CONSUMERS' PERCEPTIONS OF ANIMAL-BASED FOOD PRODUCTS AND

ADVERTISEMENTS

A Thesis

by

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ABSTRACT

Grocery sales circulars influence consumers' purchasing decision, but limited research has been conducted on them. The purpose of this study was to discover current advertisement trends for animal-based food products then describe and compare the purchasing behaviors of consumers with their personal and environmental determinants. By identifying consumers' perceptions of animal-based food products and advertisements, consumer-based product development and promotion can be more efficient.

First, a quantitative content analysis was performed to quantitatively observe the elements of animal-based food product advertisements in grocery circulars. Second, a questionnaire was distributed in several states in the Western United States to collect data on consumers' demographics, purchasing behaviors, and reactions to frequently used advertisement elements for animal-based food products. Parallel to the quantitative questionnaire, qualitative interviews were conducted with consumers to supplement the quantitative study with thick-rich descriptions of consumers' purchasing behaviors and reaction to terms found frequently in advertisements.

Quantitative results indicated pork products were advertised most frequently, followed by beef, chicken, turkey, seafood, and lamb products. The majority of animal-based food product advertisements was one-eighth of a page or less with a visual and displayed the brand name and price for the product.

Significant differences were found for the purchase of lamb products by consumers' race, grocery shopping frequency, and area of residence. The purchase of

beef, chicken, fish, and lamb products differed by consumer income levels. Advertisements containing cooked animal-based food products had greater appeal to consumers than ones containing raw animal-based food products. The influence of modifying terms including "Gluten Free" and "No Added Hormones" in advertisements differed across generations and income levels.

Qualitative results indicated cues of convenience, health, price, and quality influence where consumers shop and what products they purchase. In addition, terms used in animal-based food advertisements equated positive, negative, and skeptical responses from consumers.

This study can guide the creation of grocery sales circular advertisements for animal-based food products, but more research is needed to better understand the appeal of products and consumers' interpretation of advertisement terms.

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I believe Birdie sums every experience up well in *Hope Floats* when she said, "beginnings are scary, endings are usually sad, but it's the middle that counts the most."

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CHAPTER I

INTRODUCTION AND LITERATURE REVIEW

Consumer Behavior and Food Decision Making

The process by which consumers make decisions about a food purchase is complex. Health professionals and marketers have acknowledged people will take action to obtain things that they like and that give them pleasure (Ramey, 1964). However, consumers' decision processes can be influenced by several marketing, psychological and sensory factors, referred to as marketing-related factors (Carneiro, Minim, Deliza, Silva, & Leão, 2005). The Hierarchy of Effects Model (HOE), displayed in Figure 1, has been used in marketing and advertising theory since the 1960s to visually display the series of stages consumers proceed through in their decision-making process (Lavidge, 1961).

From cognition, affect, and action, the HOE model can be used to guide the creation of company promotional mixes to best market in each decision stage. In marketing, the analysis of consumer behavior associates primarily with personal preferences and how they are formed in the mind of the consumer (Zanoli, 2002), and two questions are important in consumer research: how preferences are acquired and how they can be modified (Zajonc, 1982).

Awareness	→	Knowledge	→	Liking	→	Preference	→	Conviction	→	Purchase
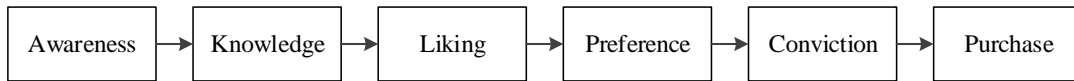
Figure 1. Hierarchy of Effects Model

The average American consumer makes one major trip to the store per week
(Caswell, 1997) with a monthly spending of approximately $400 USD at supermarkets
reported in 2012 (Jahns, 2014). Grocery stores offer several products, and most
consumers do not think about their choice of product for more than two seconds
(Lindstrom, 2012). On average, if a shopper spends an hour in the store, they are
exposed to 15,000 to 17,000 items (Caswell & Padberg, 1992). A consumer in a retail
grocery store is exposed to roughly 300 items per minute (Kotler & Armstrong, 2008).
In addition, most products contain external information to market items to consumers
provided by advertisements or packaging design (Swahn, 2014).

However, consumers are not all the same. The more a product is differentiated,
the less likely it is to appeal to consumers at large (Grunert, 2001). In relation to food
choices, it is difficult to appeal to large segments because consumers differ in their
preferences, ways of shopping, preparing meals, and eating (Grunert, 2001).

Consumer food choice is composed of a collection of variables. Numerous
individual characteristics such as uncertainty level, involvement, knowledge, or
personality, as well as attitudes, lifestyles and socio-demographics account for
differences in information needs and the individuals' reaction to information (Van der

Lans, Van Ittersum, De Cicco, & Loseby, 2001; Hu, Hünnemeyer, Veeman, Adamowicz, & Srivastava, 2004; Drichoutis, Lazaridis, & Nayga, 2005). In addition to food choice, people's needs and motivations are complex because people are likely to seek satisfaction not only at an economic level but also at deeper levels, involving emotions, cultural norms and values, or group affiliations (Chisnall, 1995).

Along with differing product wants and motivations, consumers' also have diverse information needs. The gap between scientific reality and human perceptions of food and other agricultural products is determined by individual characteristics and food properties together with information and communication, which act as situational or environmental factors in the process (Steenkamp, 1997; Drichoutis, 2005). Understanding consumers' information needs and the management of information provision emerges as a particular challenge for at least two reasons: there are many potential attributes to provide information about and consumers are not all alike (Golan, 2001). Also, different segment groups of consumers react to and use food labels and advertisements in dissimilar ways (Juhl, Høg, & Poulsen, 2000).

Advertising and Food Choice

Advertising is defined as any notice, usually paid, that is intended to attract the public's attention (Harper, 2012). It has existed for as long as humans have been trading with each other, but the term was not coined until the 15th century in coordination with the invention of the printing press (Walker, 2012). Advertising aims to make the public aware of a product or service and to induce its purchase or use (Garcia, 2000). Therefore, effective advertising is advertising that achieves this objective and initiates a

purchase. Another indicator of advertising effectiveness is the capacity of advertisements to capture the attention of the audience or readers then induce the desired action (Garcia, 2000). To influence consumer decision-making, marketers and practitioners try to engage and stimulate the consumers' senses and aim to impact consumer behavior (Swahn, 2012).

Food advertising, including individual branded products, restaurants, and supermarkets, is a continually growing industry. According to *Advertising Age*, food advertising marked some of the most important events in American advertising history (Ad Age, 1999a). By the end of the 20th century, food advertising was among the highest one-quarter of the top 100 advertising campaigns (Ad Age, 1999b). In 2010, food and candy annual advertising expenditures ranked as the sixth largest advertising category, with spending being nearly $7 billion, an increase of more than seven percent from the previous year (Daddi, 2011).

Print food advertisements are abundant and an important tool for grocery stores. Food advertisers use a full array of marketing channels with newspapers and mailed circulars being among the most important (MORI Research & Newspaper Association of America, 2009). A portion of the $1.6 billion food advertisers spent in 2012 on newspaper advertising (Newspaper Association of America, 2012) is allocated to store circulars that aim to increase existing customers' purchases and to attract customers away from their usual grocery store by offering price discounts (Jahns, 2014). Price reductions or the use of coupons and food vouchers can improve food purchases (An,

2013), and sales promotions have been shown to directly influence purchase increases (French, 2003).

Newspaper sales circulars are an important advertising channel for food and grocery retailers as well as an important information source to consumers (Magid Associates, 2011; Newspaper Association of America, 2012). Four-out-of-five readers regularly check Sunday newspaper inserts for grocery or food store advertisements (MORI Research & Newspaper Association of America, 2009), and two-thirds of readers regularly use newspaper coupons for groceries or food products (Magid Associates, 2011). Readers consult newspaper advertisements often because they prefer the easy-to-scan format and feel the ads are believable and trustworthy (Magid Associates, 2011). They seek information in the advertisements to help them achieve a balanced diet, to avoid certain allergens or ingredients, or to know the origin and environmental, ethical and technological conditions under which the food was produced (Verbeke, 2005). Weekly sales circulars provide information to consumers about not only price discounts but also what foods to consider purchasing (Jahns, 2014). Verbeke (2005) noted grocery circulars are perhaps the most important source of information about food quality and safety.

Shoppers may receive information from a variety of outlets, but newspaper grocery advertisements remain important. Super-market sales circulars are so effective in stimulating demand (Burton 1999; Bell, Chiang, & Padmanabhan 1999; Gilbert & Jackaria, 2002; Gijsbrechts, Campo, & Goossens 2003) that Jahns (2014) noted it is difficult to find a supermarket that does not use weekly circulars. Circulars have been

shown to increase targeted versus untargeted item purchasing by 100% (Burton, 1999).

