CONSUMER RESPONSES TO VICE AND VIRTUE FOOD ADVERTISING:
A COMPARISON BETWEEN ORGANIC AND NON-ORGANIC PRODUCTS

A Thesis in
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by
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ABSTRACT

Although organic foods continue to gain popularity in the US, there is very little research about consumers’ responses to advertising promoting organic foods. Via an online experiment using a national sample of US adult shoppers of organic products (N=375), the study investigates consumer responses to advertising promoting the consumption of organic foods either due to their functional benefits (i.e., virtue frame or products) or due to their hedonic aspects (vice frame or products). The results are compared to perceptions of similarly-framed advertising for non-organic products. Results indicate significant differences in the perceived healthfulness of the advertised products as a function of product type (organic vs. non-organic), message frame (vice vs. virtue) and the interaction between the two. Significant main effects of several other variables are hypothesized and discussed. The paper concludes by discussing the significance and limitation of the reported findings.
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Chapter 1

Introduction

Within the last two decades, increased interest in and demand for organic products has led to large growth in the organic market. Although organic farming and food products have existed for years, the trend of eating “green” has consumers purchasing more organic products and pushing for large supermarkets and retailers to carry a greater selection of organic product lines (Batte, Hooker, Haab & Beaverson, 2006). In 2000, sales of organic food topped $18 billion around the world and within just 6 years the market revenue more than doubled reaching $38.6 billion in 2006 (Willer, Yussefi-Menzler & Sorensen, 2008). North America is the largest organic market in the world, with food and drink sales growing from $17.3 billion in 2006 (Willer, Yussefi-Menzler & Sorensen, 2008) to $31.5 billion in 2012 (Organic Trade Association, 2013). It is expected that the US organic market will expand at an annual rate of 14% until 2018 (Unites States Organic Food Market Forecast & Opportunities, 2013).

The increase in demand and sales has also caught the attention of the United States Department of Agriculture (USDA) (Greene, 2013). The USDA estimated that the sale of organic products will reach $35 billion in the US alone in 2014, again projecting a steady 10% incline in the market revenue from year to year (Greene, 2013). With well-known food companies like Heinz and Kraft Foods and retailers such as Loblaw’s and Safeway entering the organic food market, a steady growth in the organic sales can be expected to continue (Sahota, 2009).

With this development of organic product lines and increased consumer interest, consumer research has focused on factors surrounding consumer attitudes and their consumption of organic foods. Previous studies have tested consumer knowledge, understanding, and attitudes
toward the emerging organic product market (Sahota, 2009). Through these studies, various components of the organic market have been identified: organic consumer demographics have been established (Thompson & Kidwell, 1998), consumer preferences for organic products have been determined (organic fresh produce, organic processed foods, and organic non-food products) (Dimitri & Lohr, 2007) and motivations for organic consumption have been elaborated on (Onyango, Hallman, & Bellows, 2007). Yet, despite the vast amount of literature in business and agriculture, there is a lack of organic focused research within the communication and marketing fields. Both of these fields, as well as academia, would benefit from research about organic food product types, organic consumers, and the marketing and advertising of organic products.

Because the demand for organic foods continues to grow, the purpose of this study is to focus on effective promotion of organic food products through advertisements. Through an online experiment, the study used a sample of US adults who purchase organic products. The research explores consumer responses to advertising messages that promote the consumption of organic foods through their functional benefits (i.e., virtue frame or products) or hedonic aspects (vice frame or products).
Chapter 2

Literature Review

Consumer Demographics

Several studies have outlined the organic consumer base and its evolution throughout the decades. The first level of describing typical organic consumers is by how frequently they purchase organic food products. The term “organic consumers” is used to describe individual who regularly or occasionally purchase organic food as a portion of their food shopping (Tarkiainen & Sundqvist, 2009).

Several variables such as gender, education, ethnicity, household income, and psychographics define the typical organic consumer. Initial studies characterized organic consumers as Caucasian, of higher socioeconomic class, well-educated and highly concerned with health and product quality (Thompson & Kidwell, 1998). Individuals who earned an annual income of $100,000 or more a year are more likely to purchase organic foods compared to those with an annual income below $30,000 (Ward, Mamerow, Henderson, Taylor & Meyer, 2012). With the ability to afford these products and more expendable income, consumers are more willing to pay a premium for organic products over non-organic products. Due to the ability to pay a higher price, access to organic products would likely increase where these consumers live and grocery shop. Greater access to items creates a consumer interest; and therefore, consumers within these locations would have greater exposure and experience with organic foods. Previous research has indicated the more educated a consumer is the more likely he will exhibit information-seeking behavior. Based on the education level, consumers may be prompted to better understand food values and organic regulation (Zepdea & Deal, 2009) leading to the desire to purchase organic foods. Lastly, gender can play a role in if a consumer is more likely to purchase organic products. Within the typical U.S. household, women do most of the grocery
shopping (Onyango, Hallman, & Bellows, 2007) contributing to the fact that they are more likely to purchase organic foods compared to men.

In addition to possessing greater knowledge and access, several psychographics are correlated with regular organic food purchasers. Concern with health, or the health of others, is a huge motivator to select healthier, chemical-free food items. As female consumers are found to be more health conscious (Ward et al., 2012), it is not surprising that they are more likely to identify as an organic consumer (Onyango, Hallman, & Bellows, 2007). A concern with food-related issues such as health and food safety is a large consumer motivator for organic purchase; however, a consumer’s concern with ethical issues surrounding food production such as welfare of agriculture and of the environment are also strong indicators of an organic consumer (Eden, 2009).

Thompson and Kidwell (1998) published one of the first studies to distinguish organic consumers. They identified various characteristics that help to define the organic consumers through demographic variables such as class, race, or education. Since then, many researchers have identified very similar demographics such as ethnicity, socio-economic class, education level and psychographics across the literature. While these findings are fairly consistent, there is some disagreement regarding typical age and family makeup of an organic consumer. For age, Onyango, Hallman, & Bellows (2007) found that the typical organic consumer is 18 to 32 years old. According to their research, this younger age group is 7% more likely to purchase organic products than those who are of middle ages (33 to 52 years old) (Onyango, Hallman, & Bellows, 2007). An earlier study, based on a United Kingdom MINTEL (2000) survey, indicated that the youngest and oldest age groups are generally the least concerned with their health or diet and therefore leading to less organic purchases in these age groups. According to a 2003 United Kingdom MINTEL survey (2003), the age group most likely to purchase organic items was 45
to 55 years old. This may be due to other findings of this age group having households in which children have already left home allowing for more disposable income (Padel & Foster, 2005). According to a MINTEL (2000) survey, organic purchasing habits increase as a consumer researches their 30’s and have yet to create a family or have children. Previous studies also disagree on how a family dynamic impacts organic consumption. One study conducted in the United Kingdom indicated, those who live in a single person household may purchase more organic foods (MINEL, 2000) while another study conducted in the United States indicated those who are mothers may also purchase more organic foods (Onyango, Hallman & Bellows, 2007). Researchers, within France, found that families with children under the ages of 18 years old are also more likely to buy organic due to their concern with food safety and their development of their children (Monier, Hassan, Simioni, 2009).

These inconsistencies could be attributed to the significant variation in economic development, culture or social norms among the countries from where the samples were drawn. It is also likely that, as consumers’ knowledge and social norms regarding the consumption of organic foods evolve over time, differences would be observed even within the same country depending on the year the study was published. Clearly, this body of literature remains informative only inasmuch as it reveals communalities across countries and time points.

**Consumer Motivations to Purchase Organic Foods**

Consumers’ motivations for purchasing organic foods include the taste of the product (Johansson, Haglund, Berglund, Lea, & Risvik, 1999), moral considerations such as a concern for the environment (Tobler, Visschers, & Siegrist, 2011) and fair treatment of animals (Harper & Makatouni, 2002), and health consciousness (Essoussi & Zahaf, 2009). Understanding these motivations is important for developing communication messages, branding, and campaigns for the American consumer.
**Taste.** Whether organic food products taste better than non-organic food products has been debated by many researchers, food suppliers, and even pro-organic institutions. Although no scientific conclusions regarding improved taste have been made, consumers will still indicate that organic food products taste better than conventional food products (Tobler, Visschers, and Siegrist, 2011). It is possible that the product actually does taste better but it is highly more probable that consumers expect and perceive that the product will taste better because it is organically grown. A taste test of tomatoes, conducted in Sweden, analyzed consumer perception of the non-organic and organic fruits (Johansson, Haglund, Berglund, Lea, & Risvik, 1999). Consumers were told which tomato was organically grown and which tomato was conventionally grown and then asked to taste them. Despite the fact that all consumers tasted conventionally grown tomatoes in both taste tests, the results indicated that consumers thought the “organic” tomato was better tasting and of higher quality than the “conventional” tomato (Johansson et al., 1999). Again, this demonstrates a mental association between organic foods and better tasting foods. There may not actually be any difference in taste, but consumers may still be more likely to think that organic foods taste better than non-organic foods.

**Moral considerations.** Since the 1980’s the green consumer movement has led consumers to have a wider set of concerns for purchasing products. Ethical consumerism or the practice of purchasing products that do not harm the environment and society is a motivation to purchase organic products (Harper & Makatouni, 2002). The intention to purchase “green” is not only influenced by obligation and guilt to not harm the environment, but also by the desire to contribute something that is morally and ethically good to society (Dean, Raats, & Shepherd, 2008). Consumers look to reduce their impact on the environment through gaining knowledge on products and choosing more environmentally friendly selections.
In terms of carbon footprint, consumers are mainly concerned by the transportation distance for an organic food product (Tobler, Visschers, & Siegrist, 2011). The desire for shorter distribution channels and local foods also has a connection with the notion that locally grown food is higher quality, has a better taste, and is fresher than non-local/non-organic food (Chambers, Lobb, Butler, Harvey, & Traill, 2007). Additionally, supporting local farms and local economy can serve as a consumer motivation to purchase organic and/or local sourced food (Adams & Salois, 2010).

The fair treatment of animals is another moral consideration for consumers to purchase and consume organic products. For example, if a chicken farmer opts not to use harmful hormones in the growth of his chickens, consumers will see benefit not only for their own health, but also for the welfare of the chickens (Harper and Makatouni, 2002). Consumers have the highest concern for animals that produce food items such as milk (cows), eggs (chickens), and meat products (Harper and Makatouni, 2002). Moral considerations surrounding the organic food market contribute to consumer perception and willingness to purchase organic products.

