepresented its big trash bag as environmentally friendly when in fact it was not and thus, faced a lawsuit (Landler, 1991).

According to Kangun et al. (1991) ambiguous, trivial or misleading green claims lead to message discounting. This negative impact reaches far beyond greenwashed advertisements and jeopardizes even the genuinely green advertisements along with consumers’ good intention of supporting environmental sustainability through their purchases. Roper poll in 1990 showed that people think that companies are not environmentally responsible, and advertisements and labels about environmental claims are not trustworthy (Schwartz & Miller, 1991). Manrai et al. (1997) tested the effectiveness of the green claim strength in an experimental study and found that moderate claims are more trustworthy than extremely strong claims. One possible explanation could be the general tendency of people to question anything that sounds too good to be true.

Moreover, there is considerable philosophical and political debate about the credibility of even the genuinely green (green within the boundaries of dominant social paradigm: western capitalism) companies and their various claims (Fisk, 1973, 1974; Kilbourne, 1995, 2004). Kilbourne (1995, 2004) argues that it is almost impossible to be green by trying to sell more of anything, thus, marketing incurs a big part of the blame for environmental deterioration. Thus, he suggests that the best that can be achieved with
the current dominant social paradigm is perhaps lessening the negative impact. A purely ecological approach is possible only after dropping the dominant paradigm that in fact brought the environmental crisis that we are concerned today. Instead, an opposite paradigm should be adopted, which first intends to preserve the environment before profit. Any product or service produced can be argued to have negative impact on the environment, thus, the new paradigm should actually try not to sell, this notion is directly contrary to the current approach.

Due to the reasons discussed above, the consumer response to green advertising was not as favorable as expected by marketers (Davis, 1993). A survey showed that only six percent of the people found green advertising claims very believable (Chase & Smith, 1992). According to Carlson et al. (1993) using words with no clear meaning such as ozone friendly and bio degradable contributes to consumer suspicion. Other reasons are omission of critical information, false claims or straight lies.

Many brands who got involved in greenwashing had to face a backlash from the media and public (Carlson, Grove, Kangun, & Polonsky, 1996). Many of them, such as Mobil Chemical Company, even faced legal charges from various bodies of state (Carlson et al., 1996; Landler, 1991). Attorney Generals of many states, such as California, Florida, New York, Texas, and Washington among others, brought charges against green advertising abuses. According to Carlson et al. (1993), many companies withdrew from green advertising due to a plethora of numerous and varying state level regulations in the absence of uniform federal laws regulating green advertising practices (Aho, 1992; Dagnoli, 1992; Schlossberg, 1991). With the pressure from various trade
organizations, Federal Trade Commission established some guidelines to regulate environmental advertising claims in 1992 (Carlson et al., 1993).

According to these guidelines, environmental claims should:

1. Be substantiated; 2. Be clear as to whether any assumed environmental advantage applies to the product, the package, or both; 3. Avoid being trivial; and,
4. Make the basis from comparisons clear if comparisons are used (Carlson et al., 1993, p.29).

Green advertising has experienced quite a few ups and downs (Easterling, Kenworthy, & Nemzoff, 1996) due to regulations and the backlash from public. However, some prominent companies such as Procter & Gamble, Wal-Mart, Coca-Cola, Campbell’s Soup, and Sears maintained varying degrees of green advertising (Kassaye, 2001). The next section describes the current situation of green advertising.

**Current Situation of Green Advertising**

Although some fluctuations were observed in the frequency of green advertising in the past, it is still popular today (Leonidou, Leonidou, Paliwawadana, & Hultman, 2011) as the reasons that brought green advertising did not disappear: the environmental degradation and the concern of public. Choosing products or services with eco-friendly packaging, organic status, eco-friendly status, or fair-treatment status has been found to be an important part of decision making among half of the U.S. consumers (Half of U.S. Consumers, 2008). Many consumers are even willing to pay more for environmentally responsible options. One study found that more than half of the customers are willing to pay up to 6 percent more for a green restaurant (Hu, Parsa, & Self, 2010).
There is no doubt that consumers are more aware of environmental issues today with increased media coverage. However this increased awareness does not by itself turn into an automatic higher response to environmental advertising (Chang, 2011). Many consumers in many countries are still skeptical about the credibility of green advertisements (Leonidou et al., 2011; Pfanner, 2008). This could have been caused by a myriad of green advertisements with false or associative claims by many companies, and by the increased number of complaints to government agencies about misleading green advertisements (Leonidou et al., 2011). This problem can be alleviated by using substantive claims and showing endorsement by third party environmental associations in the advertisements.

Even though there is some hesitation in public about the credibility issues, green advertisements can still prove to be effective when appropriately prepared and executed (Davis, 1993). That is why green advertising is on the rise again (Belz & Peattie, 2009; Yin & Ma, 2009). According to Hartmann and Apaolaza-Ibanez (2009) there is a revival of green advertising recently. Thus, many companies such as Toyota, General Motors, Exxon-Mobil use green advertising to build a green corporate image. Even some hotel chains such as Intercontinental Hotels use green advertising to build an environmentally responsible corporate image. Green advertisements with substantive (Chan, Leung, & Wang, 2006), detailed, specific, relevant (Davis, 1993), factual and verifiable (Polonsky, Carlson, Grove, & Kangun, 1997) claims are found to be more effective compared to non-green ones. All the green advertisements in this study are attempted to be prepared according to these guidelines as much as possible.
Thus, Hypothesis I states: Green hotel advertisements (advertisements 2 thru 5) will be more effective than a non-green hotel advertisement (advertisement 1) while environmental involvement (EI) is controlled. Hypothesis I is further specified below:

Hypothesis Ia for budget segment: Green hotel advertisement with text will be more effective than a non-green hotel advertisement while EI is controlled.

Hypothesis Ib for budget segment: Green hotel advertisement with certification logos will be more effective than a non-green hotel advertisement while EI is controlled.

Hypothesis Ic for budget segment: Green hotel advertisement with visual green messages will be more effective than a non-green hotel advertisement while EI is controlled.

Hypothesis Id for budget segment: Green hotel advertisement with Combined green messages (text, logos and visual) will be more effective than a non-green hotel advertisement while EI is controlled.

Hypothesis Ia for luxury segment: Green hotel advertisement with text will be more effective than a non-green hotel advertisement while EI is controlled.

Hypothesis Ib for luxury segment: Green hotel advertisement with certification logos will be more effective than a non-green hotel advertisement while EI is controlled.

Hypothesis Ic for luxury segment: Green hotel advertisement with green visual images will be more effective than a non-green hotel advertisement while EI is controlled.

Hypothesis Id for luxury segment: Green hotel advertisement with Combined green messages (text, logos and visual) will be more effective than a non-green hotel advertisement while EI is controlled.

**Main Research Streams in Green Advertising**
The first studies that focused on the relationship between environmental concern and the marketing started around 1970 (Kassarjian, 1971; Kinnear & Taylor, 1973; Kinnear et al., 1974; Kohan, DeMille, & Myers, 1972). However these studies were not specifically investigating green advertising. According to Easterling et al. (1996), the early research in green marketing focused on various aspects, such as consumers (Anderson, Henion, & Cox, 1974; Belch, 1979), corporations (Garfield, 1991; Makower, 1993; Miles & Munilla, 1993; Pizzolatto & Zeringue, 1993) and policy (Clark, 1991; Garcia, 1991). The studies in the 1970s documented the concern in public about environmental issues and people’s willingness to pay higher tax to alleviate the issues (McClellan, 1970). Following studies mainly focused on identifying the green consumers based on their demographic and psychographic factors (Iyer & Banerjee, 1993).

The studies that specifically investigated green advertising can be grouped under following categories: content analysis of green advertisements, philosophical and political perspectives on green advertising, advertising effectiveness, increasing the credibility of green advertising, and buyer characteristics of green consumers. All of these categories are discussed below.

**Content Analysis of Green Advertising**

Most of the initial studies that investigated green advertising fall under this category. In most of the cases, green print advertisements have been examined for their content to develop a framework and classify them based on certain common characteristics among them. Kangun et al. (1991) examined 18 magazines and found over 200 green advertisements. They developed a typology to classify the misleading claims under three categories (p. 51):
1. The claim is overly vague or ambiguous; it contains a phrase or statement that is too broad to have a clear meaning;

2. The claim omits important information necessary to evaluate its truthfulness or reasonableness; and,

3. The claim is false or an outright lie.

They found that 58% of the advertisements examined were misleading. Following up on that study, Carlson et al. (1993) attempted to find out what type of green advertisements are more prone to be misleading. They added one more category, combination of the first three, to the three categories mentioned above to classify the advertisements. They also developed another typology to classify the type of environmental claims under five categories (p. 31):

1. Product orientation: The claim focuses on the environmentally friendly attributes that a product possesses. Example: This product is biodegradable;

2. Process orientation: The claim deals with an organization’s internal technology, production technique and/or disposal method that yields environmental benefit. Example: Twenty percent of the raw materials used in producing this good are recycled;

3. Image orientation: The claim associates an organization with an environmental cause or activity for which there is broad-based public support. Example (a): We are committed to preserving our forests. Example (b): We urge that you support the movement to preserve our wetlands;

4. Environmental fact: The claim involves an independent statement that is ostensibly factual in nature from an organization about the environment at
large, or its condition. Example: The world's rain forests are being destroyed at the rate of two acres per second; and,

5. Combination: The claim appears to have multiple facets, (i.e., it reflects a product orientation, process orientation, image orientation and/or an environmental fact).

Most of the advertisements they examined were found to be image oriented and few were product oriented. Image and product oriented claims were found to be more misleading respectively compared to process and environmental fact. Energy, Forest related and household/office products were found to be the most frequently advertised product categories.

Banerjee, Gulas, and Iyer (1995) used much broader categories and content analyzed green TV and print advertisements. They categorized each advertisement based on 7 major categories (p. 27-28):

1. Advertiser: the type of advertising company;
2. Product/image: the type of advertised product or what is being advertised?;
3. Greenness: three levels of greenness, shallow, moderate, and deep;
4. Characters: characters used in the advertisement;
5. Objective: the focus of the advertisement such as product, corporate or consumer behavior;
6. Appeal: such as Zeitgeist, emotional, rational, comparative and more; and,
7. Issues: the issues highlighted in the advertisement, such as atmosphere, land water and more.
They found that manufacturers, for-profit, and non-profit organizations, were the most frequent green advertisers, respectively. Corporate image, household consumables and personal consumables were among the mostly advertised. Only nine percent of the green advertisements were deeply green, 49% were moderate and 42% were shallow. Building an environmentally responsible corporate image was the most frequent objective of the advertisements followed by communicating environmentally friendly product attributes. Sixty seven percent of the issues highlighted in the green advertisements were general, not attributable to any specific environmental concern. The main finding of this study is that green advertisements are not equal and vary greatly on multiple grounds.

Easterling et al. (1996) examined print advertisements of several magazines between 1969 and 1994. Green product attributes and corporate image were most frequently advertised topics. Green advertising experienced two major peaks around 1979 and 1990 both were followed by a sharp decrease. Energy and oil companies were found to be frequent green advertisers.

Leonidou et al. (2011) carried out a content analysis study of international green advertisements in the Economist, an international magazine. They included the advertisements between 1988 and 2007. They also found a peak in 1990 and a sharp decrease in the following years. The period between 1994 and 2001 was very slow. After 2001, the frequency of green advertisements increased and peaked in 2006. Companies in oil and chemical industries were found to be most frequent green advertisers. Almost all of the green advertisements were sponsored by firms based in developed countries. 93 percent of green advertisers were manufacturers.

**Philosophical and Political Perspective Studies**
Some studies focused on the philosophical and political perspectives of environmentalism (Kilbourne, 1995, 2004). Both of these studies rightfully criticized the current situation. According to Kilbourne (1995, 2004), the environmental mess is attempted to be fixed by the exact approaches that caused it. Kilbourne (1995) introduced political and positional dimensions in order to better understand the greenness of an advertisement or a company. Political dimension has two extremes: reformism and radicalism. He argues that reformism, if at all, would contribute little to environmental well being since it does not abandon the dominant social paradigm that caused the environmental degradation. Radicalism is seen as an approach that changes the existing paradigm in favor of environment.

Two extremes of positional dimension are anthropocentric and ecocentric. Anthropocentric view suggests human superiority over environment. According to this, environment can be put behind human desires. Ecocentric view on the other hand suggests that environment is more important than human desires and humans are a small part of environment. According to this framework, there are five levels of greenness: environmentalism, conservationism, human welfare, preservationism and ecologism. Environmentalism is the lowest and ecologism is the highest level of greenness. Porritt and Winner (1988) describes environmentalism as an approach that does not “overthrow our whole polluting, plundering and materialistic industrial society… to create a new economic and social order which will allow human beings to live in harmony with the planet” (p. 9). This radical change can only be achieved by ecologism (Kilbourne, 1995).

Advertisement Effectiveness Studies
Advertisement effectiveness can be defined in various different ways since different advertisements have different goals ranging from disseminating information about new products to simply driving the sales of existing products. Thus, the measure of effectiveness can also range from recall of product related information by consumers to incremental sales. The problem with the sales volume as a measure of effectiveness is that there are numerous reasons that are hard to isolate but they still influence the sales such as economic climate, quality of the products, condition of competition, other marketing mix elements, and effects of previous advertising (Morgan, 1987). In the same direction with this view, Tellis (2004) also highlighted the complexity of measuring advertisement effectiveness with sales results by following arguments (p. 5-6):

1. Consumers may buy a product for a variety of reasons;
2. Advertising for a brand may occur in different media;
3. Advertising may have not only instantaneous effects but also carryover effects;
4. The effectiveness of the ad may also vary over the life of a campaign;
5. Successive ads have overlapping effects and overlapping decays; and,
6. Advertising response varies by segments and individuals within a market.