Also, consumers mention print advertising—including weekly sales circulars—

frequently as influencing their grocery shopping decisions (Jahns, 2014). A very strong

relationship between visual appearance and expected quality has been observed

(Grunert, Bredahl, & Brunsø, 2004).

Grocery circulars provide consumers with several types of information, and

individual store circulars are arranged differently to display a variety of products. The

greatest proportion of space on the front page of supermarket sales circulars is devoted

to advertising protein foods, including meats, poultry, seafood, eggs, nuts, and legumes,

most of which were beef, poultry, and pork (Martin-Biggers, 2013). Jahns (2014) noted

protein foods as the most often represented group, 25% of total items advertised, in sales

circulars in a one-year study of selected grocery stores.

Despite the widespread use of grocery advertisements and the amount of money

devoted to them, limited research has been conducted on the advertisements of

newspaper circulars. Only three studies were found on research conducted to describe

the advertisements of grocery circulars (Ethan, 2013; Jahns, 2014; Martin-Biggers,

2013). The focus of grocery advertisement research has primarily focused on the

representation of healthy foods and has been confined to small sample sizes and

locations.

The Total Food Quality Model and Quality Cues

The Total Food Quality Model (TFQM), presented in Figure 2, is an

acknowledged representation of consumer decision-making in regards to how consumers

evaluate foods they purchase. The TFQM, originally proposed by (Grunert, Larsen, Madsen, & Baadsgaard, 1996), is an attempt to integrate a number of approaches to analyzing consumer quality perception and decision-making. The TFQM takes into account means-end chain theory (Gutman, 1982), multi-attribute attitude theory (Ajzen & Fishbein, 1975), and economics of information approaches (Darby & Karni, 1973). The explanation of intention to purchase as a trade-off between give and get components—which appears in the literature in many ways, mainly as extensions of the multi-attribute framework, as in the Theory of Reasoned Action and the Theory of Planned Behavior—and the explanation of consumer satisfaction as the discrepancy between expected and experienced quality (Oliver, 1980; 1993).

The TFQM includes consumer shopping environment and differentiates between the before and after purchase evaluations and dimensions of quality that are commonly categorized into search, experience, and credence characteristics (Grunert, 2004). To make purchasing decisions, consumers form quality expectations, and after the purchase has been made, the product will lead to a quality experience. With regard to most food purchases, major quality dimensions of the product (like the taste of the product) cannot be ascertained before the purchase and causes consumers to only be capable of characterizing food products by search qualities (Grunert, 2002).
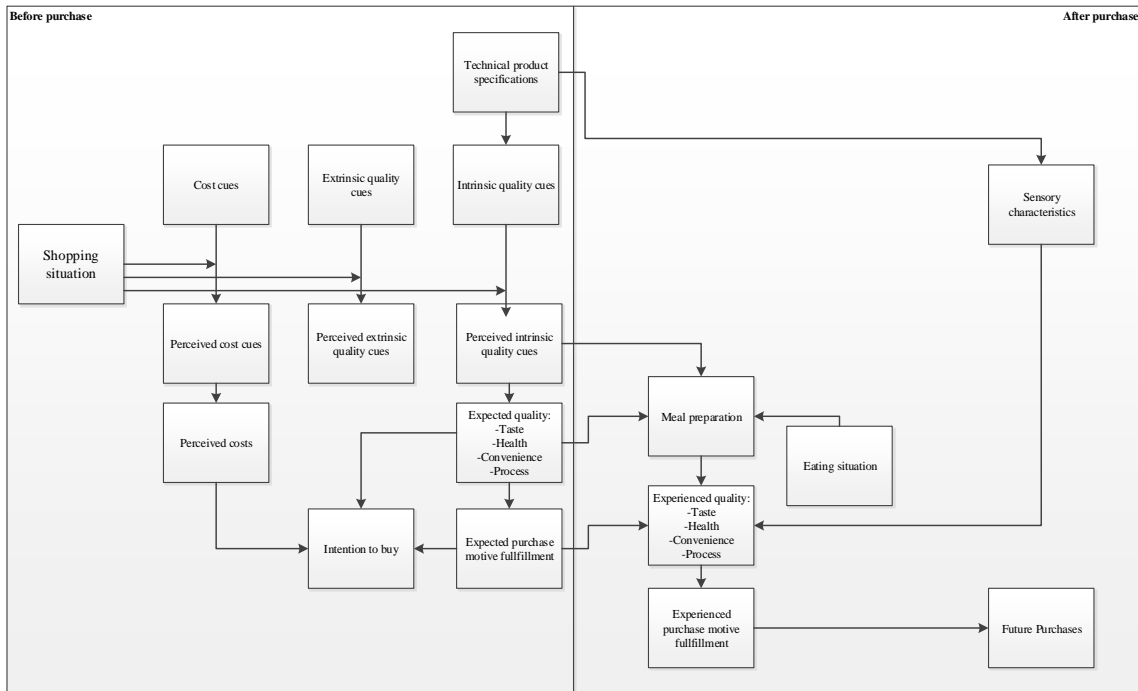
Figure 2. Total Food Quality Model (Derived from Grunert, 2004)

A search quality, such as the appearance of a piece of meat, can be evaluated before the purchase; an experience quality, like the taste of the meat, can be evaluated after the purchase; and a credence quality, such as the healthiness of the meat, can usually not be evaluated by the average consumer at all but is a question of faith and trust in the information provided (Grunert, 2004). When consumers have no means to verify the claims made, as is the case with credence quality dimensions, credibility is especially low (Ford, Smith, & Swasy, 1990).

These qualities can be assessed using of information used to form quality expectations for are usually called quality cues (Steenkamp, 1990). Cues can be classified as intrinsic or extrinsic quality cues. The intrinsic quality cues cover the

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physical characteristics of the product and are related to the product's technical specifications, which also include its physiological characteristics that can be measured objectively (Grunert, 2004). Additionally, intrinsic quality cues refer to physical characteristics of the product, such as when the taste of an apple is inferred from the color or other aspects of the appearance (Grunert, 2002). Primarily, the intrinsic cues of meat color, share of fat, fat marbling, and meat juice have been used in consumer researcher (Grunert, 2004).

Extrinsic quality cues represent all other characteristics of the product. According to Solomon (2009), four common consumer market beliefs influence consumer decisions in all product categories: brand name, store name, price, sales promotion and product packaging. The most common extrinsic quality cues are brand of the product, the store in which the product is bought, advertising claims about the product, and the product price (Grunert, 2001).

Brand names are extrinsic quality cues that allow consumers to draw on previous experiences to make purchasing decisions. Brand advertising efforts aim to display product differentiation, whereby a product's identity is partly shaped by the information that goes with the product along with other marketing variables (Verbeke, 2005). Brands act as a major quality signal that allows consumers to learn from their experience. If consumers like the quality they experienced, they can repurchase the brand and, thus, reward the producer of the better quality. If they do not like it, they can punish the producer by avoiding the brand) (Erdem & Swait, 1998). Consumers may develop preference for a brand if a branded product develops a reputation of reliable quality and

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becomes positioned as a quality brand in the mind of the consumer (Erdem & Swait, 1998).

Brand advertising aims for market share expansion for an individual brand; whereas, generic advertising is primarily concerned with increasing the demand, or slowing down an adverse trend in demand, for the product class as a whole (Verbeke, 2005). Products that are often unbranded, such as fresh meat, fish, fruit, and vegetables, make it much more difficult for the consumer to form quality expectations (Grunert, 2002). Consumers have considerable difficulties in forming quality expectations with meat products (Bredahl, Grunert, & Fertin, 1998; Grunert, 1997), and branding may appear as an obvious way a seller can signal a superior quality, thus, reduce consumer uncertainty and encouraging consumers to pay a premium for better quality (Grunert & Andersen, 2000).

The significance of store name has been frequently studied in reference to store loyalty (Sirohi, McLaughlin, & Wittink, 1998; Huddleston, Whipple, & VanAuken, 2004; Binninger, 2008; Martenson, 2007). Consumers who place a high level of importance on store name often value elements of the shopping experience that produce emotions and may unconsciously connect to a shopping experience or to a store (Chang, Want, & Huddleston, 2001). Store name and overall merchandise quality may drive consumers to purchase based on store name rather than the quality of specific product categories or brands because typically consumers purchase a basket of goods rather than a single item during a regular shopping trip (Sirohi, McLaughlin, & Wittink, 1998). Store characteristics (merchandise assortment, store design, and service) and loyalty

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intentions of supermarket shoppers appear to be related (Huddleston, Whipple, &

VanAuken, 2004).

Other extrinsic quality cues consumers use includes distribution, outlet,

packaging (Grunert, 2004), product origin, and information regarding how the animal

product was produced (Grunert, 2002). When comparing meat products especially,

consumers associate the country in which the product was produced with product quality

(Quagrainie, Unterschultz, & Veeman, 1998). New technologies applied in the food

sector, especially genetic modification, have sparked discussions among consumers in

regards to a newly awakened interest in food production along with a more evident lack

of knowledge about it (Grunert, 2002). Interest in production processes is a major factor

leading to increased importance of credence characteristics. It relates not only to

unwanted production processes by some consumers, like the use of genetic modification,

but also to production processes that some consumers regard as more desirable, such as

organic production (Grunert, 2002).