**Health consciousness.** The largest driver of organic food purchase is the consumer’s concern with health consciousness and food safety (Essoussi & Zahaf, 2009). Increased food safety scares in the last decade, like salmonella outbreaks and Mad Cow Disease (BSE) incidences, have generated consumer concern with the safety of food products (Onyango et al., 2007). Furthermore, consumers lack confidence in the food industry and question their top priorities (McEachern and McClearn (2002). Sixty-two percent of U.S. consumers believe the food industry cares more about profits than ensuring the safety of its food products (McEachern & McClean, 2002). Due to growing distrust, health consciousness appears to be the most significant predictor in attitudes and purchase intention of organically produced foods (Magnusson, Arvola, Koivisto Hursti, Aberg & Sjoden, 2002).
Consumers concerned with health values buy organic products in an attempt to reduce exposure to chemicals or pesticides (Padel & Foster, 2005) and to avoid potentially harmful growth hormones and antibiotics (Harper & Makatouni, 2002). Kirscht’s (1974) Health Belief Model helps to explain the organic consumer’s “illness avoidance” motivation. Consumer food decisions are driven by their desire to avoid the threat of disease, personal illness, or food allergies; there is a belief that foods may make you ill if you do not select the correct products (Kirscht, 1988; Zepeda & Deal, 2009). In line with this reasoning, Essoussi and Zahar (2009) determined that food decisions are also driven by a need to ensure food safety, naturalness, and healthiness of food.

In addition to food safety, the consumer’s desire to purchase and consume healthier food, drives them to purchase products that will provide more nutrients. According to a recent study, organic produce, compared to conventionally farmed produce, contains greater nutrition, more vitamin C and many more plant-defense molecules that help shield against cancer and heart disease (Brandt, Leifert, Sanderson, & Seal, 2011). This finding reflects two of the health reasons consumers may purchase organic foods. Consumers may believe that organically produced food possess more nutritional value than their conventionally produced counterparts (Yiridoe, Bonti-Ankomah, & Martin, 2005).

In conjunction with concerns for food safety and healthfulness, a greater emphasis surrounding obesity in the United States has continued to spotlight the food industry and the promotion of their products. According to the United States’ Centers for Disease Control and Prevention, 69.2% of adults are considered overweight and 35.9% are obese (Ogden, Carrol, Kit & Flegal, 2014). As obesity rates rise, so does the concern with conditions associated with obesity, such as type 2 diabetes and heart disease (Ogden et al., 2014). Due to the obesity epidemic in the United States, Americans have become increasingly aware of their diet and
nutrition habits. Healthier food items have grown in popularity and demand. As the interest surrounding organic food grows so does the focus placed on the advertising for these particular foods. Using different frames to promote a message has proven to have an impact on how individuals perceive a specific product in relation to themselves (Botta, 2003) and can be applied to the advertising of organic food products.
Chapter 3

The United States Organic Food Market

Consumers define organic products as food that does not contain pesticides, hormones, or genetically-modified ingredients and are produced in an environmentally friendly way (Harper & Makatouni, 2002). According to the Food Marketing Institute, (USDA, 2012) organic applies to “natural” foods that are “minimally processed and free of synthetic preservatives, artificial sweeteners, colors, flavors, and other artificial additives (hormones, antibiotics, hydrogenated oils, and emulsifiers).”

In the United States, the highest grossing organic food product is fresh cut produce with retail sales totaling $4.43 billion in 2003 (NBJ, 2004). Organic fruit and vegetable sales make up 42% of the total sales of organic products and have consistently been the top selling organic products since the market has emerged (NBJ, 2004). The next most frequently purchased organic products are organic beverages and dairy with retail sales equaling $2.97 billion followed by organic packaged/prepared food with $1.3 billion in annual sales (NBJ, 2004).

As the market continues to grow, new organic products emerge allowing consumers to select not only organic fresh cut produce but also organic processed foods. Despite these new product lines, consumers are more likely to purchase organic produce over organic processed foods (Dean, Raats, & Shepherd, 2008). Consumers feel guiltier when purchasing organic processed foods due to the belief that more chemicals exist within the product (Dean, Raats, & Shepherd, 2008). Consumers feel more control over the purchase of organic produce (Dean, Raats, & Shepherd, 2008) indicating that consumers believe they can control the amount of pesticides, chemicals, or other artificial substances that they consume with a fresh organic product more than an organic processed product.

Essentially, the idea of a processed organic food does not fit with a consumer’s
understanding of organic (Dean, Raats, & Shepherd, 2008). If a product is considered processed, consumers may believe the ingredients are not as healthy as a whole food product and may contain unnecessary substances. The consumer’s feeling of more control with organic fresh produce could potentially be derived from the consumer’s inexperience with more processed organic products, including multi-ingredient organic products (Dean, Raats, & Shepherd, 2008).

For some consumers, the idea of processed foods as organic could be incongruent with positive qualities such as natural and more closely related to the negative qualities of processed foods such as containing chemicals or additives. Consumers trust that organic produce is a natural product and are unsure of the organic guarantee with organic processed foods.

As more and more companies join in efforts of creating organic brands, a plethora of organic multi-ingredient products, ranging from pizza to cereal or energy bars, have been introduced to the market. Yet, there is a significant gap in knowledge related to the consumption of processed organic foods, that this study is designed to address. Specifically, extant studies have looked at fresh organic produce; however, very few have looked at multi-ingredient, processed products.
Chapter 4

Vice vs. Virtue food products (and message frames)

An important conceptual distinction has emerged from food marketing research; there are food products that are perceived as healthy and good for you (virtue) and food products that are perceived as indulgent and tasting good (vice). According to Van Doorn and Verhoef (2011), virtue and vice products are typically conceptualized in relation to each other as relative virtues and relative vices. Relative vices (also known as “wants”) are products that provide an immediate pleasurable experience (such as the good taste of chocolate cake) (Van Doorn and Verhoef, 2011). Although vice foods are consumed for enjoyment, pleasure, and immediate satisfaction, they may have negative long-term outcomes (such as future weight gain and related health problems). In contrast, relative virtues (also known as “shoulds”) are less gratifying and appealing in the short term. Despite being less desirable food items, virtue foods have fewer negative long-term consequences than vice foods and therefore are a more prudent choice for consumers (Milkman, Rogers & Bazerman, 2008; Okada, 2005; Wertenbroch, 1998).

Previous studies on vice and virtue have reviewed consumer responses to different types of products and promotions (Milkman, Rogers & Bazerman, 2008, Wertenbroch, 1998, Micu & Chowdhury, 2010). Product categories and definitions for vice and virtue have also been thoroughly explored (Wertenbroch, 1998). Research indicates that consumers are more responsive to promotion of organic virtue food as opposed to organic vice food (Bezawada & Pauwels, 2010).

Van Doorn and Verhoef (2010) used vice and virtue product categories to explore perceptions of organic and non-organic products as well as the consumer perception on the willingness to pay for these products. These researchers conducted a 2 X 2 between-subjects
design with a sample of 233 students. The procedure included a proctor showing the participants one of the four different products: milk, jam, cola and chocolate. These products were shown in non-organic as well as organic versions. Participants then completed a questionnaire and identified the price they were willing to pay for the product. The study found, as contrary to what Van Doorn and Verhoef (2010) hypothesized, that the organic claim did not have a significant effect on the perception of the vice products. However, the researchers did find support for quality perceptions of virtue and vice foods positively effecting the consumer’s willingness to pay a higher premium.

The work of Van Doorn and Verhoef (2010) demonstrates the application of vice and virtue to the realm of organic and non-organic foods. The present study expands their research by using organic and non-organic food products within a vice and virtue frame. In addition, this research uses the same product for both the vice and virtue products.

Vice foods are typically seen as pleasurable (Kahn & Dhar, 2006) whereas virtue foods are seen as having a functional health benefit to the consumer (Kahn & Dhar, 2006). The notion of vice and virtue can easily be applied to organic foods. Past research has shown that consumers eat organic whole foods for utilitarian reasons such as the benefit of improved nutrition, to avoid pesticides and chemicals, and to promote long term health (Yiridoe, Bonti-Ankomah, & Martin, 2005).

Virtue foods are consequently perceived as healthier than vice foods (Van Doorn and Verhoef, 2010). To date however, there is no knowledge of whether differences in the perceived healthfulness of the product could follow from exposure to advertising. Based on existing research on perceptions of organic produce, it would be logical to assume that following exposure to advertisements, consumers’ perceptions of a product’s healthfulness should be
influenced by the vice vs. virtue nature of the product. Specifically, it should be expected that consumers exposed to advertisements promoting a virtue product should perceive the product as healthier than consumers exposed to products (non-organic and organic) advertised in a vice frame.

Nevertheless, important confounding variables are introduced when one makes this vice versus virtue comparison using different products, like Van Doorn and Verhoef (2010) did. A more valid test of the virtue vs. vice hypothesis is needed, that would eliminate any other differences between two products, leaving only the vice vs. virtue characteristics to manifest themselves and keeping all other variables constant. This could be achieved by framing the same product as either vice and virtue.

Framing is a strategy for message construction used regularly within advertising and marketing message campaigns. A message frame is constructed to highlight specific attributes or aspects and neglect to include other attributes or aspects about a product within the message. In sum, message frames use the hedonic principles of approach (happiness) and avoidance (pain) (Tsia, 2007). A positive frame will explain the positive outcomes (happiness) of consuming a product and a negative frame will explain the negative outcomes (pain) avoided by consuming a product. Within a product message, a positive frame will explain how a consumer can achieve their pursuit of positive outcomes by consuming a product with added nutrition or added health benefit. Whereas a negative frame will explain how a consumer can avoid negative outcomes like preventing exposure to pesticides or artificial additives (Tsia, 2007). Framing has been employed in relation to health claim messages for functional foods in previous research (Van Kleef, Van Trijp, & Luning, 2005). Past researchers have found that people respond more favorably to positive framing as opposed to negative framing (Van Kleef et al., 2005). These findings and research designs indicate that a connection between product message frames and
the creation of virtue message frames or a vice messages frame can be made. The virtue frames within this research will focus on the product health benefits and, in contrast, the vice frame would focus on the positive attributes of the product such as taste. By focusing on the positive aspects of these products, consumers will respond more favorably. In addition, the message frames may also impact the consumer’s perception of the product’s healthfulness with the language and message used.