Because of the issues discussed above, many academic studies (Biehal, Stephens, & Curlo, 1992; Brown & Stayman, 1992; Bruner, 1998; Goldsmith & Lafferty, 1999; Goldsmith, Lafferty, & Newell, 2000; Mitchell & Olson, 1981; Muehling & McCann, 1993; Shimp, 1981) measured the effectiveness of advertisements with cognitive, affective and conative (Tellis, 2004) responses of viewers to the advertisements. This dissertation also follows this approach; various advertisements are shown to the audience and their responses are measured and compared.
Tellis (2004) suggested a simple yet encompassing model of how advertising works. The model has three main parts: input, process, and output. Inputs are intensity of advertising, media of advertising, and the ad content. These are the tools that the advertisers use or elements that the consumers are exposed to. Then consumers process these elements at cognitive, affective and conative levels. This is consumers’ mental processing stage. Then the outcome follows in the form of brand choice or purchase. Based on this model, the current study investigates the effectiveness of advertisement content on consumer behavior in the form of attitude toward the advertisement, attitude toward the advertised hotel and intention visit.

Tellis’s (2004) model clearly highlights the importance of advertisement content on advertisement effectiveness. The ability of the advertisement content to connect with the audience; communicate relevant, useful information; and persuade viewers about the superiority of the advertised product or service on important attributes, is fundamental to an advertisement’s success. Thus, there is a strong link between the advertising content and advertising effectiveness. There are unlimited decisions to make and options to choose from regarding the advertisement content such as different appeals and execution methods. Using green versus non-green appeals in print advertising is one of these decisions to make.

There are numerous studies that focused on the effectiveness of the green advertisements. Most of these studies used experimental designs comparing different appeals or approaches. The independent variables are usually achieved by manipulating certain aspects of the advertisements. Dependent variable, usually the effectiveness of the advertisement, is measured by scales such as attitude toward advertisement, attitude
toward product or brand, and purchase intention. Schuhwerk and Lefkoff-Hagius (1995) compared a green and a non-green (financial) appeal in the case of a laundry detergent. They also measured respondents’ involvement with the environment. They found that green appeal was significantly more effective for only those that are less involved with environment. Both of the advertisement copies had very similar content but the emphasis was manipulated: financial versus green. It can be concluded that those that are highly involved with environment were good at reading the environmental content in the advertisement even when it was not emphasized. Thus, they responded positively to both appeals, when greening was and was not emphasized.

Many green advertisements have at least one of the three distinct components: text, logo(s), or visual images to communicate green messages. Text is used to describe the greening initiatives, and explain benefits to the environment or to the consumer. Logos are used to show association with a green certification program or a non-profit environmental organization. A legitimate certification logo when noticed by the viewer can help solve the problem of greenwashing and increase the credibility of the advertisement. Visual images are used to reinforce the greening message or claim and create a quick positive association between the advertiser and the environmental responsibility with just a glance without having to read the advertisement content elaborately.

Tang, Fryxell, and Chow (2004) investigated the influence of verbal and visual cues in eco-label designs over customers’ purchasing behavior. They found that a product with a visual eco label is desired more compared to a product without any eco label. The reason behind this is based on two principals. First, people tend to prefer green options,
and second, according to studies in cognitive psychology, visual communication is easier to recall and memorize compared to textual communication (Kaplan, Kaplan, & Sampson, 1968; Lieberman & Culpepper, 1965; Lutz & Lutz, 1978; Paivio, 1969; Paivio, Roger, & Smythe, 1968a; Sampson, 1970; Scott, 1967).

According to Tang et al. (2004), theory of picture superiority effect over words is widely used in print advertisement with many visual elements to increase attention and recall, and influence audience’s perception in favor of the promoted product or company. Other researchers suggested that verbal information with high level of concreteness can be absorbed as quickly as pictorial information (Lutz & Lutz, 1977) and result in high levels of recall (David, 1998). Concrete words refer to objects, materials or people (Paivio, Yuille, & Madigan, 1968b). After an extensive review of relevant studies, Paivio (1971) concluded that although concreteness increases the recall of textual information, visual information still performs better. He also suggested that visual information supported by verbal information performs best.

Paivio (1971) explains the superiority of pictorial information by a dual code theory. According to this theory, a stimulus is recorded in memory by verbal code, visual code or both. Best recall and absorption of information occurs when both the visual and verbal codes are activated to store information. Pictorially presented information activates both the visual and verbal codes to store information for future recall. That is why pictorial information is superior. Verbally presented information with concrete words has a less likelihood than pictorial information but more likelihood than verbal information with abstract words to activate both visual and verbal codes for memory. Thus, the order of superiority is as follows: Pictorial information is more effective than
concrete verbal information, and concrete verbal information is more effective than abstract verbal information. Since the uses of visual and verbal codes have additive effects, best results can be achieved by pictorial information supported by verbal information (Paivio, 1971).

Tang et al. (2004) carried out an experimental study, which confirmed that textual information in support of the visual information on the package of a consumer product increased the money spent on these products significantly. When textual information is added to visual eco label, the overall desirability of the product increased. Their study confirmed that both visual and textual cues individually and together contribute to the desirability of the product. They did not find any interaction between textual and visual cues, and concluded that their effect is additive.

However findings of past research studies challenging the superiority of visual cues over verbal ones are undeniable (David, 1998; Lutz & Lutz, 1977; Stafford, 1996). Thus, textual and verbal cues are being tested in this study to understand how they perform in the context of green hotel advertisements. It is predicted that there will be a variation among the effectiveness of three strategies utilizing text, logo and visual image. This leads to the statement of Hypothesis II.

Hypothesis II: There will be effectiveness difference across three strategies of greening in advertisements: using text, logo, and visual image while EI is controlled.

Hypothesis IIa: There will be effectiveness difference across three strategies of greening (using text, logo, and visual image.) in advertisements for the budget hotel segment while EI is controlled.
Hypothesis IIb: There will be effectiveness difference across three strategies of greening (using text, logo, and visual image) in advertisements for the luxury hotel segment while EI is controlled.

Of all the four green advertisements (advertisements 2 thru 5), the green combination one (advertisement 5) has the highest green content and includes both visual and verbal information (combination of text, logo and visual image). Paivio’s dual code theory (1971) and Tang et al.’s (2004) empirical finding suggest that visual information supported by verbal information performs best due to the additive effect of each message medium, which leads to Hypothesis III.

Hypothesis III: Green combination advertisement (advertisement 5) will be the most effective advertisement among all five advertisements while EI is controlled.

Hypothesis IIIa: Green combination advertisement (advertisement 5) will be the most effective advertisement among all five advertisements for budget segment while EI is controlled.

Hypothesis IIIb: Green combination advertisement (advertisement 5) will be the most effective advertisement among all five advertisements for luxury segment while EI is controlled.

Obermiller (1995) compared two separate approaches to green advertising: baby is sick versus baby is well. Baby is sick approach emphasizes that environmental issues are very dire and serious. Baby is well approach emphasizes that it is not too late and consumers and companies can make a positive impact toward nature’s well being. He found that effectiveness of these two approaches depends on the particular situation. Sick baby approach was found to be more effective for situations when people think that the
environmental issue at hand is not that important or when people are unaware of the environmental issue. The advertisements in this kind of situations serve as a wakeup call and increase the awareness of viewers. Well baby approach was found to be better for situations when the people were already aware about the seriousness of the environmental issue at hand. Using sick baby approach in a situation like this is redundant and can even cause a loss of hope and consumers might think that they cannot change the already extremely bad course with their purchases.

Manrai et al. (1997) investigated the influence of green claim strength and country disposition on product and company evaluation. They found that a moderate green claim consistently performed better than extremely low or high claim strength. When the claim was low in strength, viewers found it trivial and thus, their belief did not change. When the claim was extremely high in strength to the point of being unrealistic, viewers then found it hard to believe or too good to be true. Chang (2011) also reached a similar conclusion: High effort claims caused greater levels of discomfort and resulted in low advertisement believability among highly ambivalent customers. Thus, the green claims in this study are kept moderately high.

Manrai et al. (1997) also found an interaction between country disposition and claim strength on consumers’ evaluation of the product or company. A highly positive country disposition yielded more positive evaluation only when the claim was moderate. When the claim was extremely low or high, a high country disposition yielded less positive evaluations. People with highly positive disposition of a country are expected to know more about that country, thus, they are prompt in discrediting trivial claims associated with that country or claims that are a too good to be true (Manrai et al., 1997).
Conceptual Studies Aimed at Increasing the Credibility of Green Advertising

Some conceptual studies attempted to help increase the credibility of green advertising (Davis, 1993; Ferguson & Goldman, 2010; Mendleson & Polonsky, 1995). Davis (1993) suggested various strategies to increase the credibility of the green advertising: increase claim specificity, provide detailed, useful and relevant information to consumers. These guidelines have been followed while developing the green advertisements in this study. Ferguson and Goldman (2010) highlighted the disapproval of the consumers about the fact that how companies allocate relatively small budgets for the causes but larger budgets to advertise their involvement with these causes. They discussed a few best practice examples and suggested that genuine and creative efforts in green causes can increase the loyalty of customers. Mendleson and Polonsky (1995) offered strategic alliances with non-profit environmental groups. The association with these groups can be used in advertising by visual and textual cues thus, increasing the credibility of green advertising or any green corporate communication. A common way of reflecting partnership with third party environmental organization is using their logos in the advertisements. Thus, the experiment in this study is testing the effectiveness of using logos in print advertisements (advertisement 3 for both budget and luxury segment).

Profile of Green Consumers and Implications for Advertising

It has been suggested that green consumers tend to be more educated, older, usually female, with more income, and liberal (Levin, 1990; Schwartz & Miller, 1991). However, other studies found little or no relationship between the demographic variables and green consumer behavior (Schwepker & Cornwell, 1991; Shrum, Lowrey, & McCarty, 1994). Schwepker and Cornwell (1991) and Ellen et al. (1991) found that there
is a positive relationship between internal locus of control (consumer’s confidence that his/her actions will have significant impact) and green consumer behavior, as well as post purchase behavior such as recycling (Shrum et al., 1994). Shrum et al. (1995) attempted to profile green consumers to develop appropriate advertising strategies for the target markets. They found that gender plays an interactive role on green behavior. Green females are more skeptical and critical of advertisements, they often switch TV channels to avoid advertisements, they prefer print advertisement to TV ones. Green consumers were also found to be keen in new products, information savvy, opinion leader, active in word of mouth, careful in shopping, not impulse buyer, price and quality sensitive (Shrum et al., 1995).

Stafford, Stafford, and Chowdhury (1996) investigated the relationship between various green appeals and demographics such as age and gender. Health, waste and wildlife issues were the three most important appeals respectively in regards to purchase intention of young student consumers. Although health and waste issues remained as the two most important appeals, wildlife was replaced by energy issues for working adults. Overall, student population seemed more responsive to environmental appeals. This is conflicting with some of the findings discussed above (older females tend to be greener). Health, waste and wildlife appeals are the three most important appeals among females in regards to purchase intention. Health, energy awareness and popular issues were the most important three appeals for males. Overall, females seemed to be more responsive to green appeals. Health appeal was found to be consistently most important appeal regardless of age and gender. The following section is discussing the green marketing studies in hospitality literature.
Green Marketing and Green Advertising in Hospitality Literature

Although greening practices have been adopted by many operators as well as leading brands in hospitality such as Hilton and Marriott, green marketing literature in hospitality context is very rare (Lee, Han, & Willson, 2011). Almost all of the existing studies are scattered in different subtopics of hospitality marketing and they lack a concerted effort to build on each other. In fact, there are only two studies (Chan et al., 2006; Hu, 2012) that specifically address the green advertising for hotels. However the fact that all of these studies have been conducted in the last a few years is promising for the development of the green marketing and advertising topic within the context of hospitality. The existing studies of green marketing in hospitality literature are discussed below.

The first study that focused on the effectiveness of the green advertising in hospitality was an experiment conducted by Chan et al. (2006) among Chinese respondents. The experiment was a 2x3 design and was carried out twice, for a fictitious fast food and a hotel brand. Fast food represented low and hotel represented high involvement situation. One of the independent variables, the perceived eco-friendliness of the originating country (where the brand originates from), had two levels: Eco-friendly and eco-unfriendly. Second variable, the environmental claim of the advertisement, had three levels: No claim, substantive claim and associative claim. They found that advertisements with environmental claims in general are more effective than non environmental ones, but substantial claims provide the best results in the case of both hotel and the fast food advertisement. The perceived eco-friendliness of the originating country interacted with the environmental claim
significantly only for the hotel advertisement, which is a high involvement situation. When the originating country is perceived eco-friendly, then the substantive claim was found more effective than associative claim. The superior positive effect of substantive claim on advertisement effectiveness was however reversed when the originating country was perceived eco-unfriendly. Thus, associative claim in the hotel advertisement performed better than the substantive claim when the originating country is perceived eco-unfriendly. This is an important caution that effectiveness of the green advertisements, especially ones with substantive claims are not always linear and several factors such as perceived eco-unfriendliness of the advertiser can interact with it.

Hu (2012) investigated the influence of an environmental claim (substantive versus associative) and emotional benefit (self-expressive versus nature-related) on consumers’ response to an advertising. He controlled the level of environmental involvement (highly involved versus low involved) to examine the moderating effect it might have. Substantive claim was found to be significantly more effective than associative claim in regards to attitude toward advertisement and brand but not in regards to purchase intention. A self expressive benefit was found to be significantly more effective in all three measures of advertisement effectiveness; attitude toward advertisements, brand and purchase intention. The persuasiveness of the advertisement reached its maximum when a substantive claim was used with a self expressive benefit. There was also an interaction between the claim and benefit. Substantive claim paired best with self expressive benefit, while associative claim paired best with nature related benefit. Customers highly involved with environment were found to be more
responsive to advertisements with substantive claims. However, low involved customers consistently responded poorly to any combination of claim and benefit compared to highly involved customers.