Consumer concern regarding the way food products are produced has increased

in most European countries, including interest in organic production, interest in animal

welfare, and interest in products manufactured in a "natural" way (Grunert, Bredahl, &

Brunsø, 2004). Process-related qualities of a food product are almost exclusively

credence characteristics because the consumer is seldom able to evaluate whether a food

product has actually been produced under the promised conditions (Grunert, Bredahl, &

Brunsø, 2004). Health-related qualities are also credence characteristics—consumers do

not usually, and do not expect to, feel healthier because they have eaten a product that is

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supposed to be good for their health (Grunert, 2002). When food products are marketed based on characteristics that are basically unascertainable, quality perception becomes almost exclusively a question of communication (Grunert, 2002).

In addition to intrinsic and extrinsic cues, consumers' lifestyles also dictate the search qualities sought in food purchases. Convenience in shopping, meal preparation, eating, and disposal of the remains have been of rising importance for many markets in the past decades. Part of this is due to objective changes in factors including women's participation in the labor force. However, to a large extent, convenience seems to be driven by subjective, time pressure together with attitudinal factors (Scholderer & Grunert, 2005). In the fresh meat area, poultry has adapted most to the convenience trend, by developing new cuts and various forms of pre-prepared products (Scholderer & Grunert, 2005).

Much food research is focused on experience qualities focusing mainly on sensory preference (Marreiros, & Ness, 2009), and in the literature that examines food choice, taste has often been found to be a key predictor of food (Nguyen, Otis, & Potvin, 1996; Sporny & Contento, 1995) and beverage (Lewis, Sims, and Shannon, 1989) consumption. According to Asp, (1999) and Richardson, MacFie, and Sheperd, (1994), taste, of the sensory attributes, is considered the most important in food selection (Marreiros, & Ness, 2009). Also, Raats, Daillant-Spinnler, Deliza, MacFie, and Marshall (1995) stated it is clear that the taste of a food is a crucial parameter in determined food acceptability. However, Asp, (1999) and Richardson, MacFie, and Sheperd, (1994) argued that when buying behavior is examined, it is equally clear that taste is not the

only crucial determinant and, in some cases, is clearly well down the priority list (Marreiros, & Ness, 2009). Manufacturers and food scientists continue to measure consumers' reaction to the taste, textures, and flavors and even smells of their products in an attempt to explain why consumers choose what they do (Marshall, 1995). The psychology and physiology of taste are well understood, but in trying to understand consumer choice, there appears to be little attempt to take the explanation beyond (Marshall, 1995).

Consumer Food Preference Across Demographics

Glanz et al. (1998), Kristal et al. (1995), Glanz et al. (1994), Lin (1995), Steptoe et al. (1995), and Wardle & Steptoe (1991) recognized there were differences in consumers' food purchasing decisions and food preferences across the demographics age, sex, race, and income Age was noted as a predictor for the importance of nutrition, weight control (Steptoe et al 1995; Glanz et al, 1998), cost, and convenience, with nutrition and weight control more important to older consumers and cost and convenience more important to younger consumers (Glanz et al, 1998).

In previous research, age has been expressed relatively in terms of older and younger. In this study, generational groupings were used in comparisons to assess differences among consumers of varying age. Generations are categorized by the year in which individuals were born. However, there is great variance in which specific years define each generation. For example, Schield (2010) defined the Traditionalist generation as those born between 1901 and 1944, while Nielsen (2014) did not define this group as the commonly adopted Traditionalist at all (Pew Research Center, 2010;

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Deliotte, 2014; Pendergast, 2010). Instead, Nielsen (2014) defined the '"Traditionalist" as the Greatest Generation for individuals born between 1901and 1924, and the Silent Generation for individuals born between 1924 and 1945.

The disagreement in the literature complicated selecting a single generational divide. In this study, the division of generations was drawn from Nielsen (2014), Schield (2010), Pew Research Center (2010), and Deliotte (2014). The categories of generations were derived for this study is as follows: Traditionalists (1901-1945), Baby Boomers (1946-1964), Generation X (1965-1979), Millennials (1980-1995), and Generation Z (1996-present).

The importance of taste, nutrition, weight control (Wardle & Steptoe, 1991; Steptoe et al, 1995; Glanz et al, 1998), and cost differs between sexes, with women rating all four as very important (Glanz et al, 1998). Races also place different levels of importance on taste, nutrition, cost, and convenience (Glanz et al, 1998). The price of food products is more important to consumers with lower income levels (Glanz et al, 1998), and the taste more important to consumers with higher income levels (Pollard, 1995).

Theoretical Framework

Peter (1999) noted that marketing approaches to consumer behavior may be distinguished as cognitive — approaches that emphasize constructs dealing with mental structures and thinking processes — and behavioral, approaches that focus on direct links between the characteristics of environment and behavior (Zanoli, 2002). Both approaches were widely accepted because of their high degree of complement and

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acknowledged ways of analyzing behavior (Peter, 1999). The cognitive approach is based on consumer knowledge, product perception, and the needs consumers want to satisfy (Zanoli, 2002).

The purpose of using social cognitive theory (SCT) was to explain the psychosocial functioning in terms of causation (Bandura, 2001b). Human behavior has often been explained in terms of unidirectional causation, in which behavior is shaped and controlled either by environmental influences or by internal dispositions (Bandura, 2001b). In SCT psychosocial functioning is shown in terms of triadic reciprocal causation (Bandara, 1986).

Personal determinants can be identified by individuals' feelings, and if they believe they are connected with a brand or not, based on their level of engagement (Brodie et al., 2011). An individual's personal determinants also include their self-beliefs of goals, thoughts, and reactions (Bandura, 2001a).

A stimulus or event regarding a product, including new product information, can be linked to consumer self-knowledge to memory and reveal deeper insight to consumer motivation (Zanoli, 2002). The social cognitive theory (SCT) has been used to provide insight to the media influences on an audience and audience attitudes, beliefs, and values (Pajares, 2009).

Behavioral approaches to consumer behavior could emphasize an exerted behavior (e.g., acquire a credit card) as a means to reach an objective or an end (Reynolds & Whitlark, 1995). The behavioral determinants of an individual are

described as the options that are a part of the organizational environment (Bandura, 2001a).

Based on Pajares's (2009) description of SCT, content can positively and negatively affect audience members' behaviors. It is critical to understand the psychosocial side of the mass media because the communication influences have on human actions including human thought, affect, and action (Bandura, 2001). Personal experiences assist in understanding how individuals relate to their surroundings (environmental determinants) and various events. Environmental determinants include the organizational environment, the way the environment affects its surroundings, and an individual's reaction to behavioral involvements (Bandura, 2001a).

An individual's behavior is influenced by how he or she chooses to interact with the engaging brand and the cognitive ability or focus of the individual (Brodie et al., 2011). In this transactional view of self and society, personal factors in the form of cognitive, affective, and biological events; behavioral patterns; and environmental events all operate as interacting determinants that influence each other bidirectionally (Bandura, 2001b; see Figure 3).