Because the virtue frame would highlight product advantages such as nutritional value associated with health benefits and a vice frame would focus on the taste, enjoyment and indulgence aspects of a product, a virtue message frame should influence consumers to perceive products as healthier than a vice frame. Based on this, the following hypothesis is proposed:

**H1:** Consumers exposed to the virtue-frame of a message promoting a product should perceive the advertised product as healthier than those exposed to the vice-frame of a message promoting the same product. Note that the same should be expected when the products are different.

Through previous studies, researchers have concluded that organic food products are perceived as healthier than non-organic food products. Johansson et al. (1999) found that consumers expect organic foods to be healthier than non-organic foods because they are pesticide and chemical-free. In another study, researchers found that a main motivation for consumers to purchase organic foods is their belief that the organic product is healthier and provides more healthful benefits (Essoussi & Zahaf, 2009). Therefore, I hypothesize a similar effect as H1 should occur:

**H2:** Consumers exposed to advertisements promoting an organic product should perceive the advertised product as healthier than those exposed to advertisement promoting the non-organic product. Again, the same should be expected when the products are different.

Furthermore, an interaction effect is expected between the type of product (organic or
non-organic) and the type of frame (vice or virtue) on the perception of product healthfulness. Indeed the virtue frames, for the non-organic product and the organic product, is described to contain good ingredients, provide nutrition, and be good for one’s health – thus facilitating a perception of the non-organic product to have benefits typically associated with organic products. As a result, the relative differences in perceived healthfulness between the organic and the non-organic products should be minimal or non-existent. However, there should be an observable difference between the organic and non-organic products advertised in the vice frame. The vice frame does not minimize the relative gap in perceived health benefits between the non-organic product and the organic product. On the contrary, a vice frame reinforces the impression that non-organic products should be consumed primarily for hedonic reasons such as enjoying the taste. In sum, one should expect the differences in perceived healthfulness between organic and non-organic to be significant and larger in the vice frame (vs. the virtue frame) because the virtue frame presents the non-organic products in a manner that increases their similarity with the organic products. Therefore, the following hypothesis are proposed:

**H3:** There should be a significant interaction between type of product (organic vs. non-organic) versus type of frame (virtue vs. vice) on the perceived healthfulness of the advertised product. Specifically,

**H3a:** Consumers exposed to the vice frame advertisements will perceive the organic product as healthier than the non-organic product.

**H3b:** Consumers, exposed to the virtue frame advertisements, will not perceive the organic product as healthier than the non-organic product.
Chapter 5

Other Consumer Characteristics: how mood and regulatory focus responses to organic food advertisements

Consumer characteristics can impact consumers’ perception of a food product, its advertisement, and even a consumer’s perceptions of the product’s taste. Mood is a consumer characteristic that has been defined by previous research as a mild or general affective state that can influence how consumers perceive a message (Frijda, 1993). Unlike emotions (such as anger or fear), moods will generally last longer and can extend beyond what originally created the mood (Anghelcev & Sar, 2014). In a 1987 study, researchers manipulated a participant’s mood through commercials placed within a happy or a sad television program. The results indicated that the participants who experienced the happy/positive TV programing had a more positive response for the commercials compared to the participants who experienced the sad/negative TV programing (Goldberg & Gorn, 1987). Goldberg and Gorn (1987) found the role of this affective state can impact how a consumer receives and retains the information presented in an advertisement form. In addition, as seen by Schwarz and Clore (1983), consumers use their current affective state to inform their decision making process. Therefore, mood can effect various forms of consumer behavior such as the evaluation of a product or the intention to try a product (Gorn, Goldberg & Basu, 1993). Consumers observe how they feel about a certain product or how they feel in a given moment when making an evaluative judgement (Gorn, Goldberg & Basu, 1993). Positive feelings can lead a consumer to conclude they like something whereas negative feelings can lead a consumer to conclude they do not like something (Clore, 1992). Mood can play an important role in how a consumer evaluates an organic product, an
organic product advertisement and even the product’s taste. If a consumer is in a positive mood, the consumer should have a more positive evaluation of the product than if they were in a negative mood. Based on this, the following hypothesis are proposed:

**H4a:** Consumers in a positive mood will evaluate the advertisement as more favorably than consumers who were in a negative mood.

**H4b:** Consumers in a positive mood will have a higher intention to purchase the product than consumers who were in a negative mood.

**H4c:** Consumers in a positive mood will evaluate the taste of the product higher than if they consumers who were in a negative mood.

**Regulatory Focus Theory**

Another consumer characteristic that can impact consumer perception is their regulatory focus orientation. Regulatory focus theory expands on the basic hedonic principle that “people approach pleasure and avoid pain” (Higgins, 1997, 1280). Promotion focus consists of “a concern with advancement, growth, or accomplishment” (Higgins, 1997, 1282), whereas prevention focus is a concern with “safety and responsibilities,” (Higgins, 1997, 1280).

By matching a consumer’s promotion orientation with a message focusing on achieving positive outcomes, as well as prevention orientation with a message focusing on avoiding negative outcomes, the message can be more persuasive (Keller, 2006) and more credible (Aaker & Lee, 2006).

Many researchers utilize this theory to promote persuasive messages in regards to health-related behaviors (Keller, 2006; Kim, 2006, Uskul, Sherman & Fitzgibbon, 2009, Kees, Burton, & Heintz-Tangari, 2010). For example, Kim’s (2006) study examined an interaction of the individual's regulatory focus in relation to the health-related behavior of smoking. The study paired the individual’s regulatory orientation preference of promotion or prevention with the appropriate anti-smoking message highlighting either achieving positives or avoiding negatives. The results indicated that when the participant’s regulatory focus and messaging matched, they
were more likely to perceive a greater risk in smoking and had lower intentions to participate in the behavior. Kim’s (2006) conclusions align with Higgins’ (1997) and Higgins et al. (2001) results by drawing relationships between message frames and promotion focus or prevention focus. Kim (2006) found that the frame used within the message had a large impact on the how the individual saw the benefits or disadvantages of smoking.

Previous research has employed regulatory focus as a variable in one of two ways. The first is to recognize that individuals can possess a natural tendency to have a specific regulatory orientation as a “stable individual difference” (Kees, Burton, & Heintz-Tangari, 2010, 20). While the regulatory focus can be an individual characteristic, research has also conceptualized the orientation as a “malleable attribute that can be manipulated for a particular task or goal” (Kees, Burton, & Heintz-Tangari, 2010, 20). This study aims to utilize an individual’s regulatory focus as a malleable attribute and relate it to consumer’s perceptions of organic food advertising.

The relationship between Vice and Virtue and Regulatory foci (Promotion and Prevention)

Although regulatory focus frames have never been applied to vice and virtue foods in previous research, Micu and Chowdhury (2010) found that promotion focus messages were more effective than prevention focus messages for hedonic products. Comparatively, the prevention focus messages were more effective than promotion focus messages for utilitarian products (Micu & Chowdhury, 2010). The effectiveness of the message was measured by the consumers’ amount of positive feelings, message recall, and message persuasiveness.

Conceptually, the virtue and vice dichotomy can be related to the utilitarian and hedonic distinction employed by Micu and Chowdhury (2010). Vice organic foods are mostly consumed for pleasurable (hedonic) reasons, whereas virtue foods are consumed for health benefits and nutrition (i.e., utilitarian) reasons (Wertenbroch, 1998). Therefore, a conceptual link can be drawn between hedonic consumption and vice foods, as both are associated with pleasure and
enjoyment motives. Virtue organic foods, on the other hand, can be related to utilitarian consumption due to their primarily functional use.

Based on these links and in view of the findings of Micu and Chowdhurry (2010), the following hypotheses are proposed. There will be an interaction (see Figure 1) between the type of manipulation (prevention vs. promotion) and type of organic product (virtue vs. vice); so that

**H6a: Prevention focused consumers will perceive the virtue organic food products more positively, the advertisement more positively, have a greater willingness to purchase, and possess the belief that the product is better tasting than those manipulated through the promotion focus.**

Conversely,

**H6b: Promotion focused consumers, will perceive the vice organic food products more positively, the advertisement more positively, have a greater willingness to purchase, and possess the belief that the product is better tasting than those manipulated through the prevention focus.**
Chapter 6

Method

Design

Three hundred and seventy-five participants took part in a 2 X 2 X 2 between-subjects experimental design (type of organic food product: vice versus virtue; state of regulatory focus: promotion vs. prevention) (see Table 6.1). The online experiment was conducted through Qualtrics Survey Software. Participants self-selected to participate in the experiment through a Qualtrics panel. To partake in the experiment, participants had to be primarily or partially responsible for grocery shopping in their household as well as have purchased an organic food product at least once in the last month. Participants were randomly assigned to one of the eight conditions: promotion/organic/vice, promotion/organic/virtue, prevention/organic/vice, prevention/organic/virtue, promotion/non-organic/virtue, promotion/non-organic/vice, promotion/non-organic/virtue, prevention/non-organic/vice or prevention/non-organic/virtue. The stimuli (as described later) framed pizza as both a vice and virtue food whereas cereal was only depicted as a virtue food and ice cream was only depicted as a vice food. Due to the ineffectiveness of the regulatory focus manipulation, the study design was collapsed to a 2 X 2 (type of organic food product; vice versus virtue) (see Table 6.2). After removing incomplete responses from the initial data set, a total of 231 valid response were recorded for the organic condition and 144 responses for the non-organic condition. Participants were paid $5 dollars for their participation.
Table 6.1

Study Design (2 Type of Frame (vice vs. virtue) X 2 Type of Product (Organic vs. Non-Organic) X 2 Regulatory Focus (promotion vs. prevention))

<table>
<thead>
<tr>
<th></th>
<th>Promotion Focus</th>
<th>Prevention Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vice</td>
<td>Organic/vice</td>
<td>Non-Organic/vice</td>
</tr>
<tr>
<td>Virtue</td>
<td>Organic/virtue</td>
<td>Non-Organic/virtue</td>
</tr>
</tbody>
</table>

Procedure.