Lee et al. (2011) identified seven expected outcomes of staying at a green hotel from the perspective of consumers through a qualitative study: “environmental protection, social responsibility, healthy guest rooms, eco-friendly practices, eco-friendly amenities, organic foods and reduced expenses” (p. 845). These seven expected outcomes have been found to be significant predictors of visit intention as well as word mouth intention. They explained 40% and 39% of the variation for visit and word of mouth intention. Out of the seven outcomes eco-friendly practices, healthy guest room and reduced expenses were found to be the best predictors of visit intention and they explained 40% of the variance in a stepwise multiple regression. Healthy guestrooms, reduced expenses and organic foods were the best predictors of word of mouth intention and they explained about 40% of the variance of the variance in a stepwise multiple regression.

Millar, Mayer, and Baloglu (2012) studied the importance of green hotel attributes among business and leisure travelers. Although business travelers appeared to be more concerned about the environment and placing higher importance on green hotel attributes, authors concluded that two segments are very similar. They suggested that both leisure and business hotels can target green market indiscriminately. One surprising finding of this study is that green certification of a hotel was found as the second to least important attribute while a simple attribute (such as not changing the linens daily) was found to be the most important attribute for business and second
most important for the leisure travelers. It is so ironic that in fact this attribute of not changing the linens and thus claiming to be green was the practice that prompted Jay Wester, a biologist from New York to coin the term greenwashing in 1986 (Orange & Cohen, 2010).

Graci and Dodds (2008) approached the topic from a pragmatic business perspective, and highlighted numerous benefits that hotels can leverage by going green. These benefits are “cost savings, competitive advantage, increased employee loyalty and customer retention, complying with and superseding legislative requirements, risk management, and fulfilling social responsibility” (p. 258). Bohdanowicz (2005) studied the attitude among European hoteliers toward environment. After highlighting the critical importance of environment and natural resources for the well being of hospitality industry, she reports that the environmentally responsible initiatives were treated as a secondary concern behind the operational concerns. She also reports that managers of large chain hotels were found to be more aware and active in terms of environmental initiatives compared to smaller independent hotel managers.

Laing and Frost (2010) investigated greening within the context of festival management. They discuss the importance of involving interested stake holders and highlight various ways in greening the event operations as well as some challenges. Some operational considerations in staging a green event are selection of a location, means of transportation, waste management, using green energy, the environmental friendliness of the materials used, methods and volume of logistics.

Barber, Taylor, and Deale (2010) investigated the influence of environmental involvement, environmental attitude and demographics on environmental behavior and
purchase intention within the context of wine tourism. Fifty-eight percent of the respondents were found willing to pay up to 30% premium to taste wines at an environmentally responsible winery. Those with less income were found more willing to pay a premium compared to those with higher income, however those with higher income expressed a stronger support for the statement that wineries must protect the natural and cultural environment. Females and younger generations were found more willing to pay more for environmentally friendly wineries compared to males and older generations. Females were also found more in agreement with the need for environmental protection. They showed that environmental involvement predicts environmental attitude and environmental behavior, and attitude also separately leads to behavior. Behavior in turn leads to purchase intention. All the connections are stronger for females except for direct connection between involvement and behavior. This exception is only because, for female population, much of the influence of involvement on behavior is through the attitude, rather than direct as in the case of males. Thus, females are found to be greener wine tourists and purchasers.

As the discussion above shows, the hospitality literature contains only two scholarly studies regarding the effectiveness of the green hotel advertisements (Chan et al., 2006; Hu, 2012) both of which were conducted in Asia. Neither of these studies investigated whether green advertising effectiveness varies by hotel segment. The effectiveness of the green advertisement may be influenced by the segment of the hotel just as it was influenced by the perceived eco-friendliness of the country of origin in the study of Chan et al. (2006) that was discussed above.
Some that being environmentally responsible may require a compromise from the quality of the life. Energy and water saving equipments in hotels might be perceived to hinder quality through the use of low flow shower heads in bathrooms or motion sensors that cut off the electric in guestrooms thus stop the air conditioning and increase or decrease the temperature of the room above or below the comfort zone by the time guests return back to their rooms. Thus the patrons of luxury hotels who pay a premium for the promise of a higher level of luxury and comfort may not be as willing to compromise from quality as the patrons of budget hotels who might anticipate that savings from greening initiatives will be reflected in lower price of the hotel and thus benefit them directly.

This logic however is contradictory to an industry report by Ernst & Young (2008) that states that most of the initial green hospitality operations cater to luxury market. Past studies provide conflicting suggestions as well. Barber et al. (2010) found that those with less income are more willing to pay a premium to visit eco-friendly wineries. Other scholars however profiled green consumers as more affluent with more education and more income (Iyer & Banerjee, 1993; Levin, 1990; Schwarz & Millar, 1991).

Other than these conflicting suggestions, there exist neither any scholarly studies nor any trade publications about relative success of green advertising for budget or luxury segments. Thus, an empirical study is highly needed to investigate how green advertising works on budget versus luxury hotel segments. Hypothesis IV is proposed below to test whether there is any effectiveness variation between budget and luxury hotel segments in green advertising.
Hypothesis IV: The effectiveness of the green advertising will vary based on hotel segment: budget versus luxury while EI is controlled.

Hypothesis IVa: The effectiveness of the green hotel advertisement with green text will vary based on the hotel segment while EI is controlled.

Hypothesis IVb: The effectiveness of the green hotel advertisement with green certification logo will vary based on the hotel segment while EI is controlled.

Hypothesis IVc: The effectiveness of the green hotel advertisement with green visual images will vary based on the hotel segment while EI is controlled.

Hypothesis IVd: The effectiveness of the green hotel advertisement with green combination (containing green text, logo and visual images) will vary based on the hotel segment while EI is controlled.

**Summary of Chapter 2 and the Restatement of Hypotheses**

The literature review started with the beginning of green consumerism and highlighted its development, how it decreased and increased in popularity at various times, how the consumers started using their purchasing power to help alleviate the environmental concerns they have. The uncontrolled growth of green advertising caused it to lose its credibility in the absence of legal boundaries to regulate green advertising. Currently however, the green advertising is once again on the rise due to increased public concern. Main research streams on green advertising such as content analysis studies, philosophical and political studies, advertisement effectiveness studies and their findings have been discussed. Finally, existing green advertising and marketing studies in hospitality have been brought into perspective. Following the relevant discussion based on the literature review, hypotheses of the dissertation have
been proposed throughout the literature review. A summary of main hypotheses (not the sub hypothesis restated for each tested advertisement or segment) are presented on Table 1.

Chapter 3 follows next. It provides a detailed description about the sample, experimental design, questionnaire, stimulus manipulations, independent and dependent variables, measurement scales, reliability and validity issues, as well as the statistical methods that will be employed for data analysis and hypothesis testing.

Table 1

<table>
<thead>
<tr>
<th>Hypothesis Number</th>
<th>Statement of Hypothesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothesis I:</td>
<td>Green hotel advertisements will be more effective than a non-green hotel advertisement while EI is controlled.</td>
</tr>
<tr>
<td>Hypothesis II:</td>
<td>There will be effectiveness difference across three strategies of greening in advertisements while EI is controlled: Using text, logo, and visual image.</td>
</tr>
<tr>
<td>Hypothesis III:</td>
<td>Green combination advertisement will be the most effective advertisement among all five advertisements while EI is controlled.</td>
</tr>
<tr>
<td>Hypothesis IV:</td>
<td>The effectiveness of the green advertising will vary based on hotel segment: budget versus luxury while EI is controlled.</td>
</tr>
</tbody>
</table>
CHAPTER 3

METHODOLOGY

The purpose of this study was to measure relative effectiveness of the green hotel advertisements with five varying copy characteristics (non-green; green with text; green with logos; green with visual image; green with combination of text, logo, and image) and find out possible variations due to two bipolar hotel segments (budget versus luxury). This chapter discusses the sampling frame, experimental design, questionnaire, stimulus manipulations, independent and dependent variables, measurement scales, reliability and validity issues, and the statistical methods that were employed for data analysis and hypothesis testing.

Sample

The sample was reached online through Qualtrics (2013). Data collection continued until an adequate cell size was reached for appropriate analysis. It is suggested that sample size for a multivariate analysis must at least be 20 respondents in each cell, and preferably more, as higher levels of power are reached with larger cell sizes (Hair, Anderson, Tatham, & Black, 1998). Thus, a minimum of 50 respondents in each cell were sought in this study. A total of 504 respondents for 10 (5 x 2) cells was reached. Each cell size was kept almost equal by random distribution of respondents to cells to keep the statistical analyses more straightforward (Hair, et al., 1998). Cell sizes ranged between 50 and 52 respondents. Respondents in each cell were exposed to a manipulated advertisement of either a budget hotel or a luxury one. The advertisement was one of the ten advertisements that are described more in detail below in stimulus manipulations.
After exposure to one of the ten possible advertisements, each participant was asked to respond to the scales to measure advertisement effectiveness.

**Experimental Design**

A 5 x 2 between subjects experimental design was utilized in order to reach causal and conclusive results about the effectiveness of the green hotel advertisements. All ten advertisements, five for the budget segment and five for the luxury segment are presented in Table 2 as a reference.

Table 2

*Advertisements for Each Cell Formed by Combination of Independent Variables*

<table>
<thead>
<tr>
<th>Non-Green</th>
<th>Green with text</th>
<th>Green with logos</th>
<th>Green with visuals</th>
<th>Green with combination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Budget</td>
<td>Budget</td>
<td>Budget</td>
<td>Budget</td>
<td>Budget</td>
</tr>
<tr>
<td>Luxury</td>
<td>Luxury</td>
<td>Luxury</td>
<td>Luxury</td>
<td>Luxury</td>
</tr>
</tbody>
</table>

As shown in Table 2, the five levels of the first independent variable were about the greenness of the advertisement:

1. non-green advertisement;
2. green advertisement with textual cues for greening;
3. green advertisement with logo to show green certification;
4. green advertisement with visual cue for greening; and
5. green combination advertising with text, logo and visual image.

The two levels of the second independent variable, hotel segment, were:

1. budget hotel; and,
2. luxury hotel.
According to this research design, the sample was randomly divided into 10 groups, five for the budget and five for the luxury segments. All the respondents in each cell filled out identical questionnaires to measure the advertisement’s effectiveness. However, each respondent were randomly shown different advertisements (i.e., one of the ten possible advertisements). Thus, the potential differential effectiveness of each advertisement was reflected on the questionnaires completed by the respondents.

**Questionnaire**

The questionnaire had several sections. The first section asked questions about the residence and hotel stay frequency of the respondents for screening purposes. Only those living in the United States and only those who stayed at a hotel at least once in the last two years were allowed to participate in the study.

The second section of the questionnaire started by briefing the respondents about the study and asked them to give adequate attention to the stimuli and the following questions. Then the stimulus material, one of the ten manipulated advertisements, was randomly shown to the respondents to look at it as much as they wanted. Once the respondent clicked the arrow on the screen to continue, the advertisement disappeared and the scales measuring dependent variables appeared on the screen. This happened after respondents viewed the advertisement and were exposed to the stimulus variable. The rest of the second section in the survey measured the dependent variable which consisted of three dimensions of advertisement effectiveness. These dimensions are described more in detail below.

A manipulation check followed the measurement of the dependent variables; asked the respondents two questions. The first one asked the segment of the hotel that
was shown in the advertisement (budget versus luxury). The second one asked the green status of the advertisement (non-green, green with text, green with logo, green with graphic images, or green with combination of all). Only those respondents who got these questions correct were included in the analysis. This provided two advantages: first it worked as a manipulation check to make sure that stimuli worked as intended and the message in the advertisement was passed on to the viewer; second, only the respondents that paid adequate attention to the stimuli and the questions are included in the study.

Because of the online nature of the data collection, it was important to have certain measures of quality control in allowing respondents to be included in the analysis. With similar concerns, respondents who filled out the survey in less than 4 minutes were eliminated from analysis. It is unreasonable to give adequate care and fill out the entire survey in less than 4 minutes. The examination of several cases that were filled out in less than four minutes revealed quite a few inconsistencies to justify their elimination.

The fourth section of the survey measured environmental involvement of the respondents with two separate scales that are discussed more in detail below.

The last section of the survey collected demographic information, as shown below, to describe the sample:

- gender, dichotomous variable: male or female;
- age, continuous variable: such as 18, 25, 39;
- ethnicity, categorical variable: Caucasian, Hispanic-Latino, African American, Asian American, or other;
- level of income, ordinal variable with cut off points at: $35,000; $55,000; $75,000; $95,000; and,
• level of education, ordinal variable: high school or less, some college, associate’s degree, bachelor’s degree, and graduate degree or higher.

**Independent Variables**

There were two independent variables to be tested in this study. The first independent variable was the five levels of greenness status of the advertisement. The second independent variable was the segment of the hotel appearing in the advertisement with two levels—the budget versus the luxury segment. Manipulations of the independent variables are further explained below under the heading of stimulus manipulations.

**Measurement of Environmental Involvement as Covariate**

It has been suggested that consumers’ involvement with environmentally responsible behaviors at home would lead to a greater importance placed on the green initiatives of the hotels (Millar, Mayer, & Baloglu, 2012); this implies a greater sensitivity to perceive and appreciate green messages in hotel advertisements. Schuhwerk and Lefkoff-Hagius (1995) also suggested that higher environmental involvement increases the likelihood to pay more attention to environmental messages in advertising.

In order to measure and control environmental involvement of respondents, two separate scales were included in the questionnaire. The first scale is called the green index and was adapted from the study by Millar et al. (2012). It included seven environmentally friendly activities that respondents could perform at home: “Recycle cans and bottles, use energy efficient light bulbs, reuse plastic bags, recycle paper and card board, use low-flow water fixtures, use cloth grocery bags, and buy organic groceries” (p. 403).