Personal Determinants:
-Psychographics

Behavioral Determinants
-Product Purchases
-Grocery Shopping Habbits

Environmental Determinants:
-Location
-Advertisement Channel
-Advertisement Elements
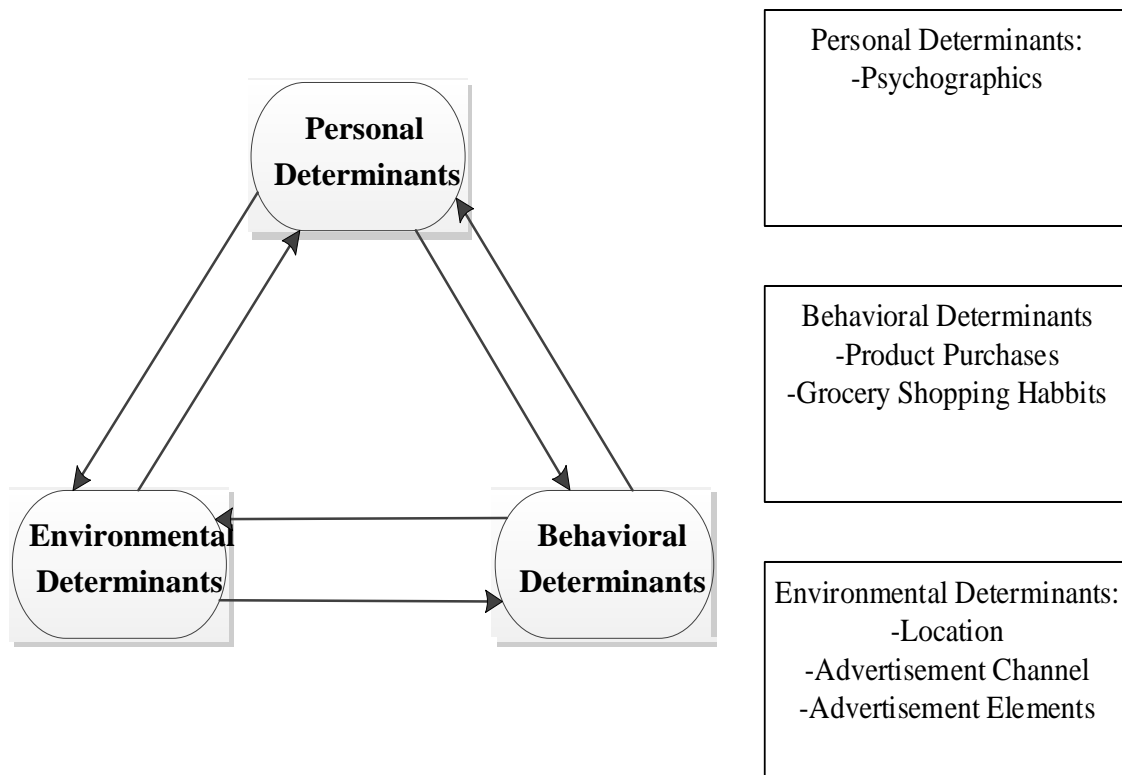
Figure 3: Social Cognitive Theory and Determinants Definitions

For the scope of this study, the personal determinants of individuals were established through demographics (including age, household income and ethnicity) and psychographics (such as frequency of eating out and level of health concern; see Appendix A). The behavioral determinants are if individuals purchase animal-based food products (see Appendix B) and how often they buy groceries (see Appendix C). The environmental determinants of this study are the individuals' location (area survey is completed; see Appendix D) and the type of grocery advertisements they use by communication channel (online, newspaper, and in-store; see Appendix E). The grocery

advertisement elements found to be utilized in sales circulars including: product presentation (raw products, cooked products, and dual presentation of cooked and raw products), consumer market beliefs (brand name, store name, price, sales promotion, and production method) and common terms used to modify the animal-based food products (such as "All Natural" and "Fresh;" Appendix F) were also considered as environmental determinants.

Purpose

The purpose of this study was to discover current advertisement trends for poultry products then describe and compare the purchasing behaviors of consumers with their personal and environmental determinants. During the past few decades, both food marketers and health professionals have engaged in systematic efforts to understand why people choose to eat the foods they do (Glanz et al., 1998). It has long been acknowledged that understanding consumers' information-seeking behavior and information processing are crucial to making better marketing decisions (Bettman, 1970). Marketers have two main reasons to be interested in consumers' behavior and their decision-making process: develop and produce foods that consumers will buy and create successful advertising and promotional campaigns to generate higher sales of foods and brand-name products (Glanz, et.al, 1998). In addition, many food sector stakeholders have agreed that the competitiveness on developed food markets is linked to the ability to develop new, differentiated products based on differing consumer segments to increase consumer loyalty and move competition away from the purely cost and price-based competition which characterizes commodity-type markets (Grunert,

Bredahl, & Brunsø, 2004). By identifying the concerns that are most important to a person's decision about exerting a specific behavior, such as purchasing a product, can lead to development of interventions, products, and decision aids to promote desirable behaviors (Glanz et al., 1998). Consumer-oriented product development, also in the meat-sector particularly, typically requires a segment-specific approach (Grunert et al., 2004), which relies on a deep understanding of the consumer.

Further, today's agriculture and food industry aims at reducing market failures from information asymmetry (Verbeke, 2005), and understanding consumer behavior in reference to food is imperative to enable the industry to communicate effectively. The management of information from agriculture and the food industry requires the target population be identified, their specific descriptors well understood, and taken into account to make information meaningful, useful and effective (Verbeke, 2005).

The importance of understanding consumer behavior in relation to food decision-making does not stop with food marketers and producers. In addition, health professionals wish to understand the determinants of food choice to use in nutrition education, and counseling, which may include developing food plans that are acceptable and appealing to their clients and patients (Thomas, 1991). Overall, consumer health, the state of the economy, agricultural industry production, the balance of trade and employment in the food sector as well as the fortunes of many companies are affected by consumers' food choices (Marshall, 1995). The future success of industry, public policy, and research relies on a better understanding of the motives, perceptions, attitudes and behavior of consumers (Frewer et al. 2004).

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Design and Method

The intent of this two-step sequential study was to discover current advertisement trends for animal-based food products and advertisements then determine the predictors of consumer behavior, based on types of consumers, environmental factors that influence consumers, and observe the reaction of consumers to advertisement elements currently used by grocery. The first step in the research sequence was a quantitative content analysis followed by a two-phase, mixed-method study with a core quantitative part and a supplementary qualitative part (quan → QUAN + qual; Morse, 2010), which is displayed in Figure 4. The designs of each section of this study vary. The quantitative strands are cross-sectional, and the qualitative strand was approached as a case study. Further description of the design for each will be described in the subsequent chapters.

A content analysis of grocery circulars was conducted to identify the key terms and advertisement elements used in the marketing of animal-based food products. An instrument was developed from the results of the content analysis to be used in a quantitative questionnaire to identify public perceptions of animal-based food products and advertisements. Qualitative interviews were conducted concurrently to support the quantitative data collected and to provide a deeper understanding of consumers' perceptions of animal-based food products and advertisements. The paper instrument was used through face-to-face interviews and/or as a self-administered questionnaire.

Conducting two parallel, independent studies, one qualitative and one quantitative, using different methods, while addressing the same research questions is a multiple methods study (Morse, 2010). Although the findings from both studies support

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each other, they are self-contained and complete. Morse (2010) stated, when using multiple methods, each study can stand-alone and is rigorous enough to be published as its own study.

A mixed-method study conceptually uses two projects with data collected from different groups of people with different types of data collection methods, such as qualitative data collection and quantitative data collection. One of the projects is considered the core project and the other is a supplemental strategy used to collect and analyze data to answer research questions (Morse, 2010). Because the data in this study are dependent upon each other and each method plays an integral part of the project, a mixed-method technique was used.

The results of this study will aid in the understanding of the determinants of consumer perceptions of animal-based food products and advertisements. The interest in how these perceptions are organized is to greater inform the understanding of best approaches to relate and communicate with individuals who have different perspectives of the animal-based food products. In addition, the understanding the various perspectives of animal-based food products could be helpful for the industry to understand how products can be best marketed.

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                        ┌─────────────────────────────┐
                        │  Research Aims 1, 2, and 3  │
                        └─────────────────────────────┘
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| Enhancing description: quan (deductive) | Theoretical drive: QUAN (deductive) | Enhancing description: qual (inductive) |

Core component of project:

- Content Analysis
- Cross-sectional design
- Stratified random sample of 1575 advertisements
- Quantitative categorical frequencies
- Research results for quan

Core component of project:

- Survey
- Version 4 or 232 Respondents (subset of larger data set)
- Collecting core data for QUAN
- Analyzing core data for QUAN
- Research results for QUAN

Supplemental component of project:

- Interview
- Consumer
- Collecting supplemental data for qual
- Analyzing data for qual
- Research findings for qual

Research Aims

Figure 4: The design of the research methods for this study

Summary

The overarching aim of this study was to understand the perceptions of animal-based food products and advertisements based on individuals' behavioral, personal, and

environmental determinants. Research questions and the methods were presented in each method chapters.

Chapter II will include a description of the content analysis method, followed by the quantitative results in chapter III. The mixed methods, step two, in this study will be presented in parallel (QUAN + qual). The quantitative survey method will be described in chapter IV followed by quantitative results in chapter five. The qualitative interview method will be described in chapter VI followed by the qualitative findings in chapter VII. A discussion of the findings and results will be presented in chapter VIII, which will enable cross referencing of the data and lead to the conclusions of the study.

CHAPTER II

CONTENT ANALYSIS METHOD

Design

In the first step of this study, a descriptive, cross-sectional content analysis was performed to investigate how animal-based food products marketed to consumers. A protocol specifying the elements and procedures was developed for this project and used to analyze the content of 1,575 nation-wide grocery sales circulars. The aims were to describe which animal-based food products were advertised and to describe the advertising elements in each. A content analysis comprises a searching-out of underlying themes in the materials being analyzed and is suggested to be the most prevalent approach to the quantitative analysis of documents (Bryman, 2004). It permits researchers to objectively, systematically, and quantitatively describe the contents of communications (Berelson, 1971; Krippendorff, 1980). The research questions used to guide the first sequence of the study, the sample, analysis procedure, and instrument will be discussed in this chapter. The results of the content analysis will be reported in the subsequent chapter.