Participants self-selected for survey and chose to take part in the study after providing informed consent. Next, participants were randomized into either the promotion or the prevention manipulation (see manipulation below). Then, the participants were randomized in an organic or a non-organic condition (see Table 6.2). The participants were asked to evaluate either two organic advertisements (organic virtue pizza/organic virtue cereal or organic vice pizza/organic vice ice cream) or two non-organic advertisements (non-organic virtue pizza/non-organic virtue cereal or non-organic vice pizza/non-organic vice ice cream). Following their evaluation, various dependent measures and basic demographic information were collected.
Table 6.2

Study Design (2 Type of Frame (vice vs. virtue) X 2 Type of Product (Organic vs. Non-Organic))

<table>
<thead>
<tr>
<th>Type of Frame</th>
<th>Type of Product</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Organic</td>
</tr>
<tr>
<td>Vice</td>
<td>Organic/vice</td>
</tr>
<tr>
<td>Virtue</td>
<td>Organic/virtue</td>
</tr>
</tbody>
</table>

Manipulation of regulatory focus.

Several researchers have developed strategies to manipulate a person’s regulatory focus (Chang & Chou, 2008; Chernev, 2004; Friedman and Forster, 2001; Florack, Friese & Scarabis, 2010; Wan, Hong, & Sternthal, 2009). A two pronged approach has frequently been used to manipulate an individual’s goal orientation (Higgins, Shah, and Friedman, 1997; Higgins and Freitas, 2002; Chau & Chou, 2008; Florack, Friese, & Scarabis, 2010). For the first prong, as adapted from Florack, Friese and Scarabis (2010), participants who were in the promotion-focused manipulation were asked to think about their past hopes, aspirations and accomplishments and then list two. Next, participants were asked to list two of their current aspirations and hopes. For those who were in the prevention-focused manipulation, participants were asked to think about their duties, obligations, and responsibilities and then list two of their past and two of their current duties. The second prong included a word fragment completion task (Gilbert & Hixon, 1991). Participants would see fragments of the words (i.e. acc_m_lish) and would have to fill in the missing letters. The word completion task would further activate either the promotion mind-set (growth, eager, active, accomplish, hope, and succeed) or the prevention mind-set (duty,
vigilant, safe, responsible, careful, and secure). Additional words to previous studies were added to ensure the manipulation took place (Lee, Keller, & Sternthal, B, 2010).

**Regulatory focus manipulation pre-test.**

A pre-test was conducted to review the manipulation’s effectiveness. Eighty-two undergraduate students from a Penn State University communications class participated in the test. Forty-four (53.7%) were randomized into the promotion condition and 38 (46.3%) were randomized into the prevention condition. By running an independent-sample t-test of the manipulation check, it was concluded the manipulation was significant for both promotion focus manipulation check (promotion, M=5.45, SD=.62, prevention, M=5.16, SD=.75); t(80) = .296 p=.05, and prevention focus manipulation check (promotion, M=4.98, SD=.93, prevention, M=5.37, SD=.67); t(80) = -.301, p=.034.

**Measures.**

All scales and stimuli were displayed in a randomized order when participants took the survey. Additionally, participants were randomized into conditions.

**Dependent variables.**

*Attitude towards the ad*

Attitude towards the advertisement (Cronbach’s α = .896) was measured on a three item scale (product ad is appealing, product ad is interesting, and product ad is believable) to understand how the consumer felt and perceived the advertisement (see appendix D) (Arias-Bolzmann, Chakraborty, & Mowen, 2000)

*Perceived product healthfulness.*

Perceived product healthfulness (Cronbach’s α = .743) included two items (product is bad/good for me and product is healthy) to measure a consumer’s view of the healthfulness of the product presented within the advertisement (see appendix D). On a 7-point scale, (1) strongly
disagree to
(7) strongly agree, participants indicated if it was very likely they would purchase the product and if it was very likely they would try the product (Coyle & Thorson, 2001; Kim & Biocca, 1997).

Mood.

Mood (Cronbach’s α = .867) included three items (sad/happy, bad/good, cheerful/gloomy) to measure the consumer’s natural state of mood (see appendix D). Cheerful and gloomy was reverse coded.

Additional Measures.

Attitude towards the product was measured by four items (the product is bad for me/good for me, dislike/like, the product has poor quality/high quality, the product is unappealing/appealing) on a 7-point scale anchored by (1) strongly disagree, (7) strongly agree (Arias-Bolzmann, Chakraborty, & Mowen, 2000). On a 7-point scale, (1) strongly disagree, (7) strongly agree, perceived taste of the product was measured by one item (the product wouldn’t taste good/the product would taste good) (Arias-Bolzmann, Chakraborty, & Mowen, 2000). Perceived overall product appeal was measured by one item (unappealing/appealing) and perceived product quality was measured by one item (low quality/high quality) on a 7-point scale, (1) strongly disagree, (7) strongly agree. Lastly, behavioral intent was measured by two items (intention to try and intention to buy) on a 7-point scale (Coyle & Thorson, 2001; Kim & Biocca, 1997).

Regulatory focus.

A manipulation check was adapted from Keller (2006). A 7-point scale was used to measure the effectiveness of the manipulation, (1) strongly disagree, (7) strongly agree, on two
items “it is important for me to do what I want to do” and “it is important for me to what I should do” (Keller, 2006).

**Sample.**

A majority of the participants were female (63.2%) and 36.8% were male. Of the participants, 36.5% indicated they were in the age range of 25 to 36. In regards to political affiliation, 46.6% of participants said they were Democrat, 30.5% said they were Independent, and 23% said they were Republican. Participants had varying levels of education: Associates Degree (22.4%), Bachelor’s Degree (33.4%) or a Graduate or Professional Degree (17.4%). Lastly, 71.5% of participant’s samples identified as White/Caucasian. There was not a strong sampling of under-represented groups: 8.5% African American, 7.2% Asian, 8.5% Hispanic/Latino, and 4.2% other.

About 48% of participants indicated that there were only one or two people in the household; due to this, it is not a surprise that 53.5% of participants said there were no children in the household. About 37.1% stated there were one to two children in the house. In addition for annual household income about 16.9% fell under $24,999, 22% were in $25,000 to $49,000, 37.4% were in $50,000 and $99,999, and 23.7% were in 100,000 or more.

**Pre-Tests.**

*First Pre-Test.*

The first pre-test was completed to determine what types of food products should be used to represent vice and virtue products. The pre-test was completed with 90 respondents from a convenience sample. On a 6-point scale, (1) strongly disagree to (6) strongly agree, participants were asked to rate how much they agreed that the food product was vice or virtue. The results indicated a majority of the products were seen as virtue (orange juice (M=3.91, SD=1.4), applesauce (M=3.68, 1.27), hummus (M=3.55, 1.2), vegetable soup
The apples (M= 4.79, SD=1.28) and strawberries (M= 4.68, SD=1.39) were perceived the most as virtue. Pizza was the only food product perceived as a vice food (M=4.49, SD=1.29) and not as a virtue (M=1.91, SD=1.08).

Second Pre-Test.

The second pre-test was completed to test the effectiveness of brand name and brand logo created for the advertisements. Additionally, the test was designed to determine if pizza could be framed as virtue product after a manipulation. The pre-test was completed by 61 respondents from a convenience sample. The brand name “Green Field” was measured on a 6-point scale, anchored by (1) strongly disagree, (6) strongly agree, for trustworthiness (M=4.24, SD=.9) and product quality (M=4.05, SD=.91). After exposing participants to a virtue framed advertisement, participants perceived the organic pizza product as a virtue product (M=4.31, SD=1.31). These results indicated that organic pizza could be marketed successfully through a virtue frame.

Third Pre-Test.

The third pre-test was designed to test a manipulation of the participant’s regulatory focus through an advertisement messages using a promotion or prevention frame. The advertisement depicted a photographed image of the multi-ingredient vice and virtue foods. The pre-test was completed by 181 Penn State undergraduate students in a Penn State communications course. The manipulation through the advertisement message proved the manipulation was not strong enough within the messages; organic virtue products: virtue cereal (M=4.87, SD=.953), vice cereal (M=4.00, SD=.991), virtue pizza (M=4.63, SD=1.15), vice pizza (M=4.02, SD=1.15), organic vice products: virtue ice cream (M=4.74, SD=1.07), vice ice cream (M=3.79, SD=1.23), virtue pizza (M=4.21, 1.15), vice pizza (M=4.34, SD=1.20). Therefore, it was determine to use a different form of manipulation for the survey.
**Stimuli.**

Eight different full page advertisements for the virtue and vice products were created as the stimuli for the experiment. The virtue product advertising messages that stressed the pesticide-free, chemical free nature of the product and placed emphasis on improving ones’ health through the nutritional benefits while steering clear of harmful artificial additives. The first message was for the organic product and emphasized the organic nature of the product.

The ad read:

Avoid the chemical-ridden flavors of processed food and improve your health with our 100% organic pizza made with only organic-certified ingredients. With a 7 whole grain crust topped with pesticide-free vegetables and hormone-free cheese, our pizza helps you to steer clear of the harmful effects of artificial additives and keeps you satisfied throughout the day. Stay away from unhealthy toxins and benefit your body with a vitamin-packed organic taste.

The second virtue message was for the non-organic product. The ad read:

Avoid chemical-ridden additives and provide great nourishment for your active lifestyle by eating healthful Green Field pizza. With a 7 whole grain crust topped with fresh picked vegetables and nutrient rich cheese. Green Field pizza is only made with real ingredients to help you steer clear of the harmful effects of artificial preservatives. Stay away from unhealthy toxins and benefit your body with vitamin-packed wholesome taste.

The vice product advertising messages focused on the indulgence that the product provided the consumer. For the vice products, the organic advertisement emphasized that the product was organic.

The ad read:

Enjoy the savory and delicious experience of our 100% organic pizza packed with tantalizing flavor in every bite. Indulge in the crisp whole grain crust topped with delectable pesticide-free vegetables and luscious melted cheese leaving your taste buds begging for more. Relish in the sensational flavor and appreciate the blend of organic-certified ingredients.
The non-organic advertisement read:

> Enjoy the savory and delicious experience of Green Field’s pizza packed with tantalizing flavor in every bite. Indulge in the crisp whole grain crust topped with delectable fresh vegetables and luscious melted cheese leaving your taste buds begging for more. Relish in the sensational flavor and appreciate the blend of simple ingredients.