Participants were asked to respond these activities with yes or no. Each response of yes contributed one point and no contributed zero point thus the score for green index ranged
from zero to seven, the higher the score given the more involved the respondent is assumed to be.

The second scale was adapted from Schuhwerk and Lefkoff-Hagius (1995). It measured overall involvement with environment by four items using seven-point Likert scale: “I am concerned about the environment; the condition of the environment affects the quality of my life; I am willing to make sacrifices to protect the environment; and my actions impact on the environment” (p. 49). Schuhwerk and Lefkoff-Hagius (1995) reported that this four item scale resulted with a Cronbach’s alpha of .90 and correlated well with twelve item New Environmental Paradigm (NEP) scale (Dunlap & Van Liere, 1978) at .65, p<.01.

**Stimulus Manipulations**

A total of ten (5 x 2) advertisements were designed to carry out the experiment. The advertisement copies were designed by a professional graphic designer following the instructions of the researcher. All ten advertisement copies used in this experiment can be viewed in the Appendix A. A fictitious hotel chain name was adopted to use in the advertisements in order to control the potential bias of an already existing brand (Chan, Leung, & Wang, 2006; Perrien, Dussart, & Paul, 1985). It has been demonstrated that the kind of manipulations used in the current study, such as changing the visual elements of the advertisement, has the ability to influence even “a priori and well developed set of beliefs” (p. 194) about existing brands (Percy & Rossiter, 1983). Thus, the findings of the current study will not be limited to fictitious or new brands only.
Hotel Segment Manipulations

Manipulation of the hotel segment in the advertisement copies were achieved by intentionally varying the underlined statements in the advertisements to signal the budget or luxury segment of the hotel, respectively, as is shown below.

**Budget.** Get the best value for your lodging needs! At Westheimer Hotels, we are proud to provide you with the best value for your lodging needs. We promise spacious rooms, comfortable beds and great deals, all in a friendly atmosphere. Whether for a vacation with your family or a business trip, we are there to welcome you. Make us your home away from home!

**Luxury.** Experience the ultimate luxury for your senses! At Westheimer Hotels, we are proud to provide you with the ultimate luxury for your senses. We promise spacious rooms, comfortable beds and finest personal service, all in an upscale atmosphere. Whether for a vacation with your family or a business trip, we are there to welcome you. Make us your home away from home!

Segment manipulation was also reinforced by the inclusion of a picture from a Motel 6 hotel room to represent the budget segment and from a luxury hotel in Vail Colorado to represent the luxury segment. All other textual, visual and dimensional elements in the budget and luxury segments were identical.

Green Status Manipulations

**Non-Green control advertisements.** The design of the stimulus advertisements started with two comparable advertisements: one for a budget hotel and other for a luxury hotel. These two advertisements were intended to be equal in terms of advertisement effectiveness in order to maintain internal validity. Thus, they were designed on equal
grounds; they had the same (or similar) textual and visual elements, the same font size, the same background, and both were full page magazine advertisements. They varied only on the segment feature. The remaining eight types of green advertisements were developed out of these two control copies.

**Green with text.** A textual message about greening efforts of the advertised hotels was added to both of the control copies (i.e., budget and luxury) of the advertisements, to make them green with text. The added text read as follows:

We care for the environment as much as we care for our guests so that you have a guilt-free stay with less carbon footprint in our hotels. Here is how we go green:

- 45% of our electric comes from renewable sources;
- All rooms and public areas have energy efficient lighting;
- Motion sensors prevent electric waste;
- Solar panels heat 60% of our hot water;
- Waste water is recycled into irrigation for plants; and,
- We are certified green by the Green Hotel Association, and by LEED, the nationally accepted benchmark for the design, construction and operation of high performance green buildings.

**Green with logos.** Two logos to represent third party endorsement by environmental organizations were inserted in both of the control copies of the budget and luxury advertisements in order to make them green with logos. Green text was not included in these two copies. The first logo came from a green hotel certification program and the second logo came from Leadership in Energy and Environmental Design (LEED)
(see Kubba, 2010 for more information on LEED). Both of these logos are presented in Figure 1.

Figure 1. Green certification logos used in some of the advertisements.

**Green with graphic image.** A professional graphic designer was commissioned to design a graphic image to visually depict most of the greening initiatives mentioned in the green text. This graphic image, which is presented in Figure 2, was added to both of the control copies (budget and luxury) to make them green with a visual graphic image. Green text and logos were not included in these two copies.

Figure 2. Visual graphic design to communicate greening initiatives of the advertised hotel.
**Green with combination.** Green text, logos and visual image all together were inserted in both of the control copies for the budget and the luxury segment advertisements. Substantive environmental claims were used for all four levels of the green advertisements, because the existing literature found them to be more effective than associative claims (Chan et al., 2006; Hu, 2012). For example, the green text provided tangible details about environmental commitment, green certification logos were legitimate, visual cues depicted distinct green messages about the initiatives taken by the hotel chain.

**Manipulation Check**

Respondents were asked to identify the segment of the advertisement that was shown to them. They were also asked to identify the green status of the advertisements, one of the five possible scenarios. Only the respondents who correctly identified the advertisements they saw were included in the final analysis. These two questions served as manipulation checks and also helped to control the quality of all online responses.

**Dependent Variables and Measurement**

The dependent variable in this study was advertising effectiveness. Previous research has evaluated advertisement effectiveness by measuring various dimensions such as attitude toward advertisement, attitude toward the brand or product and purchase intention (Biehal, Stephens, & Curlo, 1992; Brown & Stayman, 1992; Bruner, 1998; Goldsmith & Lafferty, 1999; Goldsmith, Lafferty, & Newell, 2000; Mitchell & Olson, 1981; Muehling & McCann, 1993; Percy & Rossiter, 1980; Rossiter & Percy, 1982; Shimp, 1981). Thus, in accordance with prior literature, advertisement effectiveness was captured by using three separate 7-point semantic differential scales: attitude toward...
advertisement; attitude toward the hotel; and, purchase intention. Some studies reported that intention to purchase was usually less responsive to independent manipulations than attitude (Mitchel & Olson, 1977, 1981; Percy & Rossiter, 1983; Wright, 1979).

According to Rossiter and Percy (1980) “this may result because intention to act is an operant rather than a classically conditioned response and as such is under the control of variables outside the content of the advertising [for example, price, distribution, and so forth] ” (p. 195). Thus, a similar finding with less (or no) effect on purchase intention does not mean that the tested manipulations are not effective, as long as there is significant effect on attitude.

**Attitude Toward the Advertisement**

Attitude toward advertisement was measured by the following statements adapted from MacKenzie and Lutz (1989):

This advertisement is:

- good-bad;
- pleasant-unpleasant;
- favorable-unfavorable;
- convincing-unconvincing; and,
- believable-unbelievable (p. 58).

These items were subsequently used in studies by Goldsmith and Lafferty (1999), Schuhwerk and Lefkoff-Hagius (1995), and D’Souza and Mehdi (2005), with Cronbach’s alpha reported at 0.93, 0.87, and 0.69, respectively.

**Attitude Toward the Hotel**

Attitude toward the hotel was measured by the following statements:
This hotel is:

- unfavorable-favorable;
- bad-good;
- poor quality-good quality; and,
- negative-positive (Bruner & Hensel, 1992; Goldsmith & Lafferty, 1999; Hu, 2012). Using the same scale, Goldsmith and Lafferty (1999), and Hu (2012) reported Cronbach’s alpha at 0.96 and 0.90, respectively.

**Purchase Intention**

Purchase intention was measured by:

- very likely-very unlikely;
- probable-improbable; and,
- possible-impossible (Bailey, 2005; Goldsmith & Lafferty, 1999; Hu, 2012; Yi, 1990). Goldsmith and Lafferty (1999), and Hu (2012) reported Cronbach’s alpha at 0.96 and 0.91, respectively.

**Reliability and Validity**

**Reliability**

Reliability refers to the quality of a study and the scales used in it to be able to generate same or similar results when conducted at different times. Thus, it can be regarded as the response consistency of the scale. If a scale is unreliable, the validity will be lost as well, and so the findings of the study cannot be trusted at all. To ensure reliability in this study, multi item scales that had been tested and found to be reliable by other studies were used (Bailey, 2005; Bruner & Hensel, 1992; D’Souza & Mehdi, 2005; Goldsmith & Lafferty, 1999; Hu, 2012; MacKenzie & Lutz, 1989; Schuhwerk & Lefkoff-
Hagius, 1995; Yi, 1990). According to Nunnally (1970), reliability is accomplished if Cronbach’s alpha is greater than .70. The satisfactory levels of reliability that were reported in previous studies are cited above. Although reliability is a mandatory requirement for validity, reliability does not guarantee validity.

**Validity**

Validity has many types; it may involve the scales used, or the experimental design, or the generalizability of the study. Generally, validity can be viewed as correctness and accuracy (i.e., is the study truly measuring what it purports measure?).

**Construct validity.** Construct validity refers to the ability of a scale to correctly and accurately measure what it intends to measure. To ensure construct validity, only the scales that had been developed and used by sound past studies published in reputable journals were used in this dissertation (Bailey, 2005; Bruner & Hensel, 1992; D’Souza & Mehdi, 2005; Goldsmith & Lafferty, 1999; Hu, 2012; MacKenzie & Lutz, 1989; Schuhwerk & Lefkoff-Hagius, 1995; Yi, 1990).

**Internal validity.** Internal validity is an especially important consideration for experimental studies like this one. It refers to the strength and directness of the connection between cause and effect. In other words, were they the ostensible manipulations in the advertisements that caused the variation in the measurement of advertisement effectiveness, or were there some other confounding variables (or bias) in assigning respondents into various cells of the experiment that could contribute to the variation in the dependent variable? In order to ensure internal validity, respondents were randomly distributed to one of the ten experimental cells to prevent any potential bias that might have been caused by any systematic distribution. In addition to this, strict
manipulation rules were followed in designing the advertisements, while keeping all other aspects identical. Each green advertisement is manipulated in only one direction by inclusion of text, logo, graphic image or combination of all. For example, no green textual cues were included in logo and graphic image advertisements, or no logo was used in green text or green graphic image advertisements. Non-green advertisements included none of the green cues. The hotel segment was manipulated by two different hotel room images (budget vs. luxury) and through some changes in the wording of the advertisements (see Appendix A). The five budget segment advertisements started with a headline reading: “Get the best value for your lodging needs”. The five luxury segment advertisements started with another headline reading: “Experience the ultimate luxury for your senses”.

**External validity.** External validity refers to the wider generalizability of a study. It is about the degree to which the conclusion(s), or finding(s), of a study hold true at other times, places and among diverse or larger populations. It may require that multiple studies be done, or similar ones replicated under different conditions, to demonstrate external validity. Finding similar results in the current study with the previous ones that were conducted among other populations may support external validity.

**Statistical Methods to be Used**

The statistical analyses in this dissertation were carried out in several stages. In the first stage, it was confirmed that the data was free from missing values and outliers. In the second stage, the normality, the spread and skewness of the data was examined. In the third stage, data were summarized with descriptive statistics. In Chapter 4, demographic profiles, means and standard deviations, reliabilities for the scales were
reported. In the fourth stage, assumptions for the MANCOVA analyses were checked. Finally the hypotheses were tested by MANCOVA and Univariate ANCOVAs.

To determine whether a hypothesis was rejected or accepted, .05 was used as the cut off point for \( p \) values. The studies in social sciences, also like those in others branches of science, commonly use .05 as the cut off point for claims of significant findings. Although it may be argued to be arbitrary, the convenience and the frequent use of .05, and its unsurpassed popularity over many decades made it a rule of thumb since 1925 when Fisher published his book, Statistical Methods for Research Workers (Dallal, 2009). The following section, chapter 4, reports the data analyses and the results.
CHAPTER 4

RESULTS

This section of the dissertation starts with a brief discussion about the quality of the data in terms of missing variables and outliers. It follows with the report of the demographic profile of the respondents, as well as the reliabilities of the scales that were used. A check on the assumptions of multivariate analysis of covariate (MANCOVA), the main statistical procedure employed in this dissertation, is addressed next. The results of the MANCOVA and follow up procedures to test the hypothesis are also reported in this section.

Data Analysis

Missing Data and Outliers

A special online survey feature forcing respondents to answer all the questions was activated before the beginning of the data collection so that each respondent filled out the entire survey with no missing variables. All three dependent variables (attitude toward the ad, attitude toward the hotel, and behavioral intention) and the covariate (level of environmental involvement) were measured by seven point scales; thus, there were no outliers found in the data.