Research Questions

RQ1.1: What animal-based food products are advertised in weekly grocery store circular advertisements?

RQ1.2: What sizes of animal-based food products advertisements are in weekly grocery store circulars?

RQ1.3: How are animal-based food products visually presented in weekly grocery store

circulars?

RQ1.4: How frequently do weekly grocery store circulars advertisements include terms

in reference to brand, price, or sale, when advertising animal-based food

products?

RQ1.5: What are the most frequently used terms to modify the animal-based food

products advertised in weekly grocery store circulars?

Sample

A stratified random sample of 1,575 advertisements was used for this analysis.

Sales circulars issued between September 2013 and November 2013 collected from

supermarket chains formed the sampling frame for this study. A list of 236 ZIP codes,

randomly selected from geographies across the country, was investigated to equate a

sample of 473 stores, with 84 individual stores present. The sample was restricted to

supermarkets, grocery stores, and super stores and did not include department stores

with grocery departments. If multiple stores of the same chain were found in one ZIP

code, only one sales circular was selected because advertisements for duplicate stores in

a ZIP code will be the same.

Procedure

A two-part instrument was used to quantitatively code and categorize each

animal-based food advertisement appearing in the sampled circular. Part 1 of the

instrument recorded data regarding the following categories: (1) store name and location,

(2) type of animal-based food product, (3) brand, (4) price, (5) if the product had a sales

promotion, (6) how the product was presented in the advertisement, and (7) the size of the advertisement. If multiple products were advertised next to each other in a box, all were used in the data collection.

A copy of each circular and individual animal-based food advertisement was saved to reference. The full name of the store and the zip code was recorded for each advertisement. The type of animal-based food product was recorded by indicating if the product was beef, chicken, lamb, pork, seafood, or turkey. Animal-based food products that could not be placed into a group because their identity could not be determined, such as "lunch meat" or were a combination of products, for example "hot dogs" were indicated as other. In yes or no format, it was reported if a brand was displayed in the advertisement and if a price was observed.

The advertisements were analyzed to determine if a sales promotion was presented. "On Sale," percent-off, and save dollar amounts were all considered a sales promotion. It was indicated if a visual was provided for each advertisement. If so, it was then indicated if the product was presented raw, cooked, or if a dual presentation of both was observed. The size of advertisements in relation to the entire circular page was indicated: 1/8 of one page or less, greater than 1/8 of one page and 1/4 of one page or less, greater than 1/4 of one page and 1/2 of one page or less, greater than 1/2 of one page and less than one page, or one page or more. Size categories were developed based on (Martin-Biggers, 2013) analysis of grocery advertisements for protein products sizes.

In Part 2 of the instrument, terms used to modify the animal-based food products were collected. These were categorized as terms that modified the product sold rather than how it is being sold, the brand of the product, or product type. For example "Natural" is a term modifying the product in comparison to "On Sale," a term describing how the product is being sold. Although terms such as "Bone-in" and "Certified Angus Beef" were noted, only terms modifying the product were recorded in this study.

To ensure uniformity and accuracy in the data collection, a detailed coding manual (Appendix G) was created and data collectors were trained using practice sessions. Three data collectors coded a sample of 30 sales circulars independently. Coding was compared across data collectors and discrepancies were reviewed and resolved by the data collectors to achieve unanimous agreement.

Data Analysis

The total number of 1,575 animal-based food products across all grocery circulars sampled was then observed and the percentage of each calculated. For variable details and analysis, see Appendix H. The frequency and percentage of total advertisements were reported by animal-based food product for advertisement size, product presentation, brand, price and sales promotion, and additional modifying terms, which are reported in chapter III.

CHAPTER III

CONTENT ANALYSIS RESULTS

The frequency of animal-based food products and percentages present in the

three-month sample is presented in Table 1. Pork products were advertised most

frequently ($f = 445$, 28.3%), followed by beef ($f = 426$, 27%), chicken ($f = 267$, 17%),

turkey ($f = 147$, 9.3%), seafood ($f = 142$, 9%) and lamb ($f = 3$, .2%). The additional 9.2%

of animal-based food products observed could not be categorized because a definite

animal protein could not be determined e.g., "lunch meat" or a combination of animal-

based proteins could be present in the product e.g., "hot dogs."

Table 1.
Animal-based food products advertised

Product	f	%
Beef	426	27.0
Chicken	267	17.0
Lamb	3	0.2
Pork	445	28.3
Seafood	142	9.0
Turkey	147	9.3
Other	145	9.2

The majority of each animal-based food product advertisements were categorized

in the one-eighth of one page or less group as presented in Table 2. Pork advertisements

were most frequent in the one-eighth of a page or less ($f = 383$, 86.1%), followed by beef

$f = 332$, 77.9%), chicken ($f = 225$, 84.3%), turkey ($f = 126$, 66%), seafood ($f = 122$,

86.5%), and lamb ($f = 2$, 66.7%).

     Advertisements ranging from one-eighth of one page to one-fourth of one page

compromised the next largest group of the sample followed by the one-fourth of a page

to one half of a page size range. Few advertisements were placed in the greater than one-

half of a page but less than one page category, and only three advertisements, two

chicken and one turkey, compromised a whole page advertisement.

Table 2.
Size of animal-based food product advertisements

	1		2		3		4		5	
	f	%	*f*	%	*f*	%	*f*	%	*f*	%
Beef	332	77.9	75	17.6	17	4.0	2	0.5	0	0.0
Chicken	225	84.3	26	9.7	8	3.0	6	2.2	2	0.7
Lamb	2	66.7	1	33.3	0	0.0	0	0.0	0	0.0
Pork	383	86.1	54	12.1	7	1.6	1	0.2	0	0.0
Seafood	122	86.5	17	12.1	1	0.7	1	0.7	0	0.0
Turkey	97	66.0	30	20.4	14	9.5	5	3.4	1	0.7
Other	126	86.9	12	8.3	5	3.4	2	1.4	0	0.0
Total	1,287	81.7	215	13.7	52	3.3	17	1.1	3	0.2

Notes. 1 = 1/8 of one page or less; 2 = greater than 1/8 of one page and less than 1/4 of
one page; 3 = greater than 1/4 of one page and 1/2 of one page; 4 = greater than 1/2 of
one page and less than one page; 5 = greater than one page

Animal-based food products were primarily presented with a visual of the product (f = 1,432, 90.9%). Advertisements for pork products were presented with a visual most frequently (f = 409, 91.9%), followed by beef (f = 384, 90.1%), chicken (f = 249, 93.3%), turkey (f = 137, 93.2%), seafood (f = 137, 89.4%), and lamb (f = 2, 66.7%). Beef advertisements displayed the product cooked most frequently, (f = 340, 79.8%), followed by pork (f = 301, 67.6%), chicken (f = 219, 82 %), turkey (f = 97, 66%), seafood (f = 92, 64.8%), and lamb (f = 2, 66.7%).

Table 3.
Visual representation of animal-based food products in advertisements

Product	Pictured		Raw		Cooked		Both	
	f	%	f	%	f	%	f	%
Beef	384	90.1	41	9.6	340	79.8	3	0.7
Chicken	249	93.3	25	9.4	219	82.0	5	1.9
Lamb	2	66.7	0	0.0	2	66.7	0	0.0
Pork	409	91.9	99	22.2	301	67.6	9	2.0
Seafood	127	89.4	31	21.8	92	64.8	4	2.8
Turkey	137	93.2	26	17.9	97	66.0	14	9.7
Other	124	85.5	48	33.1	72	49.7	4	2.8
Total	1,432	90.9	270	17.1	1,123	71.3	39	2.5

For all advertisements, 17.1% (f = 270) displayed animal-based food products raw. Advertisements for pork products presented the product raw most often (f = 99, 22.2%), followed by beef (f = 41, 9.6%), seafood (f = 31, 21.8%), turkey (f = 26, 17.9%), and chicken (f = 25, 9.4%). No advertisements were observed with a raw lamb product displayed. Only 2.5% (f = 39) of the advertisements analyzed presented both a raw and

cooked product. Dual presentation of products was observed most often in turkey advertisements ($f = 14$, 9.7%), followed by pork ($f = 9$, 2%), chicken ($f = 5$, 1.9%), seafood ($f = 4$, 2.8%), and beef ($f = 3$, 0.7%).

A brand name was presented most frequently in pork advertisements ($f = 271$, 60.9%), followed by beef ($f = 209$, 49.1%), chicken ($f = 155$ 58.1%), turkey ($f = 115$, 78.2%), seafood ($f = 56$, 39.4%), and lamb ($f = 1$, 33%). Price was displayed in an overwhelming majority of all animal-based food advertisements analyzed with pork advertisements most frequently presenting price ($f = 415$, 93.3%), followed by beef ($f = 394$, 92.5%), chicken ($f = 245$, 91.8%), seafood ($f = 131$, 92.3%), turkey ($f = 120$, 81.6%), and lamb ($f = 1$, 33.3%). Only 32.9% ($f = 518$) of advertisements presented the animal-based food products on sale with beef products most often on sale ($f = 152$, 35%), followed by pork ($f = 128$, 28.8%), chicken ($f = 71$, 26.6%), seafood ($f = 49$, 34.5%), and turkey ($f = 48$, 32.7%). No advertisements for lamb products were on sale.