Each advertisement depicted an image of the food product to make the advertisement more believable (See Appendix A and B). In addition, if the advertisement was for an organic product it had the “Green Field Organic” brand logo. If the advertisement was for a non-organic product, it had a “Green Field” brand logo. The logos were identical except the elimination of the word “organic” for the non-organic brand. As previously stated, results from the pre-tests indicated the logo name and logo were perceived as trustworthy and of high quality. All the advertisements used in the study are presented in Appendix A and B.
Chapter 7

Results

Regulatory Focus Manipulation Check

One-hundred and seventy-six participants (46.9%) were randomized into the promotion condition and 199 (53.1%) were randomized into the prevention condition. By running an independent-sample t-test of the Regulatory Focus manipulation and the manipulation check, it was concluded the manipulation did not have significant differences between the promotion focus (promotion, M=5.73, SD=1.16, prevention, M=5.6, SD=1.28); t(373) = .830 p = .407, and prevention focus (promotion, M=5.93, SD=1.20, prevention, M=6.05, SD=1.14); t(373) = -1.02, p=.306.

Hypotheses

H1 – H3.

H1 stated consumers who saw the virtue-framed message of a product would perceive that product as healthier than if they had seen the vice-framed message. Similarly, H2 stated that consumers would perceive the organic products as healthier compared to the non-organic products. Lastly, H3 stated there would be an interaction between the type of product (organic vs. non-organic) and the type of frame (virtue vs. vice).

Results for same product: vice-framed pizza vs. virtue-framed pizza

Results indicated support for H1. The main effect of the pizza product type (vice vs virtue) on perceived healthfulness of the product was significant; \(F(1,3) = 5.44, p=.020\). Specifically, for the perception of health between type of frame: virtue (M=4.83, SD=1.17) and vice (M=4.62, SD=1.14). Results also indicated support for H2 with a significant main effect \(F(1,3) = 5.74, p=.047\) found for the pizza product and type of product, organic (M=4.82, SD=1.11) and non-organic (M=4.57, SD=1.23), on perceived healthfulness.
Table 7.1

*Consumer Perception of Health of Pizza Products*

<table>
<thead>
<tr>
<th>Type of Product (Ice Cream and Cereal Products)</th>
<th>Vice Frame</th>
<th>Virtue Frame</th>
<th>Organic Product</th>
<th>Non-Organic Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>M=4.62</td>
<td>M=4.83</td>
<td>M=4.82</td>
<td>M=4.57</td>
<td>SD=1.14</td>
</tr>
</tbody>
</table>

For H3, results of an ANOVA indicated there was a significant interaction between type of frame of the advertisement (vice pizza vs. virtue pizza) and organic vs. non-organic; ($F(1,3) =5.743, p < .017$). Specifically, in the vice frame the organic pizza (M=4.82, SD=1.06) was seen as healthier than the non-organic pizza (M=4.29, SD=1.18). In the virtue frame, the difference in means between organic pizza (M=4.82, SD=1.17) and non-organic pizza (M=4.87, SD=1.20) was significantly reduced (see Table 7.1).

Table 7.2

*Perception of Health: Type of Frame versus Type of Pizza Products*

<table>
<thead>
<tr>
<th>Type of Frame</th>
<th>Organic Pizza</th>
<th>Non-Organic Pizza</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vice</td>
<td>Organic/vice (M=4.82, SD=1.06)</td>
<td>Non-Organic/vice (M=4.29, SD=1.18)</td>
</tr>
<tr>
<td>Virtue</td>
<td>Organic/virtue (M=4.82, SD=1.17)</td>
<td>Non-Organic/virtue (M=4.87, SD=1.20)</td>
</tr>
</tbody>
</table>

Lending support for H3a and H3b, a simple effect analysis showed that the differences in perceived product healthfulness in the vice frame were statistically significant (p=.002;
supporting H3a), whereas the differences in perceived healthfulness in the virtue frame were non-significant (p = .775; supporting H3b).

Figure 7.1

*Interaction: Type of Pizza Product (organic vs. non-organic) by Type of Frame (Virtue vs. Vice) on Perceived Healthfulness Scale*

Results for the different vice (ice cream) and virtue (cereal) products

Additional results indicated support for H1-H3 when different products were used.

Again, the results from an ANOVA indicated the main effect of product type (vice vs virtue) on perceived healthfulness of the organic product was significant ($F(1,3) = 86.16, p = .000$) (see Figure 7.2), specifically, for the perception of health between type of frame, virtue (M=5.12, SD=.98) and vice (M=4.03, SD=1.43). Additionally, results also indicated support for H2 through a significant main effect ($F(1,3)= 12.48, p = .000$) for the type of product organic (M=4.75, SD=1.20) and non-organic (M=4.30, SD=1.52) on perceived healthfulness.
Table 7.3

*Consumer Perception of Health of Cereal and Ice Cream Products*

<table>
<thead>
<tr>
<th>Type of Product (Ice Cream and Cereal Products)</th>
<th>Vice Frame</th>
<th>Virtue Frame</th>
<th>Organic Product</th>
<th>Non-Organic Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>M=4.03</td>
<td>M=5.12</td>
<td>M=4.75</td>
<td>M=4.30</td>
<td></td>
</tr>
<tr>
<td>SD=1.43</td>
<td>SD=.98</td>
<td>SD=1.2</td>
<td>SD=1.52</td>
<td></td>
</tr>
</tbody>
</table>

Again for H3, the results of the ANOVA indicated there was a significant interaction between type of product (vice vs. virtue) and organic vs. non-organic; (F(1,3) = 9.37, p < .002). Within the vice frame the organic product (M=4.75, SD=1.20) was seen as healthier than the non-organic product (M=4.30, SD=1.52). In regards to the virtue frame, there is once again very little difference in means between organic products (M=5.15, SD=.90) and non-organic products (M=5.09, SD=1.11).

Table 7.4

*Perception of Health: Type of Frame versus Type of Cereal/Ice Cream Products*

<table>
<thead>
<tr>
<th>Type of Frame</th>
<th>Type of Product (Ice Cream and Cereal Products)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Organic</td>
</tr>
<tr>
<td>Vice</td>
<td>Organic/vice (M=4.75, SD=1.20)</td>
</tr>
<tr>
<td>Virtue</td>
<td>Organic/virtue (M=5.15, SD=.90)</td>
</tr>
</tbody>
</table>

Providing more support for H3a and H3b, a simple effect analysis showed that the differences in perceived product healthfulness in the vice frame were statistically significant.
(p=.000; supporting H3a), whereas the differences in perceived healthfulness in the virtue frame were non-significant (p=.740; supporting H3b).

**Figure 7.2**

*Interaction: Type of Product (organic vs. non-organic) by Type of Frame (Virtue vs. Vice) on Perceived Healthfulness Scale*

**H4.**

H4 stated that consumers who are in a positive mood will evaluate the advertisement more favorably (H4a), have a higher intention to purchase the product (H4b), and evaluate the taste of the product higher (H4c) than consumers who are in a negative mood.

For H4 significance was found for main effect of mood (see Table 7.1). An independent sample t-test was conducted with natural mood (positive versus negative) as a grouping variable on the dependent variables for the pizza products. Significant results were found for H4a attitude towards the pizza advertisement (positive, M=4.87, SD=.90, negative, M=4.36, SD=1.28; t(373) = 3.27, p=.001), and H4c for the taste of the pizza product (positive, M=4.81, SD=1.38, negative,
M=4.29, SD=1.61; t(373) = 2.12 p=.013). Significance was also found for the perceived product quality (positive, M=5.31, SD=.827, negative M=4.55, SD=1.26; t(373)= 5.8, p=.000), and perceived overall product appeal (positive, M=5.28, SD=1.26, negative M=4.67, SD=1.01; t(373)= 5.7, p=.000). For H4b, marginal significance for intention to buy the pizza product (positive, M=4.72, SD=1.145, negative, M=4.42, SD=1.46; t(373)= -1.81, p=.071) and the intention to try (positive, M=4.95, SD=1.11, negative, M=4.6, SD=1.40); t(373)= -2.099, p=.079).

Table 7.5

<table>
<thead>
<tr>
<th>Effect of Mood on Dependent Variables for Pizza</th>
<th>Mood</th>
<th>Mean</th>
<th>St. Deviation</th>
<th>t</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude towards Advertisement</td>
<td>positive</td>
<td>4.87</td>
<td>0.9</td>
<td>3.27</td>
<td>0.001</td>
</tr>
<tr>
<td>Perceived Healthfulness of Product</td>
<td>positive</td>
<td>4.79</td>
<td>1.13</td>
<td>2.35</td>
<td>0.019</td>
</tr>
<tr>
<td>Perceived Product Taste</td>
<td>positive</td>
<td>4.81</td>
<td>1.38</td>
<td>2.12</td>
<td>0.013</td>
</tr>
<tr>
<td>Intention to Purchase Product</td>
<td>positive</td>
<td>4.72</td>
<td>1.145</td>
<td>1.81</td>
<td>0.071</td>
</tr>
<tr>
<td>Intention to Try Product</td>
<td>positive</td>
<td>4.95</td>
<td>1.11</td>
<td>2.09</td>
<td>0.079</td>
</tr>
<tr>
<td>Perceived Overall Appeal</td>
<td>positive</td>
<td>5.14</td>
<td>0.97</td>
<td>1.38</td>
<td>0.000</td>
</tr>
<tr>
<td>Perceived Product Quality</td>
<td>positive</td>
<td>5.15</td>
<td>1.19</td>
<td>2.63</td>
<td>0.002</td>
</tr>
</tbody>
</table>

For H4 significance was found for main effect of mood for all products (see table 7.2). Again, an independent sample t-test was conducted with natural mood as a grouping variable (negative/positive) on the dependent variables for all products. There were significance found for H4a between positive (M=4.86, SD=.96) and negative moods (M= 4.13, SD=.976) found for attitude towards the advertisement; t(373)=.73, p = .000). Additionally, for H4b, there were also significant differences existing regarding the product taste between positive (M=4.88, SD=1.45)
and negative moods (H4b) (M=3.96, SD=1.77); t(373)=4.18 p=.000. Significance was also found for the perceived product quality (positive, M=5.15, SD=1.19, negative M=4.71, SD=1.2; t(373)= 2.63, p=.002), and perceived overall product appeal (positive, M=5.14, SD=.97, negative M=4.92, SD=1.05; t(373)= 1.38, p=.000). Lastly, for H4c, significance was also found for the intention to purchase the product (positive, M=4.68, SD=1.23, negative M=3.98, SD=1.28; t(373)= 3.85 , p=.000), and the intention to try the product (positive, M=4.89, SD=1.19, negative M=4.14, SD=1.30; t(373)= 4.21, p=.000).