Demographic Profile of the Respondents

Demographic profile of the respondents is reported in Table 3. Age was measured by asking respondents to report their exact age. The age variable was later grouped into age brackets for reporting purposes, as shown on Table 3. A balanced age distribution was observed; about 20 percent of the sample was between the ages of 18 and 30,
Table 3

Demographic Profile of the Respondents

<table>
<thead>
<tr>
<th>Category</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-30</td>
<td>100</td>
<td>19.8</td>
</tr>
<tr>
<td>31-40</td>
<td>92</td>
<td>18.3</td>
</tr>
<tr>
<td>41-50</td>
<td>129</td>
<td>25.6</td>
</tr>
<tr>
<td>51-60</td>
<td>105</td>
<td>20.8</td>
</tr>
<tr>
<td>60+</td>
<td>78</td>
<td>15.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>504</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>244</td>
<td>48.4</td>
</tr>
<tr>
<td>Female</td>
<td>260</td>
<td>51.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>504</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>African American</td>
<td>42</td>
<td>8.3</td>
</tr>
<tr>
<td>Hispanic-Latino</td>
<td>22</td>
<td>4.4</td>
</tr>
<tr>
<td>Caucasian</td>
<td>406</td>
<td>80.6</td>
</tr>
<tr>
<td>Asian American</td>
<td>24</td>
<td>4.8</td>
</tr>
<tr>
<td>Others</td>
<td>10</td>
<td>2.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>504</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High school or less</td>
<td>77</td>
<td>15.3</td>
</tr>
<tr>
<td>Some college</td>
<td>133</td>
<td>26.4</td>
</tr>
<tr>
<td>Associates degree</td>
<td>62</td>
<td>12.3</td>
</tr>
<tr>
<td>Bachelor’s degree</td>
<td>148</td>
<td>29.4</td>
</tr>
<tr>
<td>Master or PhD</td>
<td>84</td>
<td>16.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>504</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Annual household income</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than $35,001</td>
<td>112</td>
<td>22.2</td>
</tr>
<tr>
<td>$35,001-$55,000</td>
<td>109</td>
<td>21.6</td>
</tr>
<tr>
<td>$55,001-$75,000</td>
<td>108</td>
<td>21.4</td>
</tr>
<tr>
<td>$75,001-$95,000</td>
<td>75</td>
<td>14.9</td>
</tr>
<tr>
<td>More than $95,000</td>
<td>100</td>
<td>19.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>504</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Frequency of hotel stay in the last two years</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Once</td>
<td>53</td>
<td>10.5</td>
</tr>
<tr>
<td>Twice</td>
<td>105</td>
<td>20.8</td>
</tr>
<tr>
<td>Three times</td>
<td>75</td>
<td>14.9</td>
</tr>
<tr>
<td>Four times</td>
<td>82</td>
<td>16.3</td>
</tr>
<tr>
<td>Five times</td>
<td>86</td>
<td>17.1</td>
</tr>
<tr>
<td>More than five times</td>
<td>103</td>
<td>20.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>504</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Main Purpose of Hotel Stay</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business</td>
<td>32</td>
<td>6.3</td>
</tr>
<tr>
<td>Leisure</td>
<td>398</td>
<td>79.0</td>
</tr>
<tr>
<td>Business &amp; Leisure</td>
<td>68</td>
<td>13.5</td>
</tr>
<tr>
<td>Others</td>
<td>6</td>
<td>1.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>504</td>
<td>100.0</td>
</tr>
</tbody>
</table>
18 percent was between 31 and 40, 25.6 percent was between 41 and 50, 21 percent was between 51 and 60, and 15.5 percent was above 60.

Gender was also distributed almost equally. Females constituted slightly more than half of the sample with 51.6 percent, and the remaining 48.4 percent were males. Most of the respondents were Caucasians with 80.6 percent, followed by African Americans with 8.3 percent, Asian Americans with 4.8 percent and by Hispanic-Latinos with 4.4 percent. The level of education appeared to be relatively high. More than 58 percent of the respondents reported having an associates’ degree, or higher, such as a bachelor’s, master, or doctoral degree. A somewhat equal distribution was observed among the income measuring brackets. Except for the ethnicity and level of education, the demographic profile of the respondents adequately reflects various groups in United States’ population. This may increase the external validity of the findings.

Only the respondents who stayed at a hotel in the last two years at least once were included in the study. The frequencies of hotel stay in the last two years are reported in Table 3. Those who stayed in a hotel only once in the last two years constituted 10.5 percent of the respondents, while 20.8 percent stayed twice, 15 percent three times, 16.3 percent four times, 17 percent five times, and 20.4 percent stayed more than five times. The fact that most of the respondents stay at hotels frequently makes the findings and implications more realistic. The most common purpose of a hotel stay was Leisure with 79 percent, distantly followed by Business & Leisure with 13.5 percent and by Business with 6.3 percent.
Reliability of the Scales

The items listed as Believable-Unbelievable and Positive-Negative in the scales of AAd (attitude toward the advertisement) and AHot (attitude toward the hotel) respectively were reverse-coded. Thus, they are aligned with the rest of the items in those scales and higher scores mean more positive attitudes. These two items were originally anchored differently from the rest of the items in the scale as a measure to prevent respondents from automatic filling of the survey. Once they are reverse coded and aligned with the rest of the scale, reliabilities were assessed by Cronbach’s alpha as shown in Table 4. All three scales of the dependent variable and the scale of environmental involvement for covariate showed highly satisfactory levels of reliability, all above .90, which is acceptable per Nunnally (1970).

Table 4

<table>
<thead>
<tr>
<th>Scales</th>
<th>Number of items</th>
<th>Observed Chronbach’s alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAd (Attitude Toward the Advertisement)</td>
<td>5</td>
<td>.91</td>
</tr>
<tr>
<td>AHot (Attitude Toward the Hotel)</td>
<td>4</td>
<td>.94</td>
</tr>
<tr>
<td>PI (Purchase Intention)</td>
<td>3</td>
<td>.96</td>
</tr>
<tr>
<td>EI (Environmental Involvement)</td>
<td>4</td>
<td>.92</td>
</tr>
</tbody>
</table>

Test of Assumptions for MANCOVA

Like most other statistical techniques, MANCOVA has certain assumptions that must be checked, and any violation must be addressed. The assumptions of MANCOVA are independence, an equality of the variance-covariance matrices,
normality, linearity and multicollinearity among the dependent variables, a linear relation of covariate to the dependent variables for all levels of the independent variables, homogeneity of regression slopes, and the absence of outliers. Each of these assumptions has been checked and no significant violation was detected that posed a threat to the robustness of MANCOVA. MANCOVA is a robust technique to certain violations of the assumptions when the cell sizes are equal and large (Hair, Anderson, Tatham, & Black, 1998), which is the case in this study. A complete discussion of all assumptions can be seen in Appendix C.

**Multivariate Analysis of Covariance (MANCOVA) Result**

A 5 x 2 MANCOVA was conducted to evaluate the effects of five advertising strategies and two bipolar hotel segments on advertising effectiveness conceptualized and measured by three dependent variables: AAd, AHot, and PI. The independent variables and their combination forming the experimental cells can be seen in Table 5.

Table 5

<table>
<thead>
<tr>
<th>The Independent Variables and the Cells in 5X2 Experimental Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Green</td>
</tr>
<tr>
<td>Budget</td>
</tr>
<tr>
<td>Luxury</td>
</tr>
</tbody>
</table>

Since the main focus in this study is evaluating the effectiveness of the green advertising strategies, the level of EI of the sample is controlled as a covariate and means of dependent variables are adjusted for initial differences on EI. Thus, a potentially significant result may not be attributed to the variation in the environmental
attitudes of the sample but to the effectiveness of the manipulated and tested strategies of the green advertisements. All of the subsequent hypotheses were tested in the same manner, while controlling for EI. In other words, the variation caused by EI in the three dependent variables is equalized across all the respondents. The relationship between the environmental involvement as the covariate and the combined dependent variables was found significant (Wilks’s $\Lambda = .893$, $F(3, 491) = 19.617$, $p < .000$, partial $\eta^2 = .107$). This justified the inclusion of the covariate EI in the study and adjusting its influence on the dependent variables to equalize the differences of EI among the various respondents.

The result of MANCOVA analysis indicated no interaction between advertising strategy and hotel segment (Wilks’s $\Lambda = .975$, $F(12, 1299) = 1.032$, $p = .417$, partial $\eta^2 = .008$). However, the main effects were significant for both of the independent variables. Significant differences were detected among the five advertising strategies (Wilks’s $\Lambda = .953$, $F(12, 1299) = 1.998$, $p = .021$, partial $\eta^2 = .016$), and between two hotel segments (Wilks’s $\Lambda = .835$, $F(3, 491) = 32.259$, $p < .000$, partial $\eta^2 = .165$) on the combined dependent variables. Therefore, due to the lack of interaction between advertising strategy and hotel segment, the previously stated hypotheses will be analyzed for the main effects only rather than for each segment.

**Hypotheses Testing**

**Test of Hypothesis I**

Hypothesis I states that green hotel advertisements (advertisements 2 thru 5) will be more effective than a non-green hotel advertisement (advertisement 1) while
controlling for EI. Hypothesis I is tested by four sub-hypotheses as part of the planned comparisons rather than post hoc-tests. Planned comparisons are more powerful in finding the existing significant differences between compared groups as they do not require the original significance level (.05) to be divided by the number of comparisons to control the inflation of Type I error due to multiple comparisons. To be able to use planned comparisons, specific hypotheses must be stated before the data is examined and a theory must support these hypotheses. These requirements are met in this study. All the adjusted mean scores used in testing the sub-hypotheses of Hypothesis I are reported in Table 6.

**Test of Hypothesis Ia.** Hypothesis Ia states that green hotel advertisements with text will be more effective than a non-green hotel advertisement. After controlling for the environmental involvement and holding it constant, the advertisements with green text were found to be significantly more effective than non-green control advertisements on the AAd \( (p = .011, M_{\text{non-green}} = 4.89 \text{ vs. } M_{\text{green-text}} = 5.35) \), and on the AHot \( (p = .009, M_{\text{non-green}} = 4.96 \text{ vs. } M_{\text{green-text}} = 5.48) \) but not on the PI \( (p = .121, M_{\text{non-green}} = 4.55 \text{ vs. } M_{\text{green-text}} = 4.90) \). Thus Hypothesis Ia is partially supported by two of the three dependent variables.

**Test of Hypothesis Ib.** Hypothesis Ib states that green hotel advertisements with certification logos will be more effective than a non-green hotel advertisement. After controlling for the environmental involvement and holding it constant, the advertisements with certification logos were indeed found to be significantly more effective than non-green control advertisements on the AAd \( (p = .013, M_{\text{non-green}} = 4.89 \text{ vs. } M_{\text{green-logo}} = 5.35) \), on the AHot \( (p = .011, M_{\text{non-green}} = 4.96 \text{ vs. } M_{\text{green-logo}} = 5.47) \), and on the PI \( (p \)
Thus, Hypothesis Ib is fully supported by all three dependent variables.

**Test of Hypothesis Ic.** Hypothesis Ic states that green hotel advertisements with visual graphic green messages will be more effective than a non-green hotel advertisement. After controlling for the environmental involvement and holding it constant, green hotel advertisements with visual graphic green messages did not cause a significant improvement on the AAd ($p = .094$, $M_{\text{non-green}} = 4.89$ vs. $M_{\text{green-graphic}} = 5.20$). However, they were found to be significantly more effective on the AHot ($p = .020$, $M_{\text{non-green}} = 4.96$ vs. $M_{\text{green-graphic}} = 5.42$) and on the PI ($p = .047$, $M_{\text{non-green}} = 4.55$ vs. $M_{\text{green-graphic}} = 5.00$). Thus, Hypothesis Ic is partially supported by two of the three dependent variables.

**Test of Hypothesis Id.** Hypothesis Id states that green hotel advertisements with combined green messages (text, logos and visual images) will be more effective than a non-green hotel advertisement. After controlling for the environmental involvement and holding it constant, green hotel advertisements with combined green messages were indeed found to be significantly more effective than non-green control advertisements on the AAd ($p = .000$, $M_{\text{non-green}} = 4.89$ vs. $M_{\text{green-combo}} = 5.54$), on the AHot ($p = .002$, $M_{\text{non-green}} = 4.96$ vs. $M_{\text{green-combo}} = 5.60$), and on the PI ($p = .003$, $M_{\text{non-green}} = 4.55$ vs. $M_{\text{green-combo}} = 5.22$). Thus, Hypothesis Id is supported by all three dependent variables.

Overall, there is enough evidence to support Hypothesis I. Only two comparisons out of twelve failed to support Hypothesis I. Thus, it is concluded that Hypothesis I is supported, and green hotel advertisements are more effective than comparable non-green ones, after controlling for the environmental involvement and holding it constant.
**Test of Hypothesis II**

Hypothesis II states that there will be effectiveness difference(s) across three strategies of greening in advertisements using text, logos, and visual images, while EI is being controlled. Comparisons of three dependent variables among the three strategies failed to yield support for Hypothesis II in all of the nine possible comparisons (three dependent variables influenced by three factors), all nine $ps > .05$. Thus, the data and the analysis does not support Hypothesis II, indicating that these three greening strategies can be considered somewhat comparable to each other in effectiveness.

**Test of Hypothesis III**

Hypothesis III states that the strategy of green combination advertisement (utilizing text, logos and visual graphic images simultaneously) will be the most effective one among all five strategies when the influence of EI is controlled. Green combination advertisements are not found to be significantly different than any of the other three greening strategies (text, logos, and visual graphic images), all three $ps > .05$. However, examining the main effects of greening strategy in Table 6 reveals that green combination advertisements consistently generated the most positive results in all of the three dependent variables. The current study failed to support this observation with any statistical significance. However, this does not mean that there is no difference between green combination and other green advertisements. Thus, future studies may be able to determine if there is a statistical difference between them.