Table 4.
Inclusion of brand, price, and sales promotion in animal-based product advertisements

Product	Brand				Price				On Sale			
	Yes		No		Yes		No		Yes		No	
	f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
Beef	209	49.1	217	50.9	394	92.5	32	7.5	152	35.7	274	64.3
Chicken	155	58.1	112	41.9	245	91.8	22	8.2	71	26.6	196	73.4
Lamb	1	33.3	2	66.7	1	33.3	2	66.7	0	0.0	3	100.0
Pork	271	60.9	174	39.1	415	93.3	30	6.7	128	28.8	317	71.2
Seafood	56	39.4	86	60.6	131	92.3	11	7.7	49	34.5	93	65.5
Turkey	115	78.2	32	21.8	120	81.6	27	18.4	48	32.7	99	67.3
Other	130	89.7	15	10.3	124	85.5	21	14.5	70	48.3	75	51.7
Total	937	59.5	638	40.5	1430	90.8	145	9.2	518	32.9	1,057	77.1

There were 54 terms identified that modify the product in 935 individual advertisements (59.3%). The 15 most frequently used terms are displayed in Table 5. Appendix I contains all 54 modifying terms with their respective frequency and percent. In a sample of 1,575 individual advertisements, the term "Fresh" was used in 255 times (16.2%), followed by "USDA Inspected" ($f = 127$; 8.1%), "Grade A" ($f = 83$; 5.3%), "All Natural" ($f = 75$; 4.8%), and "Lean" ($f = 47$; 3.0%). The sixth most frequently used term observed was "Farm Raised" ($f = 15$; 3.0%), followed by "Moist" ($f = 14$; 1.0%), and "No Salt or Water Added" ($f = 10$; 0.9%). "Gluten Free," "Healthy," "No Antibiotics," and "Tender" were each found on 9 occasions 0.6%). Behind those, "Vegetarian Fed" ($f = 7$; 0.4%), "Local" ($f = 6$; 0.4%) and "No Added Hormones" ($f = 6$; 0.4%) were observed with remainder of the found terms found less than five times.

Table 5.
Fifteen most frequent modifying terms utilized in animal-based product advertisements

	Total (n = 1575)		Beef (n = 426)		Chicken (n = 267)		Lamb (n = 003)		Pork (n = 445)		Seafood (n = 142)		Turkey (n = 147)		Other (n = 145)	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%
Terms	935	59.3	322	75.6	160	59.9	0	0.0	346	77.8	31	21.8	62	42.2	14	9.7
Fresh	255	16.2	59	13.8	98	36.7	0	0.0	55	12.4	21	14.8	17	11.6	5	3.4
USDA Inspected	127	8.1	21	4.9	79	29.6	0	0.0	22	4.9	0	0.0	4	2.7	1	0.7
Grade A	83	5.3	1	0.2	41	15.4	0	0.0	3	0.7	2	1.4	36	24.5	0	0.0
All Natural	75	4.8	6	1.4	22	8.2	0	0.0	31	7.0	3	2.1	13	8.8	0	0.0
Lean	47	3.0	26	6.1	1	0.4	0	0.0	14	3.1	0	0.0	4	2.7	2	1.4
Farm Raised	15	1.0	0	0.0	0	0.0	0	0.0	0	0.0	15	10.6	0	0.0	0	0.0
Moist	14	0.9	0	0.0	2	0.7	0	0.0	11	2.5	0	0.0	0	0.0	1	0.7
No Salt or Water Added	10	0.6	3	0.7	0	0.0	0	0.0	7	1.6	0	0.0	0	0.0	0	0.0
Gluten Free	9	0.6	0	0.0	2	0.7	0	0.0	3	0.7	0	0.0	3	2.0	1	0.7
Healthy	9	0.6	0	0.0	5	1.9	0	0.0	1	0.2	1	0.7	2	1.4	0	0.0
No Antibiotics	9	0.6	6	1.4	2	0.7	0	0.0	0	0.0	0	0.0	1	0.7	0	0.0
Tender	9	0.6	2	0.5	3	1.1	0	0.0	2	0.4	0	0.0	0	0.0	2	1.4
Vegetarian Fed	7	0.4	5	1.2	2	0.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Local	6	0.4	0	0.0	4	1.5	0	0.0	1	0.2	0	0.0	1	0.7	0	0.0
No Added Hormones	6	0.4	2	0.5	2	0.7	0	0.0	1	0.2	0	0.0	1	0.7	0	0.0

CHAPTER IV

QUANTITATIVE METHOD

In the second strand of the study, data were extracted from a larger study

designed to test survey methods which included: mail survey, drop-off/mail-back, drop-

off/pick-up, variable drop-off/pick-up, and variable drop-off/mail-back conducted in

parallel with face-to-face interviews, which will be discussed in chapter VI. The aim was

to describe the consumer perceptions of animal-based food products and advertisements.

The same questionnaire was used for each quantitative data collection in selected

geographical areas including Denver, CO; San Francisco, CA; Fresno, CA; San Diego,

CA; College Station, TX; Houston, TX; and Dallas, TX. A timeline with the location,

date and questionnaire delivery method is displayed in Figure 5. The research questions,

distribution methods, questionnaire design and content, population, and sample are for

the quantitative data collection for this project is described in this chapter.
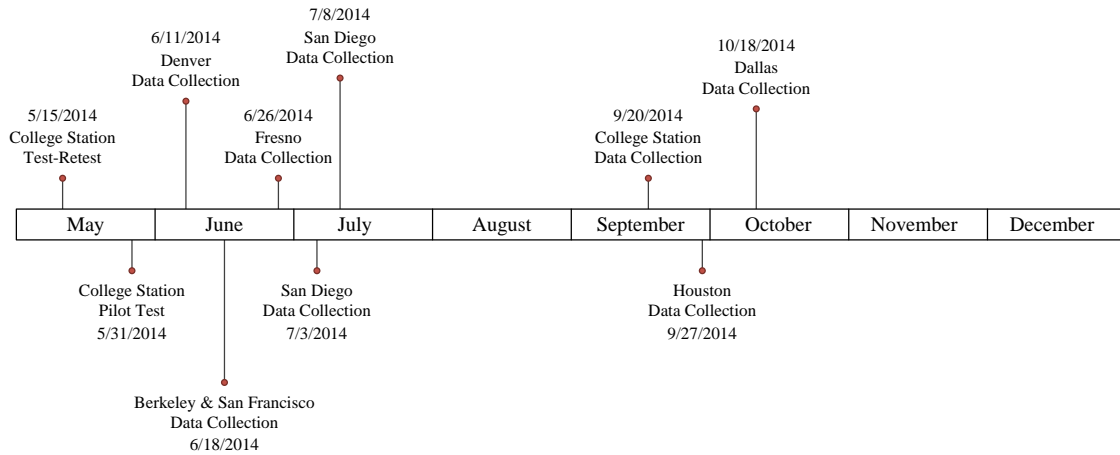
Figure 5. Questionnaire distribution timeline

Research Questions

RQ2.1: What are consumers' animal-based food products purchasing behaviors?

RO2.1.1: Describe and compare what animal-based food products consumers

purchase.

RO2.1.2: Describe the grocery shopping habits of consumers.

RQ2.2: How does environment relate to consumers' purchasing behaviors?

RO2.2.1: Describe and compare where people live to their purchasing behaviors.

RO2.2.2: Describe and compare the types of advertisements consumers use.

RQ2.3: How do consumers' personal determinants (psychographics) relate to their

purchasing behaviors?

RO2.3.1: Describe and compare the influence of quality cues related to food

purchases (convenience, quality, cost, nutrition, production process).

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RO2.3.2: Describe and compare the importance of brand name and store name to

consumers' demographics.

RQ2.4: What are consumers' reactions to elements of grocery advertisements?

RO2.4.1: Describe the degree of appeal for raw and cooked products in

advertisements.

RO2.4.2: Describe and compare the degree of positivity or negativity associated

with common terms found in grocery advertisements for animal

proteins.

RO2.4.3: Describe and compare the degree of influence common terms found in

grocery advertisements for animal proteins have on the food purchasing

decisions of consumers.

Method

Data collection for the quantitative portion of this study used to address the

research questions was a part of a larger study developed to test survey methods.

Therefore, the population, sample selection, and data collection methods of the larger

study will be presented are presented in Appendix J. A description of the respondents

(subjects), instrumentation (including validity and reliability), and the analyses used to

address the research questions of this study were included in the following section. It is

important to note, because the aims of the larger study were to refine and test survey

methods, some of the methods were adjusted during data collection.