Table 7.6

Effect of Mood on Dependent Variables for Cereal and Ice Cream

<table>
<thead>
<tr>
<th>Mood</th>
<th>Mean</th>
<th>St. Deviation</th>
<th>t</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude towards Advertisement</td>
<td>positive</td>
<td>4.86</td>
<td>0.96</td>
<td>0.73</td>
</tr>
<tr>
<td></td>
<td>negative</td>
<td>4.13</td>
<td>0.976</td>
<td>0.73</td>
</tr>
<tr>
<td>Perceived Healthfulness of Product</td>
<td>positive</td>
<td>4.66</td>
<td>1.35</td>
<td>0.73</td>
</tr>
<tr>
<td></td>
<td>negative</td>
<td>4.09</td>
<td>1.27</td>
<td>0.73</td>
</tr>
<tr>
<td>Perceived Product Taste</td>
<td>positive</td>
<td>4.88</td>
<td>1.45</td>
<td>0.73</td>
</tr>
<tr>
<td></td>
<td>negative</td>
<td>3.96</td>
<td>1.77</td>
<td>0.73</td>
</tr>
<tr>
<td>Intention to Purchase Product</td>
<td>positive</td>
<td>4.68</td>
<td>1.23</td>
<td>0.73</td>
</tr>
<tr>
<td></td>
<td>negative</td>
<td>3.98</td>
<td>1.28</td>
<td>0.73</td>
</tr>
<tr>
<td>Intention to Try Product</td>
<td>positive</td>
<td>4.89</td>
<td>1.19</td>
<td>0.73</td>
</tr>
<tr>
<td></td>
<td>negative</td>
<td>4.14</td>
<td>1.3</td>
<td>0.73</td>
</tr>
<tr>
<td>Perceived Overall Appeal</td>
<td>positive</td>
<td>5.28</td>
<td>1.26</td>
<td>0.73</td>
</tr>
<tr>
<td></td>
<td>negative</td>
<td>4.67</td>
<td>1.01</td>
<td>0.73</td>
</tr>
<tr>
<td>Perceived Product Quality</td>
<td>positive</td>
<td>5.31</td>
<td>0.827</td>
<td>0.73</td>
</tr>
<tr>
<td></td>
<td>negative</td>
<td>4.55</td>
<td>1.26</td>
<td>0.73</td>
</tr>
</tbody>
</table>

H5.

H5a stated that consumers who were manipulated in the prevention focus would perceive virtue organic foods more positively, the advertisement more positively, have a greater willingness to purchase, and possess the belief that the product is better tasting than those who were manipulated in the promotion focus. On the other hand, H5b stated that consumers who were manipulated in the promotion focus would perceived vice organic foods
more positively, the advertisement more positively, have a greater willingness to purchase, and possess the belief that the product is better tasting than those who were manipulated in the prevention focus. Unfortunately, the regulatory focus theory manipulation was unsuccessful and the hypotheses could not be tested.
Chapter 8

Discussion

The research aimed to investigate consumer responses to advertising promoting the consumption of organic foods either due to their functional benefits (i.e., virtue frame or products) or due to their hedonic aspects (vice frame or products).

This study makes an important contribution to the understanding of consumer perceptions of vice and virtue foods by proposing a design which significantly increases the internal validity of the comparison between vice and virtue consumption. In past research, different products were used to operationalize the vice-virtue variable. For example, the comparisons were made between a wholesome product like organic milk – representing the virtue value of the variable and a multi-ingredient product like pizza, representing the vice value of the variable (see, for example, Van Doorn and Verhoef, 2010). Clearly, the resulting differences in perceptions cannot be attributed solely to the vice-virtue distinction between such products; the test is confounded by many other variables which differentiate by framing the same product as virtue and vice (pizza).

Based on a review of the available literature, this is the first investigation of the effects of advertising food using the two types of frames. It appears that no paper has reported an investigation of vice and virtue frames within the context of communications.

Significance found for H1 indicates that consumers who see a virtue framed message will perceive that product as healthier than if it was advertised in a vice framed message. This finding has important practical implications for advertisers who are looking to meet the needs of shoppers looking for healthful products. Advertisers should use a virtue framed message focusing on the healthful benefits of the food product as opposed to a vice framed message to pique the interest of their healthful consumer groups. Additionally, the finding indicates that the
same product can be successfully framed through a vice or a virtue frame. Within this research, pizza was advertised through both a vice and a virtue frame despite the fact that consumers typically consider pizza to be a vice product (as seen in the first pre-test). Based on this, many products, if not all, may have potential to be framed as either a vice and virtue.

The results for H2 indicate that participants perceive an organic food product to be healthier than a non-organic food product. This finding demonstrates that consumers may perceive an organic vice product as healthy just because it is organic. It can be assumed that when a consumer sees an organic label on a multi-ingredient product, he determines that the product is healthy, even though this may not be the case. Again this finding indicates to advertisers that consumers believe organic foods products, even ice cream, can be perceived as healthier if it is an organic product rather than a non-organic product.

Furthermore, H3 examines a significant interaction between the type of product and the type of frame on the perceived healthfulness of an advertised product. For H3a, the data revealed that consumers who saw the vice framed products perceived the organic product as healthier than the non-organic product. This finding indicates that it would be difficult for advertisers to market non-organic vice products as healthful.

On the other hand, for H3b, the results indicated that consumers who saw the virtue frame advertisements did not perceive the organic products as healthier than the non-organic products. These results indicate that the healthfulness of a virtue food was not seen differently between organic and non-organic products. The finding also demonstrates that there was no significant difference in health perception between these product types (organic vs. non-organic). This essentially means consumers do not perceive any differences between a non-organic product’s healthfulness and organic’s healthfulness when the products are advertised in a virtue frame.
In addition, the data reveals support for H4. The results indicate that consumers in a positive mood perceive advertisements more favorably, products more favorably, and the taste of the product to be better than consumers who are in a negative mood. The products, both organic and non-organic, as well as vice and virtue were more likely to be perceived positively if the participant was in a positive mood rather than a negative mood. Though none of the previous literature evaluated the effect of mood on the perception of organic products, a more important contribution is that the mood measured within this study is the participants’ natural state of mood (it is not manipulated as in other studies). The price willing to pay was also measured but no significant differences were found.

Lastly, for H5a stating consumers within the prevention focus would perceive the virtue organic products more positively than those in the promotion focus, and for H5b, consumers within the promotion focus would perceive the vice organic products more positively than those in the prevention focus, the manipulation within the experiment was unsuccessful; therefore, a test for significance could not be performed. This is one of the largest limitations of the study.

**Practical Implications**

The findings within the study provide several practical implications for the organic and non-organic food industries. The research successfully frames a food product (pizza), typically seen as a vice product, within a vice frame and a virtue frame. This indicates that different products, even if they are not typically perceived as virtue, may be able to be successfully advertised through a virtue frame. For example, pizza virtue frames within the study focused on the healthful benefits of the product and the avoidance of pesticides. This type of message may also be applicable to other items typically perceived as a vice products such as chocolate or wine. Advertisements for a “vice” can highlight healthful benefits to the consumer and perhaps be perceived as more of a virtue food.
In addition, another practical implication is understanding how consumers perceive a difference between organic/non-organic products and vice/virtue frames. As discussed earlier, there was little difference in perceived healthfulness between the organic and non-organic product within the virtue frame and the vice frame. This indicates that if advertisers use effective descriptors to explain the health benefits and naturalness of the food product consumers will see no difference between the organic and non-organic products. Ultimately, consumers will see natural products, a main competitor of organic products, as just as healthful as the organic products through a virtue message. Organic products are typically more costly and if there is no perceived difference in value for healthfulness, this may lead consumers to purchase the natural, healthful non-organic products over the healthful organic products. For the non-organic industry, it is important to understand that consumers do not perceive a difference between organic and non-organic and therefore they should continue to use similar language to the organic product to market and advertise their products. On the other hand, organic advertisers should consider altering their strategy in marketing their food products. The data reveals that even if an advertisement message for an organic food product does not focus on healthfulness of the product the consumer’s perception of healthfulness for the product will remain high. Therefore, organic advertisers should focus on highlighting other aspects of the product such as the vice properties of the product (sensationalism/taste/enjoyment) rather than just the healthfulness. Consumers anticipate that an organic product is pesticide and chemical free; however, it may be unexpected that the product can also be indulgent, taste good, and free of artificial additives.

Lastly, mood is an important consumer characteristic that impacts a consumer’s perception of products. A positive mood leads consumers to have a more positive perception and interaction with products. This indicates that grocery stores, health food stores, and food markets
should promote and create a positive atmosphere which will influence the mood of their consumers. In addition, food companies should advertise their products in places that also generate a positive mood for consumers. A consumer’s mood can not only affect their perception of taste and attitude towards the advertisement but can also have a large impact on the consumer’s intention to purchase or try the product.

Limitations

Despite these significant findings, the study is not without limitations. One of the major limitations is that the regulatory focus manipulation was unsuccessful and I am unable to provide any theoretical contributions to how the role of consumer’s regulatory focus might play in shaping perceptions of organic food advertisements. Though the manipulation was successful within the pre-test using college students, within the experiment the manipulation check indicated that the participants’ regulatory focus was not manipulated. I speculate that the manipulation was unsuccessful due to the population that completed the experiment. Participants took the survey through the Mechanical Turk which allowed them complete the survey in the comfort of their home, at work, or anywhere they saw fit. Perhaps if the experiment was completed in a more controlled setting, as some of the previous research where regulatory focus was manipulated ((Higgins, Shah, and Friedman, 1997; Friedman and Forster, 2001; Higgins and Freitas, 2002; Chernev, 2004; Werth and Foerster, 2007; Chau & Chou, 2008), participants may have been more focused and the manipulation may have been successful.