**Test of Hypothesis IV**

Hypothesis IV states that the effectiveness of the green advertising will vary based on the hotel segment (budget versus luxury) while EI is controlled.
### Table 6

*Adjusted Mean and Standard Deviation Scores of Three Dependent Variables (N=504)*

<table>
<thead>
<tr>
<th></th>
<th>Non-Green</th>
<th>Green Text</th>
<th>Green Logo</th>
<th>Green Visual Images</th>
<th>Green Combination</th>
<th>Main Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Budget</strong></td>
<td>AAd</td>
<td>4.53 (1.44)</td>
<td>5.25 (1.44)</td>
<td>4.96 (1.41)</td>
<td>4.88 (1.40)</td>
<td>5.32 (1.34)</td>
</tr>
<tr>
<td></td>
<td>AHot</td>
<td>4.32 (1.76)</td>
<td>5.17 (1.52)</td>
<td>4.82 (1.64)</td>
<td>5.01 (1.53)</td>
<td>5.16 (1.41)</td>
</tr>
<tr>
<td></td>
<td>PI</td>
<td>4.31 (1.83)</td>
<td>4.77 (1.76)</td>
<td>4.73 (1.88)</td>
<td>4.92 (1.54)</td>
<td>4.99 (1.60)</td>
</tr>
<tr>
<td><strong>n</strong></td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>52</td>
<td>51</td>
</tr>
<tr>
<td><strong>Luxury</strong></td>
<td>AAd</td>
<td>5.26 (1.23)</td>
<td>5.46 (1.25)</td>
<td>5.73 (1.18)</td>
<td>5.53 (1.19)</td>
<td>5.77 (1.18)</td>
</tr>
<tr>
<td></td>
<td>AHot</td>
<td>5.59 (1.26)</td>
<td>5.79 (1.20)</td>
<td>6.12 (0.98)</td>
<td>5.85 (1.08)</td>
<td>6.04 (1.12)</td>
</tr>
<tr>
<td></td>
<td>PI</td>
<td>4.79 (1.81)</td>
<td>5.02 (1.60)</td>
<td>5.64 (1.29)</td>
<td>5.08 (1.47)</td>
<td>5.46 (1.51)</td>
</tr>
<tr>
<td><strong>n</strong></td>
<td>50</td>
<td>51</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>253</td>
</tr>
<tr>
<td><strong>Main Effects</strong></td>
<td>AAd</td>
<td>4.89 (1.39)</td>
<td>5.35 (1.35)</td>
<td>5.35 (1.35)</td>
<td>5.20 (1.31)</td>
<td>5.54 (1.28)</td>
</tr>
<tr>
<td></td>
<td>AHot</td>
<td>4.96 (1.67)</td>
<td>5.48 (1.40)</td>
<td>5.47 (1.49)</td>
<td>5.42 (1.36)</td>
<td>5.60 (1.35)</td>
</tr>
<tr>
<td></td>
<td>PI</td>
<td>4.55 (1.84)</td>
<td>4.90 (1.68)</td>
<td>5.18 (1.67)</td>
<td>5.00 (1.50)</td>
<td>5.22 (1.57)</td>
</tr>
<tr>
<td><strong>n</strong></td>
<td>100</td>
<td>101</td>
<td>100</td>
<td>102</td>
<td>101</td>
<td>251</td>
</tr>
</tbody>
</table>

*Note.* Mean scores are estimated after adjusting for the covariate environmental involvement. Standard deviations are reported in parentheses. AAd = attitude toward the advertisement; AHot = attitude toward the hotel; PI = purchase or stay intention; n = number of participants in each cell.

If so, this could be caused by an interaction between the hotel segment and the greening strategy used. Any interaction is ruled out due to a non-significant result (Wilks’s Λ = .975, F(12, 1299) = 1.032, p = .417, partial η² = .008). The second possible source of variation, due to segment, would be if green luxury advertisements perform significantly better or worse than the green budget advertisements. In fact, the former scenario was found to be the case in this experiment. The effectiveness of at least one luxury advertisement significantly differed from the effectiveness of budget advertisements (Wilks’s Λ = .835, F(3, 491) = 32.259, p < .000, partial η² = .165), while the influence of EI was controlled. The results shown in Figures 3, 4, and 5 (see Appendix B) reveal that luxury hotel advertisements were consistently more effective than the budget ones on the AAd, AHot, and on the PI, respectively. The results of each sub-hypothesis of Hypothesis IV are presented below. Planned comparisons were
implemented by keeping the significance level at .05 without having to adjust it according to the number of comparisons, since the hypotheses were stated prior to data collection. However, the results below must be taken into consideration cautiously since the luxury control advertisement (non-green luxury) was also found to be significantly more effective than the budget control advertisement (non-green budget) on the AAd ($p = .002$, $M_{\text{non-green budget control ad}} = 4.40$ vs. $M_{\text{non-green luxury control ad}} = 5.27$) and on the AHot ($p = .000$, $M_{\text{non-green budget control ad}} = 4.19$ vs. $M_{\text{non-green luxury control ad}} = 5.63$), but not on the PI ($p = .069$, $M_{\text{non-green budget control ad}} = 4.14$ vs. $M_{\text{non-green luxury control ad}} = 4.82$).

The adjusted mean scores were used and reported in testing the sub-hypotheses of Hypothesis IV to control for the EI as the covariate. However, these means vary slightly from the adjusted means reported in Table 6 as a result of the overall MANCOVA analysis that included all ten cells in the experiment. This is caused by a slight change in the average EI as only two cells of interest (e.g., budget text and luxury text for Hypothesis IVa) were included in each sub-hypothesis.

**Test of Hypothesis IVa.** Hypothesis IVa states that the effectiveness of the green hotel advertisement with green text will vary based on the hotel segment. Univariate ANCOVA detected no significant difference caused by the hotel segment on the AAd ($p = .437$, $M_{\text{green-text budget}} = 5.23$ vs. $M_{\text{green-text luxury}} = 5.42$) and on the PI ($p = .462$, $M_{\text{green-text budget}} = 4.75$ vs. $M_{\text{green-text luxury}} = 4.97$). However, a significant difference was found on the AHot ($p = .018$, $M_{\text{green-text budget}} = 5.16$ vs. $M_{\text{green-text luxury}} = 5.76$). The luxury green advertisement with text was found to be more effective than
the budget one with text, on the AHot only, but not on the AAd and the PI. Thus, Hypothesis IVa is only partially supported.

**Test of Hypothesis IVb.** Hypothesis IVb states that the effectiveness of the green hotel advertisement with green certification logos will vary based on the hotel segment. Univariate ANCOVA detected significant differences caused by the hotel segment on the AAd \( (p = .003, M_{\text{green-logo budget}} = 5.01 \text{ vs. } M_{\text{green-logo luxury}} = 5.78) \), AHot \( (p = .000, M_{\text{green-logo budget}} = 4.87 \text{ vs. } M_{\text{green-logo luxury}} = 6.16) \), and on the PI \( (p = .006, M_{\text{green-logo budget}} = 4.80 \text{ vs. } M_{\text{green-logo luxury}} = 5.70) \). The luxury green advertisement with logo was found to be more effective than the budget one with logo on all three dependent variables: the AAd; the AHot; and, the PI. Thus, Hypothesis IVb was fully supported.

**Test of Hypothesis IVc.** Hypothesis IVc states that the effectiveness of the green hotel advertisement with green visual images will vary based on the hotel segment. A univariate ANCOVA detected significant differences caused by the hotel segment on the AAd \( (p = .018, M_{\text{green-visual image budget}} = 4.92 \text{ vs. } M_{\text{green-visual image luxury}} = 5.54) \), and on the AHot \( (p = .004, M_{\text{green-visual image budget}} = 5.05 \text{ vs. } M_{\text{green-visual image luxury}} = 5.85) \), but not on the PI \( (p = .665, M_{\text{green-visual image budget}} = 4.97 \text{ vs. } M_{\text{green-visual image luxury}} = 5.10) \). The luxury green advertisement with green visual images was found to be more effective than the budget one on two of the three dependent variables - the AAd and the AHot; but, not on the PI. Thus, Hypothesis IVb is partially supported.

**Test of Hypothesis IVd.** Hypothesis IVd states that the effectiveness of the green hotel advertisement with green combination (containing green text, logo and visual images) will vary based on the hotel segment. A univariate ANCOVA detected no significant difference caused by the hotel segment on the AAd \( (p = .066, M_{\text{green-}} \)}
combo budget = 5.36 vs. \( M_{\text{green-combo luxury}} = 5.74 \) and on the PI \( (p = .118, M_{\text{green-combo budget}} = 5.04 \) vs. \( M_{\text{green-combo luxury}} = 5.42 \). However, a significant difference was found on the AHot \( (p = .000, M_{\text{green-combo budget}} = 5.21 \) vs. \( M_{\text{green-combo luxury}} = 6.01 \). The luxury advertisement with green combination of text, logo and visual images was found to be more effective than the budget one, on AHot only, but not on the AAd and the PI. Thus, Hypothesis IVd is only slightly supported.

In summary, data and the results suggest only partial support for Hypothesis IV. Seven out of twelve comparisons (three dependent variables influenced by four factors) showed significantly higher scores caused by luxury segment. However, as noted above, this result must be evaluated in the context of the fact that the luxury control advertisement also performed better than the budget control advertisement on two of the three dependent variables. The results of the testing of all four hypotheses are summarized in Table 7.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Statement of Hypothesis</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Green hotel advertisements will be more effective than a non-green hotel advertisement.</td>
<td>Supported</td>
</tr>
<tr>
<td>II</td>
<td>There will be effectiveness difference across three strategies of greening in advertisements: Using text, logo, and visual image.</td>
<td>Not Supported</td>
</tr>
<tr>
<td>III</td>
<td>Green combination advertisement will be the most effective advertisement among all five advertisements.</td>
<td>Not supported</td>
</tr>
<tr>
<td>IV</td>
<td>The effectiveness of the green advertising will vary based on hotel segment: budget versus luxury.</td>
<td>Partially supported with caution*</td>
</tr>
</tbody>
</table>

*Note. All hypotheses were tested while controlling for EI as the covariate. *Caution is due to the fact that a significant difference was also observed between the two control advertisements.
Summary of Chapter 4

Planned comparisons supported Hypothesis I, indicating that green advertisements are more effective than non green one regardless of the hotel segment. No support was found for Hypothesis II. This indicated that green advertisements with green text, logos, and visual images are not significantly different from each other in terms of advertisement effectiveness. Hypothesis III was not supported either. Although the green combination advertisement produced the highest means for all three dependent variables, these means were not significantly better than the means for other green advertisements. Hypothesis IV was partially supported as the green luxury advertisements were found significantly more effective than the green budget ones in seven of the twelve comparisons. Chapter 5 provides a discussion of these results with practical and theoretical implications.
CHAPTER 5
DISCUSSION AND CONCLUSION

This chapter summarizes the study and reviews the results of testing the hypotheses that were proposed herein. The findings and the practical implications are discussed next, followed by the limitations and future research directions.

Summary of the Study

This dissertation was undertaken to understand the effectiveness of the green hotel advertising. An experiment was carried out to see whether green hotel advertising is actually more effective than non-green hotel advertising. The experiment had two independent variables that were manipulated. The first independent variable was greening strategy with five levels:

- non-green;
- green with text;
- green with logos;
- green with visual graphic images; and,
- green combo (including text, logos and graphic images).

The second independent variable was hotel segment with two levels:

- budget; and,
- luxury.

A total of ten print advertisements have been developed with intended manipulations for each level of the independent variables. Respondents were randomly shown one of the ten advertisements. Following the exposure, advertisement effectiveness was measured by three separate scales: AAd (Attitude toward
Advertisement), AHot (Attitude toward Hotel), and PI (Purchase Intention). MANCOVA (Multivariate Analysis of Covariance) revealed that greening strategy and hotel segment influences the effectiveness of the advertisements when EI (Environmental Involvement) was held constant.

**Hypotheses Discussion**

Hypothesis I stated that green hotel advertisements would be more effective than non-green hotel advertisements. This assertion has been supported by the analysis herein. The results are aligned with the findings of past researchers (i.e., Chan, Leung, & Wang, 2006; Hu, 2012). All four types of green advertising (green with text, green with logos, green with visual graphic images, and green combination) were shown to be more effective than non-green advertising. Data revealed that green advertising strategies are more effective than non-green ones when environmental involvement was held constant.

Hypothesis II stated that there would be effectiveness differences across three advertising strategies of greening using text, logos, and visual images. This hypothesis was not supported, indicating a certain level of comparability between these three greening strategies. From the current analysis, it is possible to say that hotels can choose any of these three greening strategies to communicate their greening initiatives to the target markets. According to Paivio’s (1971) dual code theory, it was expected that green advertising with visual graphic images would be more effective than green advertising with text. The results of this study do not support this proposition. However, larger samples sizes may yield statistical support in favor of dual code theory. Thus, more research in this topic is recommended.
Hypothesis III predicted that green combination advertisement would be the most effective advertising among all five alternatives. Although the examination of main effects in Table 6 reveal the green combination advertisement consistently as the most effective strategy, no statistical significance was detected to support this indication. It was noted above that most of the respondents are highly educated. The high levels of education must have enabled respondents to understand and appreciate the greening communication in three other green strategies (green text, green logo, and green graphic) much easier than the normal population with average levels of education. Thus, probably due to the high levels of education among the respondents, there was no significant difference between green combo and any of the other green advertisements. Future analyses with larger sample sizes including less educated groups might provide support for Hypothesis III.

Hypothesis IV predicted a variation across various strategies of greening caused by the hotel segment. Data showed that green advertisements by a luxury hotel were significantly more effective than green advertisements by a budget hotel. However, this finding must be evaluated with caution, because even the luxury control advertisement (luxury non-green) was found to be more effective than the budget control advertisement (budget non-green). This inherent difference in the control advertisements may hinder the conclusion that green advertisements work better for luxury segments. There were only two factors in the advertisements that differed between the luxury and the budget segments. One of them was the picture of the hotel room (see Appendix A for the two different hotel rooms used in the manipulation of the segment). It was either the picture of a budget hotel room from a Motel 6 to represent the budget segment or the picture of a
luxury hotel room from an upscale hotel in Vail Colorado to represent the luxury segment. The second difference between the budget and luxury segments were the textual information introducing either a budget hotel with the emphasis of great value or an upscale hotel with the emphasis of ultimate luxury. The variation of textual information and the pictures used in the control advertisements could have caused the luxury segment to appear as more effective in the subsequent green advertising strategies. It is likely that the more attractive picture of an upscale hotel room used in the luxury hotel advertisements might have caused respondents to have a more favorable opinion of the luxury hotel. It is also possible that, with all else being equal, and the cost of a hotel room not being a consideration, everyone would prefer to stay at a luxury hotel rather than a budget one. These two factors might explain why luxury segment advertisements performed better than budget segment ones. Due to the bias posed by these factors in favor of the luxury segment advertisements, it is not appropriate to suggest any further findings about the relatively higher effectiveness of luxury green advertisements over budget ones based on these results.