A cross-sectional design was utilized in this study. Bryman (2012) noted that the cross-sectional design is the most common form used when collecting survey data.. The cross-sectional design encompasses research conducted to obtain quantitative or quantifiable data at more than one case, at a single point in time to identify patterns of association (Bryman, 2012).

Population and Sample

Because data were collected as a part of a fields research trip and course the research site selection, times, and procedures were planned to facilitate the data collection efforts, as a whole. Probabilistic and non-probabilistic sampling strategies were used in this study. The specific sampling methods used in this study could be interpreted in multiple ways. Multi-stage sampling was used in the quantitative part of this study. A convenience sample of metropolitan areas in the western United States was selected: Denver, CO; San Diego, CA; San Francisco, CA; Fresno, CA; Houston, TX; Dallas, TX; and College Station, TX. Collecting data in these areas can arguably be somewhat representative of the population of the selected cities; however, there is no probabilistic way of calculating the margin of sampling error.

For all variations of the hand delivery survey distribution data collections zip codes were randomly selected using the MELISSA database and a random number generator in Microsoft® Excel® was utilized to ensure true randomization of sample locations. The hand delivery method of survey distribution aims to capitalize on the strengths of each approach. In the hand delivery data collection method trained researchers go door-to-door to distribute a questionnaire to randomly selected and

eligible residents with the use of face-to-face communication. Beginning streets were randomly selected and Google Maps™ was used to assess the identified streets to observe the area for appropriateness and safety. The street view function of Google Maps™ was utilized to observe the street to ensure the location was in a residential area without multifamily dwellings rather than a highly industrial or commercial area. After assessing the area, the lead researchers developed a planned route to increase survey distribution ease and efficiency.

The nature of the data collection methods in this study involved students going door-to-door but safety was made a top priority. Google Maps™ street view function was utilized to determine the safety of the initial street for each research group and the lead researchers made a final subjective decision on the safety of the location. If the first randomly selected street did not meet the criteria the next street on the list was researched via Google Maps™ until an acceptable starting point was obtained for each research group in their respective zip code. After the initial street, the researchers distributed questionnaires to other residents on nearby and adjacent streets out of convenience and in regards to safety.

It is important to note that though the approach to this study provided the opportunity for a large of data to be collected, the numerous sources of data and variation of methods poses a threat to the external validity to this study because of the concern of unknown error. A total of 1,353 questionnaires were collected as a part of the larger study, but only form four of the questionnaire will be utilized this study 232.

Mail surveys are frequently used for social research; however, a common challenge in mail survey data collection is error of nonresponse. Nonresponse error is defined as not getting everyone who is sampled to respond to the survey request (Dillman, 2009). For this study, mail-based surveys were used as a data collection method to act as a source of response rate comparison in relation to other data collection methods.

Instrument

The data collected for this study was obtained from a two-section questionnaire that evaluated the consumer perceptions of animal-based food products. Although consumers' perceptions of animal-based food products were the primary focus of this study, meat products, in general, were included in the questionnaire as a point of comparison and to add to the literature base.

The first portion of the questionnaire assessed demographic and other general questions and was developed by using widely accepted media questions from Nielsen. Questions regarding consumers' purchasing behaviors and reaction to grocery advertisement elements composed the second part of the questionnaire. The questionnaire was designed to create an 8.5" X 7" booklet questionnaire of 14 pages and had a heavyweight cover (Appendix K). Dillman (1991) noted that printing the questionnaire in a booklet format with a neutral but interesting cover should increase response the response rate.

In the second part of the questionnaire, questions regarding consumers' shopping habits and how frequently they consult grocery advertisements from differing channels

(online, newspaper and in-store) were asked. The second part of the questionnaire also enabled us to determine whether or not respondents purchased animal-based food products (i.e., beef, chicken, fish, lamb, pork, or turkey) and the level of importance common consumer market beliefs, including brand, price, production method (e.g., organic, traditional, grain-fed, grass-fed), quality, on sale and store name have on purchasing decisions.

Sixteen mock grocery advertisements were used in the second part of the questionnaire. These mock advertisements were developed using advertisements from the nation-wide content analysis of grocery circulars to create appropriate and realistic product labels, layouts, and prices. Each mock advertisement was created with a white background and black text displayed product labels and price in a yellow box with red outline (see Appendix G). Each mock advertisement developed had a visual component because 90.9% ($f = 1,432$) of 1,575 advertisements had a visual presentation of a meat product (cooked, raw, a dual presentation of both a cooked and raw product). Participants were asked to respond to questions using a 6-point Likert-type rating scale format, to rate the appeal of the mock advertisement, (1 = "Very Repulsive" to 6 = "Very Appealing"). Also, a 6-point Likert-type rating scale format was used to assess the influence (1 = "Not at all influential" to 6 = "Very influential"), and association with bad or good (1 = "Very bad" to 6 = "Very good") of commonly found modifying terminology such as "All Natural" and "Fresh." The terms used in these ratings were the most frequently used in the content analysis of this study.

Because there was not an obvious description of consumer perspectives' of agriculture in the literature, research collected in a spring 2014 Field Research Methods Course (ALEC 689/ AGCJ 491) offered in the Department of Agricultural Leadership, Education, and Communication at Texas A&M University served as the starting point of developing psychographic questions for the questionnaire. Student researchers investigated perspectives of agriculture in various cities and venues, such as farmers markets and rodeos. Qualitative interviews were conducted at each location, and focus groups were held on the Texas A&M University campus to pull descriptions of perspectives of agriculture from diverse sources. Ten questions statements from the perspective of agriculture results were utilized in the development of this study's psychographic questions to best describe the type of individual completing the questionnaire.

Validity

"Validity is an overall evaluative judgement of the degree to which empirical evidence and theoretical rationales support the adequacy and appropriateness of interpretations and actions based on test scores or other modes of assessment" (Messick, 1995, p. 6). Face validity is focused on a concern with whether an indicator appears to reflect the content of the concept in question (Bryman, 2012). For this study, face validity was addressed by having faculty and graduate students review the questionnaire as visual communication experts to assess if the questionnaire was adequately asking the appropriate questions to achieve the purpose of this study. From the conversations with

reviewers, the questionnaire was edited for grammar, punctuation, and spelling as well as the ease of questionnaire completion and understanding of instructions.

Content validity addresses if the measure actually measures what is trying to test (Collins, 2006). It is established by showing that the test items are a sample of a universe in which the investigator is interested (Messick, 1995). Content validity was established by drawing survey questions from the literature for both the demographics section (Nielson) and consumer market beliefs portion of the questionnaire (Solomon, 2009). It was also addressed by developing the questionnaire material based on the content analysis described in the first section of this study.

Reliability "refers to the consistency of the measure of a concept" (Bryman, 2012, p. 169). For this study, reliability was estimated by conducting a pilot study in College Station, before data were collected. Because the items in section one of the questionnaire the questionnaire were not considered summatable, the test-retest method was determined appropriate to calculate a coefficient of stability. Therefore, a test-retest of this questionnaire three weeks prior to distribution was conducted. Pearson *r* correlation coefficients were calculated for each item by comparing the responses from the initial administration to the responses from the second administration. The resulting Pearson *r* correlation coefficients ranged from .79 to .96.

Data Analysis

Data were analyzed using IBM® SPSS® Statistics version 22.0 and followed the multivariate analysis procedures noted by Tabachnick and Fidell (2013). For ease of understanding, the analysis will be presented individually by research objective under

each research question for this section. Variable names, types, and values can be found in the data coding sheet (Appendix P). For a detailed visual of the analyses for each research objective, including the variables used and analyses conducted, see Appendix Q. The SPSS® Statistics Syntax used for the analysis in this study are displayed in Appendix R. The alpha level for comparisons was set a *priori* at .05; however, multiple comparisons required adjustment to the alpha to address Type I error. Each adjustment will be addressed by analysis.

Multivariate Analysis of Variance (MANOVA) was calculated to compare variables in this study. For MANOVAs, effect size was measured by Partial eta squared (Π_p^2). This measure is more "convenient in multivariate designs in which comparisons are more complex than simply the differences between a pair of means" (Tabachnick & Fidell, 2013, p. 55) Measuring effect sized is biased when using Π^2 (eta squared) because there are no adjustments made for sample size. When a significant difference was observed in MANOVAs, ANOVAs were conducted. The effect size for ANOVAs was calculated and measured by ω^2 (omega squared), because it takes into account the variance explained by the model (Field, 2009). Effect size for ANOVAs were calculated using the following formula to provide a more accurate estimation.

Variable Recodes

Prior to performing formal analysis, a series of data recodes and variable computations were necessary due to the large scale of data collected in association with the larger study. Each one is listed individually by recode number below and can be referenced in Appendix Q.