It is possible that participants rushed through and did not take their time to complete the survey due to the motivation of a monetary reward. It appears the people who took the survey were not as invested in their answers as the students who completed the same manipulation within the pre-test. The elimination of one hundred and twenty five participants from the
experiment data set was necessary because of their inability or reluctance to follow directions. For future studies using regulatory focus, a strong recommendation is to measure a person’s natural regulatory focus instead of manipulating it. Additionally, when measuring the regulatory focus, it would benefit the researchers to use a bi-polar scale which forces the participant to select either a promotion or a prevention orientation, instead of administering two separate items which participants can both rate highly.

Furthermore, while Amazon Mechanical Turk is a widely used and accepted sampling method, participants self-select what surveys they want to complete. Although I aimed to select only organic shoppers with primary or shared responsibility for grocery shopping in the household, these qualifying attributes were self-reported and it is possible that we ended up with many non-organic shoppers taking the survey to earn the reward.

Additionally, the stimuli messages and products chosen may have been a limitation of the study. The messages for the vice and virtue products were originally crafted to manipulate the participant’s regulatory focus. After failed manipulation attempts within pre-tests, the messages were tested for the effectiveness for vice and virtue. The message use language typically associated with regulatory focus manipulation such as “avoid” and “achieve” which could confound how the vice and virtue messages were perceived. Also, the second interaction, though contributing to the study, was not a valid test of the vice and virtue messages as cereal represented only the virtue food category and ice cream represented the vice category. To be a valid test, both cereal and ice cream should be tested through a vice and a virtue message frame. This may be something that future researchers can explore.

Lastly, a large percentage of the participants were relatively young within the age range of 25 to 36. This may have had an impact on why 53.5% of the participants indicated there were no children in the household and 48% only had one or two people in their household. One can
hypothesize that the data may change based on the participant’s responsibility for children or others. Lastly, sampling error can occur with 71.5% of participant’s identifying as White/Caucasian. While this is closely representative of the United States’ population (77.% Caucasian), it would be beneficial to understand the perceptions of organic foods and learn successful ways of advertising to underrepresented populations, such as the growing Hispanic and Latino American population (17.1%) (US Census Bureau, 2013).

**Future Research**

The results of this study should act as a foundation to construct future organic multi-ingredient and vice and virtue research. The main finding within the study indicates that organic multi-ingredient food can successfully be advertised through either a vice or a virtue message. As such, future researchers should replicate this research using different multi-ingredient products. Furthermore, future research can also consider examining consumers’ response to vice and virtue frames as a function of the number of ingredients contained within the product. Researchers could examine consumer response to processed, multi-ingredient foods and compare how this response may differ to lightly processed, wholesome products, such as yogurt or applesauce.

Lastly, future researchers can continue to understand how organic consumption motivations may influence consumer response to advertisements. Past research shows three primary consumer motivations to purchase organic foods (taste, moral considerations and health concerns). It may be possible that a consumer’s motivation to purchase organic foods may influence the way they respond. Researchers should incorporate questions that assess a consumer’s primary motivation to purchase an organic product and its influence on the consumer’s response to a product advertisement frame. For example, consumers who purchase organic for a taste motivation may be more responsive to vice appeals and consumers who
purchase for health may be more responsive to virtue appeals.

I also suggest researchers use more heterogeneous and more diverse samples of organic consumers. Specifically, it would be beneficial for researchers to include more members of the different ages, geographic locations (including other countries), ethnicities, and educational backgrounds. In addition, responses from non-organic consumers were not collected; surveying this demographic may lead to understanding if vice (hedonic reasons) and virtue (functional reasons) frames would compel non-organic consumers to purchase organic products.

Additionally, while the survey inquired about how frequently participants purchased organic foods, the survey did not investigate as to how long they had been purchasing organic products. Neglecting this could affect the consumer’s experience with organic multi-ingredient products and their reactions to the advertisements.
APPENDIX A

ORGANIC ADVERTISMENTS

Organic Virtue Pizza

Organic Vice Pizza

Organic Virtue Cereal

Organic Vice Ice Cream
GREEN FIELD ORGANIC PIZZA

Chemical-free ingredients for a better, healthier you!

Avoid the chemical-ridden flavors of processed food and improve your health with our 100% organic pizza made with only organic-certified ingredients. With a 7 whole grain crust topped with pesticide-free vegetables and hormone-free cheese, our pizza helps you to steer clear of the harmful effects of artificial additives and keeps you satisfied throughout the day. Stay away from unhealthy toxins and benefit your body with a vitamin-packed organic taste.
GREEN FIELD ORGANIC PIZZA

Mouthwatering taste for a more satisfied you!

Enjoy the savory and delicious experience of our 100% organic pizza packed with tantalizing flavor in every bite. Indulge in the crisp whole grain crust topped with delectable pesticide-free vegetables and luscious melted cheese leaving your taste buds begging for more. Relish in the sensational flavor and appreciate the blend of organic-certified ingredients.

100% Organic, 100% Delicious
GREEN FIELD ORGANIC CEREAL

Pesticide-free, chemical free for a better, healthier you!

Improve your health by enjoying our 100% organic cereal that provides complete nutrition in every bite. With a mix of 7 whole grains and only organic-certified ingredients, our cereal has the greatest amount of vitamins to keep you energized and satisfied throughout the day. Enhance your health with all the nutritional benefits your body needs by enjoying mother nature’s purest ingredients.
GREEN FIELD ORGANIC ICE CREAM

Additive-free indulgence for a more satisfied you!

Indulge in the savory experience of our 100% organic ice cream with a burst of sensational flavor in every bite. Delight in the sweet blend of creamy hormone-free milk, rich indulgent chocolate and smooth caramel swirl to leave your taste buds satisfied. Relish in the great taste of our velvety organic masterpiece.
APPENDIX B

NON-ORGANIC ADVERTISMENTS

Non-Organic Virtue Pizza

Non-Organic Vice Pizza

Non-Organic Virtue Cereal

Non-Organic Vice Ice Cream
NON-ORGANIC VIRTUE PIZZA

GREEN FIELD PIZZA

For a better, healthier you!

Avoid chemical-ridden additives and provide great nourishment for your active lifestyle by eating healthful Green Field pizza. With a 7 whole grain crust topped with fresh picked vegetables and nutrient rich cheese, Green Field pizza is only made with real ingredients to help you to steer clear of the harmful effects of artificial preservatives. Stay away from unhealthy toxins and benefit your body with vitamin-packed wholesome taste.
GREEN FIELD PIZZA

Mouthwatering taste for a more satisfied you!

Enjoy the savory and delicious experience of Green Field’s pizza packed with tantalizing flavor in every bite. Indulge in the crisp whole grain crust topped with delectable fresh vegetables and luscious melted cheese leaving your taste buds begging for more. Relish in the sensational flavor and appreciate the blend of simple ingredients.
GREEN FIELD CEREAL
For a better, healthier you!

100% Great Ingredients, 100% Good for You Food

Benefit your health by consuming Green Field’s cereal that provides complete nutrition in every bite. With a mix of 7 whole grains and real ingredients, Green Field cereal has the greatest amount of vitamins to keep you energized and satisfied throughout the day. Enhance your health with all the nutritional benefits your body needs by enjoying mother nature’s ingredients.
NON-ORGANIC VICE ICE CREAM

GREEN FIELD ICE CREAM
Indulgence for a more satisfied you!

Indulge in the savory experience of Green Field’s ice cream with a burst of sensational flavor in every bite. Delight in the sweet blend of creamy milk, rich indulgent chocolate and smooth caramel swirl to make you happy and your taste buds satisfied. Relish in the great taste of our velvety masterpiece.
STUDY QUESTIONNAIRE

This survey will measure your perception of certain types of foods and then ask you to evaluate some advertising messages. The survey will take approximately 20 minutes to complete. Please take this survey only if you buy organic products at least once a month or more often.

Purpose: The purpose of this research is to gain a deeper understanding of consumer motivations.
1. You must be 18 years of age or older to take part in this research study.
2. Procedures: Participate in the survey and then evaluate one or two advertisements.
3. Confidentiality: No identifiable personal data will be collected by the researchers.
4. Right to Ask: Please contact Qualtrics with any questions or concerns about this study.
5. Voluntary Participation: Your decision to be in this research is voluntary. You can stop at any time. You do not have to answer any questions you do not want to answer. However, you will not receive compensation unless you answer all questions. To participate, click “Agree” below. Clicking “Agree” means that: • you have read this disclaimer • you voluntarily agree to participate • you are at least 18 years of age If you do not wish to take the survey, click “Disagree” below,

Agree (1)  Disagree (2)

CONSUMER ATTITUDES AND SHOPPING BEHAVIORS

How much do you agree or disagree with the following statements?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree (1)</th>
<th>Disagree (2)</th>
<th>Somewhat Disagree (3)</th>
<th>Somewhat Agree (4)</th>
<th>Agree (5)</th>
<th>Strongly Agree (6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>When it comes to food, I always seek out exciting new tastes. (1)</td>
<td></td>
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<tr>
<td>I love to eat. (2)</td>
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<tr>
<td>When it comes to food, I always try to eat what is good for me. (3)</td>
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<tr>
<td>I try to avoid meals with little nutritional value. (4)</td>
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</tbody>
</table>
How much do you agree or disagree with the following statements?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree (1)</th>
<th>Disagree (2)</th>
<th>Somewhat Disagree (3)</th>
<th>Somewhat Agree (4)</th>
<th>Agree (5)</th>
<th>Strongly Agree (6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I sometimes worry that there are harmful chemicals in my food. (1)</td>
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<tr>
<td>I usually read the ingredients on food labels. (2)</td>
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<tr>
<td>I am interested in information about my health. (3)</td>
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<tr>
<td>I am generally preoccupied about my health. (4)</td>
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</tr>
</tbody>
</table>

How often do you buy organic food?

- Never
- Rarely
- Sometimes
- Often
- All of the Time
How much do you agree or disagree with the following statements about purchasing organic food at the grocery store? Chose the answer which best represents your beliefs.