**Practical Implications of Findings**

Confirmation of Hypothesis I revealed that advertisements with green messages are more effective than advertisements without them. This is a clear indication that hotels, and perhaps other hospitality organizations, should use green messages in their advertising. However, they must be careful to make substantial and truthful claims in their advertisements. Associative claims instead of substantive claims can be considered trivial and may be regarded as a way of misleading the consumer. A worse scenario is also likely if the substantive claims made in the advertisement are found to be false. This
practice could trigger lawsuits and a customer backlash against the hotel. Thus, hotels must have some genuine greening initiatives in place when they use green advertising. On the other hand, hotels that do not have any greening initiatives should seriously consider going green as the data in this study suggests that consumers have a preference toward green properties.

Lack of statistical support to confirm Hypothesis II indicates that any of the three greening strategies (text, logos, and visual graphic images) can be implemented with similar levels of success. However, hotels might find it useful to choose the one strategy that is more likely to be preferred by their target markets. It is possible that the segment a particular hotel aims to serve might prefer green messages delivered by text, or logos, or visual graphic images. This task of identifying which method works best for which groups of customers is a topic of interest for future studies. The selection of the best method of greening strategy might be influenced by many factors, such as media outlet, message content, execution style, available space in the media and cost of additional space, or the clutter in the advertisement and the media in any particular case.

Even though Hypothesis III was not supported statistically, green combination advertisement consistently yielded the highest scores on advertising effectiveness. Thus, it is advisable that hotels should use a combination of green elements in their advertising such as text, logo and visual images. Using a combination of various green elements increases the visibility of the green messages. Past researchers found that the effect of textual and visual cues in advertising is additive (i.e., Paivio, 1971; Tang, Fryxell, Chow, 2004); thus, it should be beneficial to use them simultaneously when the copy design parameters of the print advertising allows enough space for all green elements.
Hypothesis IV was supported by the data and indicated that green luxury advertisements were more effective than green budget ones. However, the same results were also observed between the budget and the luxury control advertisements. Thus, the tendency of luxury advertisements to perform better than the budget ones is thought to be caused by the confounding factors of a more attractive picture and textual information employed to manipulate the luxury segment. Because of this bias in favor of the luxury advertisements, it is difficult to conclude that green advertising works more effectively for luxury segments.

**Theoretical Implications**

Paivio’s (1971) dual code theory was followed in formulating Hypotheses III and IV. According to this theory, pictorially presented information is superior to textual one in terms of absorption and recall because the former activates both the visual and verbal codes to store information, while the latter is less likely to activate both codes. This led to the Hypothesis III, stating that there would be significant difference between green advertisements with text, logo and graphic images. Paivio (1971) and other researchers (Tang et al., 2004) found that pictorial and textual information is additive, thus when used together, they both contribute to the absorption of information and recall. This led to Hypothesis IV, which was also rejected in this study. The rejection of these hypotheses in this study does not mean the rejection of the theory, however, since a future study with larger sample size may be able to detect the difference between these three methods of greening. Nevertheless, the findings of this study may also indicate a need to refine the dual code theory as it failed to accurately predict the results, herein.
Tellis (2004) suggested that there is a close relationship between advertisement content and advertising effectiveness. This study confirmed that advertising contents, specifically the green messages, influence the advertising effectiveness. Many past studies (i.e., Davis, 1993; Chan et al., 2006; Hu, 2012; Polonsky, Carlson, Grove, & Kangun, 1997; Tang et al., 2004) suggested that green advertising would be more effective compared to non-green ones or ones with trivial claims. However, no past research study examined the effectiveness of the green advertising for budget and luxury hotel segments among American consumers. Two studies (Chan et al., 2006; Hu, 2012) that focused on the particular case were carried out among Asian consumers but failed to control for environmental involvement. Thus, the current study not only supplemented the prior studies but also increased their external validity by finding similar results in a different market and by controlling an important covariate such as environmental involvement. The influence of hotel segment and the various strategies of greening on advertisement effectiveness has been studied for the first time by the current dissertation.

General Discussion

Apart from hypotheses testing and the findings with statistical significance, it is also possible to draw some inferences by looking at the graphs in Figures 3, 4, and 5 (see Appendix B). These graphs show that luxury control advertisement yielded better results than budget control advertisement on all three of the dependent variables, where the biggest difference was observed on the AHot, followed by the AAd and PI.

The gap shrank noticeably with green text advertisement, although the luxury segment maintained its superiority over budget. Green text advertisement increased the three DVs by about 0.20 for the luxury segment. However, it increased the AHot by 0.85,
the AAd by 0.72, and PI by 0.46 for the budget segment. This may indicate that green text advertisement benefits the budget segment more positively than the luxury segment.

The opposite condition was observed regarding the influence of green logo on PI. Green logo advertisement increases the PI by 0.42 for budget segment and by 0.85 for the luxury segment. The increases that green logo advertisement caused on AAd and AHot are almost equal for both segments. This indicates that green logo advertisement may be more effective for the luxury segment on PI.

The green graphic advertisement, like the green text, seems to be contributing more to the budget segment. Green graphic advertisement caused an increase of about 0.27 on all three DVs for the luxury segment while it increased the AAd by 0.35, the AHot by 0.69 and the PI by 0.61 for the budget segment.

The green combo advertisement increased the PI for the budget and luxury segments almost equally by 0.68 and 0.67 respectively. It increased AHot for the budget segment by .84 and for the luxury segment by 0.45, while increasing AAd for the budget by 0.79 and for the luxury segment by 0.51. Thus, the green combo advertisement can be thought to benefit budget segment more positively. These findings are based on a simple comparison of mean values across different types of greening and segments; they were not tested for statistical significance. Thus, some of these interpretations might well be caused by the error variance in the data.

However, the tendency of the luxury advertisements to be more effective than budget ones has been confirmed with statistical significance, \( p < .000 \). Thus, it is suggested that advertisers should try to use the most attractive hotel and room pictures and emphasize the high quality aspect of their hotels along with greening initiatives. They
should refrain from using any picture or textual information that focuses on anything that can indicate a perception of lower quality, such as a great value, great deal, or low prices. Although this kind of value indicators can be successfully used at the points of sale, they probably should not be used in general advertising.

**Conclusion**

One of the main findings of this study is that green hotel advertisements are more effective than non-green hotel advertisements, even when the EI (Environmental Involvement) is controlled. The past two studies reached the same conclusion among Asian research participants (Chan et al., 2006; Hu, 2012) without controlling the EI (Environmental Involvement). The current study contributed to the literature on several grounds which are discussed below.

This is the first study regarding the effectiveness of the green hotel advertising that has been conducted with the participation of American hotel customers which is one of the biggest hospitality markets domestically and internationally. When considered together with the past two research studies mentioned above (Chan et al., 2006; Hu, 2012), the current study provides an external validity to the findings of these studies. Thus, green advertising effectiveness is valid for both Asian and Western consumers.

Unlike the past studies, the current study controlled the level of EI thus showed that green advertising is effective regardless of the various levels of EI among consumers. In addition, the current study was the first in attempting to find the better strategies of greening. The influence of hotel segment on green advertising effectiveness was also first examined in this study. Even though the current study could not yield conclusive results on the last two areas (i.e., which method of green advertising is most effective? Or how
does hotel segment influence the effectiveness of the green advertising?), the hope is that it will stimulate the curiosity of future researchers and these areas will be subject to rigorous studies.

**Limitations**

Just like any other study, this dissertation has some limitations that need to be discussed to calibrate the interpretations of the results. The ten advertisements tested in this study are not actual hotel advertisements and have been developed by a graphic designer with the instructions of the author over numerous e-mails which proved to be much harder and more limiting than expected. Thus, the advertisements are not big budget, award worthy advertisements designed by the professional and famous advertising agencies. Although designing the best possible green hotel advertisements ever is beyond the ability and the intent of the study, considerable amount of work and attention was put in making them as realistic as possible. It was especially challenging to make ten separate advertisements and manipulate the market segment (luxury vs. budget), green status (green vs. non-green), and greening strategy (green with text, logo, graphic image, and combination) while keeping them identical in all other aspects. For example, two of the advertisements use graphic images to give the green message. It was very limiting to not be able to use a written green slogan to introduce and support the green graphic images in these advertisements. Using some green text like a slogan as a transition to or introduction of the green graphic images would be crossing the line into textual message which is another manipulation by itself, green with textual cues. Not using any text would leave the graphic image all by itself at the bottom of the advertisement with no textual connection to the rest of the advertisement. In an ideal
advertisement by the actual hotel industry that uses graphics heavily, advertisers would still be able to use considerable amount of textual cues to support or explain the graphic image. Due to strict manipulation rules that needs to be followed in this study, two advertisements using graphic images for giving green messages lack the necessary textual framing and thus, may not be as effective as it would in real life with more flexibility of using supporting textual cues.

The fact that respondents are forced to view the particular advertisements as part of the data collection and that they will consciously pay some attention to them is another limitation. In real life, consumers will pause to look at the advertisements only if it catches their attention or only if the message relates to them. Thus, the real success of an actual advertisement relies not only in its effectiveness when the consumers are forced to view it but also in its ability to get the consumers’ attention. The advertisements are viewed online, this means that, based on the screen size and the quality of the resolution, advertisements might not look with the actual size and quality as it would in a printed magazine, and respondents may need to scroll up and down, left and right to see all parts of the advertisement. Since Qualtrics’ (2013) online respondents who live in the United States are recruited as the sample, the study will capture only the responses of those people in the database of Qualtrics (2013) and its affiliates, and those who have internet access and ability to use a computer.

Another limitation common to most surveys is that they measure the respondents’ self-expressed intention, but not their actual behavior or purchase. Actual behaviors can be different from self-expressed intentions. Because of the comparative nature of this study, the difference between behavior and intention does not pose much threat to the
conclusion that some of the ten advertisements tested in this study is more effective than others. An advertisement that is more effective in generating positive intentions is also more likely to generate positive consumer behavior in the same direction. Other common limitations of survey research, such as automatic filling and social desirability effect, may also have altered the results of this study.

The cell sizes were about fifty, which is above the minimum cell size of 20 (Hair, Anderson, Tatham, & Black, 1998). However, fifty respondents might not be enough to find the existing variations on the dependent variables. Thus, the current cell sizes might have posed a limitation on the findings. The hypotheses that were not supported in the current dissertation may be supported in future studies with larger sample sizes. The use of convenient sampling is another limitation of this dissertation.

**Future Research**

The area of green marketing and green advertising effectiveness is very new and is currently evolving throughout the hospitality industry. As this evolution continues, many areas will need to be investigated. The influence of demographic and psychographic factors on the perception of green hotel advertising is one of them. Respondents can be grouped by demographic factors such age, gender, ethnicity, level of education, and/or purpose of hotel stay to understand if these factors have any influence on advertising effectiveness. On a similar vein with the current study, the effectiveness of the green advertising for other hospitality and tourism operations such as airlines, cruise ships, theme parks and destinations should be investigated by future research. Their relative effectiveness, across the industries could be compared. It is still unknown
whether marketing for green hotels, airlines, or cruise ships will be perceived by travelers as having a more positive environmental impact over each other.

The influence of price on the effectiveness of the green advertisements can be another area of future research. The perceptional and preferential differences of consumers between green big chains and green small individual hotels can also be studied. It is unknown whether green advertising effectiveness varies between a big existing brand of a hotel chain and a small emerging one which is being branded as a dedicatedly green one.

Future studies may include recall measures as part of advertisement effectiveness to better gauge the difference between various forms of greening strategy. Another goal of future research could be investigating the difference between the respondents with high environmental involvement, versus low or non-environmental involvement on green advertising effectiveness. This dissertation provides many new directions for future studies as discussed above.
APPENDIX A

Ten (10) Manipulated and Tested Advertisements

Budget Non-Green

GET THE BEST VALUE FOR YOUR LODGING NEEDS!
At Westheimer Hotels, we are proud to provide you with the best value for your lodging needs. We promise spacious rooms, comfortable beds and great deals, all in a friendly atmosphere. Whether for a vacation with your family or a business trip, we are there to welcome you. Make us your home away from home!

Call 1.473.364.6835 or visit www.staywestehimer.com
EXPERIENCE THE ULTIMATE LUXURY FOR YOUR SENSES!
At Westheimer Hotels, we are proud to provide you with the ultimate luxury for your senses. We promise spacious rooms, comfortable beds and finest personal service, all in an upscale atmosphere. Whether for a vacation with your family or a business trip, we are there to welcome you.
Make us your home away from home!

Call 1.473.364.6835 or visit www.staywestehimer.com
GET THE BEST VALUE FOR YOUR LODGING NEEDS!
At Westheimer Hotels, we are proud to provide you with the best value for your lodging needs. We promise spacious rooms, comfortable beds and great deals, all in a friendly atmosphere. Whether for a vacation with your family or a business trip, we are there to welcome you. Make us your home away from home!

WEISSHEIMER HOTELS

STAY GREEN & CHANGE THE WORLD IN YOUR HOTEL ROOM!
We don’t just talk green, we also walk green, so you stay green! Here is how we do it:

- 45% of our electricity comes from renewable sources
- Solar panels heat 60% of our hot water
- We are green-certified by the Green Hotel Association and by LEED (Leadership in Energy and Environmental Design)
- Wastewater is recycled into irrigation for plants

Call 1.473.364.6835 or visit www.staywestheimer.com
EXPERIENCE THE ULTIMATE LUXURY FOR YOUR SENSES!
At Westheimer Hotels, we are proud to provide you with the ultimate luxury for your senses. We promise spacious rooms, comfortable beds and finest personal service, all in an upscale atmosphere. Whether for a vacation with your family or a business trip, we are there to welcome you. Make us your home away from home!