<table>
<thead>
<tr>
<th>I am knowledgeable when it comes to organic foods. (1)</th>
<th>Strongly Disagree (1)</th>
<th>Disagree (2)</th>
<th>Somewhat Disagree (3)</th>
<th>Somewhat Agree (4)</th>
<th>Agree (5)</th>
<th>Strongly Agree (6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am interested in organic foods. (3)</td>
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<tr>
<td>Most of the time, I can afford to buy organic foods if I want. (4)</td>
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<tr>
<td>Where I live, I can find a pretty good range of organic foods available for purchase. (5)</td>
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<tr>
<td>I buy organic products whenever I can. (6)</td>
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<tr>
<td>With a few exceptions, it's not really worth it to buy organic food. (7)</td>
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</tbody>
</table>
Please indicate how much each of the following considerations matters when it comes to YOU and YOUR REASONS to purchase organic food. I BUY ORGANIC FOOD BECAUSE:

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree (6)</th>
<th>Disagree (7)</th>
<th>Somewhat Disagree (8)</th>
<th>Somewhat Agree (9)</th>
<th>Agree (10)</th>
<th>Strongly Agree (11)</th>
</tr>
</thead>
<tbody>
<tr>
<td>It is better for the environment.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>It tastes better. (2)</td>
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<tr>
<td>It is healthier. (3)</td>
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</tr>
<tr>
<td>It ensures more fair treatment of animals. (4)</td>
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</tr>
<tr>
<td>It is better for my children. (5)</td>
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</tr>
<tr>
<td>Other people I know do it. (6)</td>
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</tbody>
</table>
REGULATORY FOCUS MANIPULATION – PROMOTION FOCUS

The next task asks you to take a couple of minutes to reflect on yourself. Please think about the type of person you ideally would like to be, the type of person you hope, wish or aspire to be.

Now, please list two of your past aspirations and hopes.

Next, please list two of your current aspirations and hopes.

To the best of your ability, please fill in the missing letters by typing the complete word in the box below.

1) GR_W_H
2) E_G_R
3) ACT_VE
4) ACC_MPLI_H
5) H_PE
6) SUC_E_D
REGULATORY FOCUS MANIPULATION – PREVENTION FOCUS

The next task asks you to take a couple of minutes to reflect on yourself. Please think about the type of person you ought to be, the type of person you believe it is your duty, obligation or responsibility to be.

Now, please list two of past your duties, obligations, and responsibilities.

Next, please list two of your current duties, obligations, and responsibilities.

To the best of your ability, please fill in the missing letters by typing the complete word in the box below.

1) DU_Y
2) V_G_LANT
3) S_FE
4) RESP_NSIB_E
5) SE_URE
6) C_REF_L
MOOD AND MANIPULATION CHECK

Please indicated how you are feeling at the moment:

<table>
<thead>
<tr>
<th></th>
<th>1 (1)</th>
<th>2 (2)</th>
<th>3 (3)</th>
<th>4 (4)</th>
<th>5 (5)</th>
<th>6 (6)</th>
<th>7 (7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sad: Happy (1)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Bad: Good (2)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Gloomy: Cheerful (3)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

How important are the following to you?

<table>
<thead>
<tr>
<th>Strongly Disagree (14)</th>
<th>Disagree (15)</th>
<th>Somewhat Disagree (16)</th>
<th>Somewhat Agree (17)</th>
<th>Agree (18)</th>
<th>Strongly Agree (19)</th>
</tr>
</thead>
<tbody>
<tr>
<td>It is important for me to do what I want to do. (1)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>It is important for me to do what I should do. (2)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
ORGANIC QUESTIONNAIRE VERSION

Please take your time to read the following ad, and then answer some questions about it.

GREEN FIELD ORGANIC PIZZA

Chemical-free ingredients for a better, healthier you!

Avoid the chemical-ridden flavors of processed food and improve your health with our 100% organic pizza made with only organic-certified ingredients. With a 7 whole grain crust topped with pesticide-free vegetables and hormone-free cheese, our pizza helps you to steer clear of the harmful effects of artificial additives and keeps you satisfied throughout the day. Stay away from unhealthy toxins and benefit your body with a vitamin-packed organic taste.
Rate the organic pizza presented in the advertisement on the following scales:

<table>
<thead>
<tr>
<th></th>
<th>1 (1)</th>
<th>2 (2)</th>
<th>3 (3)</th>
<th>4 (4)</th>
<th>5 (5)</th>
<th>6 (6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bad for me: Good for me (1)</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Good-tasting: Would not taste good (2)</td>
<td></td>
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</tr>
<tr>
<td>Low Quality: High Quality (3)</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Unappealing: Appealing (4)</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Healthy: Unhealthy (5)</td>
<td></td>
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</tr>
</tbody>
</table>

Rate the advertisement on the following scales:

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree (1)</th>
<th>Disagree (2)</th>
<th>Somewhat Disagree (3)</th>
<th>Somewhat Agree (4)</th>
<th>Agree (5)</th>
<th>Strongly Agree (6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I dislike the ad. (1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>The ad is appealing to me. (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The ad is interesting to me. (3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The ad is believable. (4)</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Q29 How much do you agree or disagree with the following statements:

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree (1)</th>
<th>Disagree (2)</th>
<th>Somewhat Disagree (3)</th>
<th>Somewhat Agree (4)</th>
<th>Agree (5)</th>
<th>Strongly Agree (6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I would buy this organic pizza if it were available. (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would try this organic pizza. (3)</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
Please take your time to read the following ad, and then answer some questions about it.

GREEN FIELD PIZZA

For a better, healthier you!

Avoid chemical-ridden additives and provide great nourishment for your active lifestyle by eating healthful Green Field pizza. With a 7 whole grain crust topped with, fresh picked vegetables and nutrient rich cheese, Green Field pizza is only made with real ingredients to help you steer clear of the harmful effects of artificial preservatives. Stay away from unhealthy toxins and benefit your body with vitamin-packed wholesome taste.
Rate the pizza presented in the advertisement on the following scales:

<table>
<thead>
<tr>
<th></th>
<th>1 (1)</th>
<th>2 (2)</th>
<th>3 (3)</th>
<th>4 (4)</th>
<th>5 (5)</th>
<th>6 (6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bad for me: Good for me (1)</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Good-tasting: Would not taste good (2)</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Quality: High Quality (3)</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unappealing: Appealing (4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Healthy: Unhealthy (5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Rate the advertisement on the following scales:

<table>
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<tr>
<th></th>
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<th>Somewhat Agree (4)</th>
<th>Agree (5)</th>
<th>Strongly Agree (6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I dislike the ad. (1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The ad is appealing to me. (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The ad is interesting to me. (3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I think the ad is believable. (4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

How much do you agree or disagree with the following statements:

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<th>Somewhat Disagree (3)</th>
<th>Somewhat Agree (4)</th>
<th>Agree (5)</th>
<th>Strongly Agree (6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I would buy this pizza if it were available. (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would try this pizza. (3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
What percent extra would you pay for this pizza compared to a non-organic version? Drag the slider to indicate the percent to the right of the slider.

______ I would pay ____ percent more for the organic version.

DEMOGRAPHICS (in both versions of survey)

Please write your age in the box below, using 2-digit numbers only (e.g., 18 or 46).

What is your gender?
☐ Male (1)
☐ Female (2)

How many children do you have (number only; if none, please write the number 0)?

What is the highest degree or level of school you have completed?
☐ Some High School (1)
☐ High School Graduate (2)
☐ Some College (3)
☐ Associates Degree (4)
☐ Bachelor’s Degree (5)
☐ Graduate/Professional (6)

Approximately what was your TOTAL HOUSEHOLD income last year (round to the nearest thousand, such as: 42,000 or 25,000 or 89,000)? ____ Annual Household income

Please specify your ethnicity.
☐ White/Caucasian (1)
☐ African American (2)
☐ Asian (3)
☐ Hispanic/Latino (4)
☐ American Indian/Alaskan Native (5)
☐ Native Hawaiian (6)
☐ Pacific Islander (7)
☐ Other (8)

How many people live in your household (including children and persons with no income)?
APPENDIX D

PERCEIVED HEALTHFULNESS SCALE

MOOD RELIABILITY SCALE

ATTITUDE TOWARDS ADVERTISEMENT SCALE
## RELIABILITY SCALES

### Reliability Scale for Perceived Product Healthfulness

<table>
<thead>
<tr>
<th></th>
<th>Scale Mean if Item Deleted</th>
<th>Scale Variance if Items Deleted</th>
<th>Corrected Item-Total Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product is good/bad for me</td>
<td>4.5787</td>
<td>1.945</td>
<td>0.598</td>
</tr>
<tr>
<td>Product is healthy</td>
<td>4.88</td>
<td>1.453</td>
<td>0.598</td>
</tr>
<tr>
<td>Cronbach's Alpah</td>
<td>0.743</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Reliability Scale for Mood

<table>
<thead>
<tr>
<th></th>
<th>Scale Mean if Item Deleted</th>
<th>Scale Variance if Items Deleted</th>
<th>Corrected Item-Total Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feeling sad/happy</td>
<td>11.01</td>
<td>6.0906</td>
<td>0.819</td>
</tr>
<tr>
<td>Feeling bad/good</td>
<td>10.79</td>
<td>7.466</td>
<td>0.754</td>
</tr>
<tr>
<td>Feeling gloomy/cheerful</td>
<td>11.31</td>
<td>6.807</td>
<td>0.681</td>
</tr>
<tr>
<td>Cronbach's Alpah</td>
<td>0.867</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Reliability Scale for Attitude Towards Advertisement

<table>
<thead>
<tr>
<th></th>
<th>Scale Mean if Item Deleted</th>
<th>Scale Variance if Items Deleted</th>
<th>Corrected Item-Total Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product ad is interesting</td>
<td>4.1833</td>
<td>1.19</td>
<td>0.844</td>
</tr>
<tr>
<td>Product is healthy</td>
<td>4.768</td>
<td>1.141</td>
<td>0.844</td>
</tr>
<tr>
<td>Cronbach's Alpah</td>
<td>0.915</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
References


Florack, A., Friese, M., & Scarabiss, M. (2010). Regulatory focus and reliance on implicit


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