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Below is an illustration of our environmentally responsible operations.

Call 1.473.364.6835 or visit www.staywestheimer.com
EXPERIENCE THE ULTIMATE LUXURY FOR YOUR SENSES!
At Westheimer Hotels, we are proud to provide you with the ultimate luxury for your senses. We promise spacious rooms, comfortable beds and finest personal service, all in an upscale atmosphere. Whether for a vacation with your family or a business trip, we are there to welcome you. Make us your home away from home!

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STAY GREEN & CHANGE THE WORLD IN YOUR HOTEL ROOM!

We don’t just talk green, we also walk green, so you stay green! Here is how we do it:

- 45% of our electricity comes from renewable sources
- Solar panels heat 60% of our hot water
- We are green-certified by the Green Hotel Association and by LEED (Leadership in Energy and Environmental Design)
- Wastewater is recycled into irrigation for plants

Call 1.473.364.6835 or visit www.staywestehimer.com
EXPERIENCE THE ULTIMATE LUXURY FOR YOUR SENSES!
At Westheimer Hotels, we are proud to provide you with the ultimate luxury for your senses. We promise spacious rooms, comfortable beds and finest personal service, all in an upscale atmosphere. Whether for a vacation with your family or a business trip, we are there to welcome you. Make us your home away from home!

STAY GREEN & CHANGE THE WORLD IN YOUR HOTEL ROOM!
We don’t just talk green, we also walk green, so you stay green! Here is how we do it:
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- Wastewater is recycled into irrigation for plants

Call 1.473.364.6835 or visit www.staywestehimer.com
Figure 3. Differential influence of hotel segment on AAd (Attitude toward Advertisement) for five separate advertising strategies when EI (Environmental Involvement) is controlled.
Figure 4. Differential influence of hotel segment on AHot (Attitude toward Hotel) for five separate advertising strategies when EI (Environmental Involvement) is controlled.
Figure 5. Differential influence of hotel segment on PI (Purchase Intention) for five separate advertising strategies when EI (Environmental Involvement) is controlled.
APPENDIX C

Discussion of Assumptions for MANCOVA

Independence. It is important that observations are independent of each other for MANCOVA results to be valid (Hair, Anderson, Tatham, & Black, 1998). This is ensured by random distribution of respondents into any of the ten groups that are being investigated in this study. Randomization ensured that cases in each of the ten cells, and all cases in the entire sample, are independent of each other. They are not bound to each other by time, place, or any other possibly confounding factor that can systematically pose the threat of bias in any of the studied groups.

Equality of variance-covariance matrices. It is assumed that the level of variance in the dependent variables are similar across all groups. This assumption is prone to be violated since there are ten groups and three dependent variables in the current study. Box’s M test of equality of covariance matrices was significant ($p<.000$), indicating a violation. However, according to Hair et al. (1998), “violation of this assumption has minimal impact if the groups are of approximately equal size” (p. 348). Since the group sizes in this study are almost equal, violation of this assumption does not pose a threat to the results of MANCOVA.

Normality. It is assumed that dependent variables are multivariate normal, meaning that “joint effect of two variables is normally distributed” (Hair et al., 1998, p. 349). The effect of the covariate on the dependent variables must also be normally distributed. There is no direct test of multivariate normality and violations have little impact with large sample sizes (Hair et al., 1998). The cell sizes in the current study range between 50 and 52 respondents, which are well above the minimum cell size of
the 20 recommended by Hair et al. (1998). Thus, violation of this assumption does not pose a threat to validity of MANCOVA results.

**Linearity and multicollinearity among the dependent variables.** It is required that all dependent variables and the covariate are linearly related. This assumption is held true since three dependent variables AAd, AHot, and PI are all linearly related.

**Covariate must be linearly related to the dependent variables for all levels of the factors.** Theoretically it is expected that the consumers with high levels of EI (Environmental Involvement) are expected to be more positively responsive to green messages in advertising with all else being equal. In fact, there is a linear relationship between EI and the dependent variables which is evident in the significant result of the covariate in the MANCOVA results (Wilks’s $\Lambda = .893$, $F(3, 491) = 19.617$, $p < .000$, partial $\eta^2 = .107$).

**Homogeneity of Regression Slopes.** It is assumed that covariate and independent variables do not interact, in other words, the influence of covariate on the dependent variables does not change significantly based on various levels of independent variables. In the current study, the covariate EI is expected to have an influence on DVs for all four levels of green advertising strategy but not for the non-green advertisement. As expected, EI as the covariate, interacts with IVs if non-green advertisement is included in the test of homogeneity of regression slopes, $ps < .05$, and assumption is violated. When non-green advertisement cells are excluded from the analysis however, assumption is not violated, $ps > .05$. It is logical that EI will have influence on advertisement effectiveness for green advertisements but not for non-
green advertisements, thus it is justified that this assumption is tested with the exclusion of non-green advertisements.

**Outliers.** Since the dependent variables are measured on a seven point scale, all variables are within the parameters of the scale, thus there are no outliers in the data.
APPENDIX D

The Questionnaire Used for Data Collection

INFORMED CONSENT FORM

Introduction: This study attempts to collect information about differences in individual perception of advertisements via an online Qualtrics survey.

Procedures: You will first be asked several screening questions. Then you will be shown two separate advertisements and your reaction to them will be measured by survey questions. Survey will finish with some demographic questions. Survey consists of 19 questions and should take about 5-10 minutes to complete.

Risks/Discomforts: Risks are minimal for involvement in this study. However, you may feel emotionally uneasy when asked some demographics and attitudinal questions as well as when you are required to make some evaluations after each advertisement. Although we do not expect any harm to come upon any participants due to electronic malfunction of the computer, it is possible, though extremely rare and uncommon.

Benefits: There are no direct incentives from the researchers to the participants. However, it is hoped that through your participation, researchers will learn more about how advertisements are perceived. And practitioners will be able to develop advertisements that you like and that make sense to you.

Confidentiality: All data obtained from participants will be kept confidential and will only be reported in an aggregate format (by reporting only combined results and never reporting individual ones). All questionnaires will be concealed, and no one other than the principal investigator and student researcher listed below will have access to them. The data collected will be stored in the HIPAA-compliant, Qualtrics-secure database until it has been deleted by the primary investigator.

Compensation: There is no direct compensation from the researchers.

Participation: Participation in this research study is completely voluntary. You have the right to withdraw at anytime or refuse to participate entirely without any jeopardy to you. If you desire to withdraw, please simply close your internet browser and no further action is required. If you want to continue, you can click on the arrow at the bottom right side of the page.

Questions about the Research: If you have questions regarding this study, you may contact principal investigator Seyhmus Baloglu, at 702 895 3932, seyhmus.baloglu@unlv.edu or student investigator Safak Sahin at 917 544 75 68, sahins@unlv.nevada.edu. Questions about your Rights as Research Participants: If you have questions you do not feel comfortable asking the researcher, you may contact Office of Research Integrity at University of Nevada, Las Vegas at toll free number 877 895 2794 or irb@unlv.edu.
1. In which country do you reside?
   Please select below
   If United States Is Not Selected, Then End The Survey.

2. State In which state do you currently live?
   Please select below

3. Approximately, how many times have you stayed in hotels in the past two years?
   Never (Then End The Survey)
   1 time
   2 times
   3 times
   4 times
   5 times
   more than 5 times, please specify the number below: ____________________

4. Please tell us about the percentage (%) of your stay based on hotel segments below. Total must be 100%

| What percent (%) of your hotel stays in the past two years were in the following categories of lodging properties? | Budget/Economy Hotels such as Motel 6, Super 8 or similar | Midscale Hotels such as Holiday Inn, Double Tree or similar | Upscale/Luxury Hotels such as Hyatt, Ritz Carlton, Four Seasons or similar |
|---|---|---|
| | | |

5. What was your most common primary purpose of hotel stays in the past two years?
   Business
   Leisure
   Business and leisure
   Other. Please Specify: ____________________

6. One of the two statements below is randomly assigned to the respondents and thus places them into either Budget or Luxury Segments.
IN THE NEXT WINDOW, YOU WILL SEE AN ADVERTISEMENT FOR A "BUDGET HOTEL". PLEASE VIEW THIS ADVERTISEMENT LIKE YOU WOULD IN A MAGAZINE YOU READ AND PAY SPECIAL ATTENTION TO "TEXTUAL AND VISUAL CUES AS WELL AS EMBLEMS" IF THEY ARE PRESENT IN THE ADVERTISEMENT YOU SEE. YOU WILL BE QUESTIONED ABOUT THEM AND ONLY CORRECT RESPONDENTS WILL BE ABLE TO CONTINUE THE SURVEY. ONCE YOU CLICK THE ARROW TO MOVE TO THE FOLLOWING QUESTIONS, YOU WILL NOT BE ABLE TO SEE THIS ADVERTISEMENT AGAIN. SO ALLOW YOURSELF ENOUGH TIME TO VIEW AND READ THE ADVERTISEMENT BEFORE YOU MOVE ON.

IN THE NEXT WINDOW, YOU WILL SEE AN ADVERTISEMENT FOR A "LUXURIOUS AND EXPENSIVE HOTEL". PLEASE VIEW THIS ADVERTISEMENT LIKE YOU WOULD IN A MAGAZINE YOU READ AND PAY SPECIAL ATTENTION TO "TEXTUAL AND VISUAL CUES AS WELL AS EMBLEMS" IF THEY ARE PRESENT IN THE ADVERTISEMENT YOU SEE. YOU WILL BE QUESTIONED ABOUT THEM AND ONLY CORRECT RESPONDENTS WILL BE ABLE TO CONTINUE THE SURVEY. ONCE YOU CLICK THE ARROW TO MOVE TO THE FOLLOWING QUESTIONS, YOU WILL NOT BE ABLE TO SEE THIS ADVERTISEMENT AGAIN. SO ALLOW YOURSELF ENOUGH TIME TO VIEW AND READ THE ADVERTISEMENT BEFORE YOU MOVE ON.

☐ I have read and understood the statement above thus I will view the advertisement adequately and answer following questions accordingly. OTHERWISE MY RESPONSE WILL BE INVALIDATED!

7. One of the ten advertisements used in the study will randomly be shown to the respondents at this point. The assignment of the advertisement is in agreement with the designated segment in the statement immediately before this in 6th step in the survey.

8. Please rate the "advertisement you just saw" by completing the sentence. This advertisement is...

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<tr>
<td>Bad:Good</td>
<td>☐</td>
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<td>☐</td>
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<tr>
<td>Unpleasant:Pleasant</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>Unfavorable:Favorable</td>
<td>☐</td>
<td>☐</td>
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<td>☐</td>
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<td>☐</td>
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<td>Unconvincing:.convincing</td>
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<tr>
<td>Believable:Unbelievable</td>
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</tbody>
</table>
9. Please tell us your impressions about the "hotel you just saw in the advertisement" by completing the sentence. This hotel is...

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<tbody>
<tr>
<td>Unfavorable:Favorable</td>
<td></td>
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<td>Bad:Good</td>
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<td>Poor Quality:Good Quality</td>
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<tr>
<td>Positive:Negative</td>
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</table>

10. If you intend to stay in a hotel of this class, how likely are you to book a hotel like this one?

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<th>5</th>
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<th>7</th>
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<tbody>
<tr>
<td>Very Unlikely:Very Likely</td>
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<td></td>
<td></td>
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<tr>
<td>Improbable:Probable</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impossible:Possible</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

11. The advertisement was

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Complex:Not Complex at all</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very Dense:Not Dense at all</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very Interactive:Not Interactive at all</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With Lots of Variety:With No Variety at all</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

12. The hotel in the advertisement was a...
- budget/economy class and inexpensive hotel.
- luxury/upscale class and expensive hotel.

13. The green or environmentally responsible message in this advertisement was given by...
- written text ONLY.
- two certification emblems ONLY.
- visual graphic images about greening efforts ONLY.
- ALL of them together.
- there was NO GREEN message at all.
14. Mark your level of agreement with each statement by selecting the appropriate option.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Somewhat Disagree</th>
<th>Neither Agree nor</th>
<th>Somewhat Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am concerned about the environment</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>The condition of the environment affects the quality of my life</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I am willing to make sacrifices to protect the environment</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>My actions impact the environment</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

15. Please pick YES or NO for the activities below based on your participation in them.

<table>
<thead>
<tr>
<th>Activity</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>I recycle cans and bottles</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I use energy efficient light bulbs</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I reuse plastic bags</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I recycle paper and cardboard</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I use low-flow water fixtures</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I use reusable grocery bags</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I buy organic groceries</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
16. Which ethnicity describes you most accurately?
   ○ African American
   ○ Hispanic-Latino
   ○ Caucasian
   ○ Asian American
   ○ Other. Please Specify. ____________________

17. How old are you?
   ○ 18
   ○ 19
   ○ …. 

18. What is your gender?
   ○ Male
   ○ Female

19. What is the highest level of education you have attained?
   ○ High School or less
   ○ Some College
   ○ Associates Degree
   ○ Bachelor's Degree
   ○ Masters or PhD Degree

20. What is your household income?
   ○ $35,000 or less
   ○ $35,001-$55,000
   ○ $55,001-$75,000
   ○ $75,001-$95,000
   ○ more than $95,000

21. Which option describes your political views best?
   ○ Independent
   ○ Progressive-Democrat
   ○ Conservative-Republican
   ○ Other. Please Specify: ____________________
References


Morgan, J. (1987). Developing and measuring advertising effectiveness in the hotel industry. *A monograph presented to the Faculty of the Graduate School of Cornell University in partial fulfillment for the degree of masters of professional studies.*


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Dissertation Title:
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Committee Member, Dr. Karl Mayer, Ph.D.
Graduate Faculty Representative, Dr. Anjala Krishen, Ph. D.