Recode 1.1: recode age to generational groups. This was necessary to easier compare age in the data analysis. The root variable Age (D001) was recoded to a new variable Generation (D001_RC_B). The new variable's labels were: 1 = Traditionalists (Age = 1901 – 1994); 2 = Baby Boomer (Age = 1945 – 1960); 3 = Generation X (Age = 1961 – 1979); 4 = Millennials (Age = 1980 – 1995); 5 = Other (Age = else).

Recode 2.1: recode zip codes to survey distribution areas. This recode was necessary to easier describe and compare respondents by location. The root variable Zip Code (ZIP) was recoded to a new variable Area (ZIP_RC). The new variable's labels were: 1 = Denver (ZIP = 80207; ZIP = 90239; ZIP = 80220); 2 = San Francisco (ZIP = 94705; ZIP = 94707; ZIP = 94118; ZIP = 941270; 3 = Fresno (ZIP = 93703; ZIP = 93706); 4 = San Diego (ZIP = 92065; ZIP = 92029; ZIP = 92410; ZIP = 92064; ZIP = 92128; ZIP = 92130; ZIP = 92106); 5 = College Station (ZIP = 77802; ZIP = 77807; ZIP =77840); 6 = Houston (ZIP = 77493; ZIP = 77375; ZIP = 77064); 7 = Dallas (ZIP = 77236; ZIP = 75227; ZIP = 75241).

Recode 3.1: compute a new variable to represent consumer importance of cost. This was accomplished by summating "Price," "On Sale," and "I buy whatever food is on sale" to a new variable Cost Importance. The root variables: Price (V4_Q007_B), On

Sale (V4_Q007_E), and I buy whatever food is on sale (V4_Q010_F) were summated to create Cost Importance (V4_SV_C).

Recode 4.1: compute a new variable to represent consumer importance of health. This was accomplished by summating "I am active" and "I am health conscious" to a new variable Health Importance. The root variables: "I am active" (V4_Q010_A) and" I am health conscious" (V4_Q010_C) were summated to create Health Importance (V4_SV_H).

Recode 5.1: compute a new variable to represent consumer importance of production process. This was accomplished by summating "production method" and "I am concerned about how my food is produced" to a new variable Production Process Importance. The root variables: "Production Process" (V4_Q007_C) and "I am concerned about how my food is produced" (V4_Q010_B) were summated to create Production Process Importance (V4_SV_PP).

Recode 6.1: recode a new variable to represent race. Initial descriptive statistics of the data showed that there was not adequate cell size for the race variable by initial variable coding. To achieve adequate cell size the race variable was recoded into a new variable. The root variable, Race (D003_A; D003_B; D003_C; D003_D; D003_E; D003_F) were recoded in to a new variable, Truncated Race Variable (D003_RC). If Race (D003_E) = 1 and Race (D003_A) = 2 and Race (D003_B) = 2 and Race (D003_C) = 2 and Race (D003_D) = 2 and Race (D003_F) = 2 the new variable Truncated Race Variable (D003_RC) = 1 (White Only). If Race (D003_E) = 1 and Race (D003_A) = 1 or Race (D003_B) = 1 or Race (D003_C) = 1 or Race (D003_D) = 1 or

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Race (D003_F) = 1 the new variable Truncated Race Variable (D003_RC) = 2 (White and Other). If Race (D003_E) = 2 and Race (D003_A) = 1 or Race (D003_B) = 1 or Race (D003_C) = 1 or Race (D003_D) = 1 or Race (D003_F) = 1 the new variable Truncated Race Variable (D003_RC) = 3 (Non-White).

 Recode 6.2: recode a new variable to the truncated race variable. A second recode of the race variable was necessary to achieve adequate cell size for the analysis of this study. For the purpose of multivariate analysis, this variable will be used for adequate cell size. This variable will also be utilized in all descriptive statistics for this study. The root variable, Truncated Race Variable (D003_RC), was recoded to a new variable, Truncated Race Variable – White and Other (D003_RC2). The new variable labels were: 1 = White (Truncated Race Variable (D003_RC) = 1) and 2 = Other (Truncated Race Variable (D003_RC) = ELSE).

 Recode 7.1: recode a new variable to represent income level. Initial descriptive statistics of the data showed that there was not adequate cell size for the income level variable by initial variable coding. To achieve adequate cell size, the income level variable was recoded to a new variable. For the purpose of multivariate analysis, this variable will be used for adequate cell size. This variable will also be utilized in all descriptive statistics for this study. The root variable Income (D008) was recoded to a new variable Truncated Income Level Variable (D008_RC). The new variable labels were: 1 = < $30,000 (D008 = 1); 2 = $30,000 to $49,000 (D008 = 2); 3 = $50,000 to $99,999 (D008 = 3); 4 = > = $100,000 (D008 = 4; D008 = 5).

Recode 8.1: compute a new variable to represent consumer appeal of raw products. This was achieved by summating all the variables for appeal of raw beef, raw chicken, and raw pork. The root variables Raw Burger (V4_Q004_N), Raw Chicken (V4_Q004_C), and Raw Pork (V4_Q0004_K) were summated to create Raw (V4_Q004_SV_R).

Recode 8.2: compute a new variable to represent consumer appeal of cooked products in advertisements. This was achieved by summating all the variables for appeal of cooked beef, cooked chicken, and cooked pork. The root variables Cooked Burger (V4_Q004_F), Cooked Chicken (V4_Q004_E), and Cooked Pork (V4_Q0004_A) were summated to create Cooked (V4_Q004_SV_C).

Research Question 2.1: What are consumers' animal-based food product purchasing behaviors?

Research Objective 2.1.1: Describe and compare the animal-based food products consumers purchase. The frequency and percent of type of products purchased (V4_Q008_A through V4_Q008_F) were calculated using crosstabs by the selected demographics: generation (D001_RC_B), sex (D002), race (D003_A through D003_F), truncated race variable (D003_RC2), income (D008), and truncated income variable (D008_RC), as well as psychographics (V4_Q010_A through V4_Q010_L).

A non-parametric comparison using Chi-Square (χ^2) was performed to compare products purchased (V4_Q008_A through V4_Q008_F) by generation (D001_RC_B), sex (D002), race (D003_A through D003_F), truncated race variable (D003_RC2), income (D008) and truncated income variable (D008_RC).

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A MANOVA was used to compare the mean scores of dependent variables products purchased (V4_Q008_A through V4_Q008_F) across conditions and test interactions among independent variables psychographics (V4_Q010_A through V4_Q010_L).

Research Objective 2.1.2: describe the grocery shopping habits of consumers. The grocery shopping frequency (V4_Q009) was described by products purchased (V4_Q008_A through V4_Q008F) using crosstabs to report the frequency and percent.

Research Question 2.2: How does environment relate to consumers' purchasing behaviors?

Research Objective 2.2.1: describe and compare where people live to their purchasing behaviors. Using crosstabs, the frequency and percent of products purchased (V4_Q008_A through V4_Q008_F) was presented by area, (ZIP_RC). A non-parametric comparison using Chi-Squares was performed to compare products purchased (V4_Q008_A through V4_Q008_F) with the area in which the survey was distributed (ZIP_RC).

Research Objective 2.2.2: describe and compare the types of advertisements individuals use. The frequency and percent of the type of advertisement used: Online (V4_Q001), Newspaper (V4_Q002), and In-Store (V4_Q003) were described by products purchased (V4_Q008_A through V4_Q008_F) using crosstabs. A non-parametric comparison using Chi-Square was performed to compare products purchased (V4_Q008_A through V4_Q008_F) by advertisement use: Online (V4_Q001), Newspaper (V4_Q002), and In-Store (V4_Q003).

Research Question 2.3: How do consumers' personal determinants (psychographics)

relate to their purchasing behaviors?

Research Objective 2.3.1: describe and compare the influence of quality cues related to food purchases: convenience, cost, health, production process, and quality. The minimum, maximum, mean, and standard deviation for (V4_Q010_F), cost importance (V4_SV_C) health importance (V4_SV_H), production process 9V4_SV_PP), and quality (V4_Q007_D) were calculated using by generation (D001_RC_B), sex (D002), race (D003_A through D003_F), truncated race variable (D003_RC2), income (D008) and truncated income variable (D008_RC).

MANOVA was used to compare the mean scores of dependent variables convenience (V4_Q010_F), cost importance (V4_SV_C) health importance (V4_SV_H), production process 9V4_SV_PP), and quality (V4_Q007_D) across conditions and test interactions among independent variables generation (D001_RC_B), sex (D002), truncated race variable (D003_RC2), and truncated income variable (D008_RC).

Research Objective 2.3.2: describe and compare the importance of brand name and store name to consumers. The minimum, maximum, mean, and standard deviation for brand name (V4_Q007_A) and store name (V4_Q007_F) were calculated using by generation (D001_RC_B), sex (D002), race (D003_A through D003_F), truncated race variable (D003_RC2), income (D008) and truncated income variable (D008_RC).

MANOVA was used to compare the mean scores of dependent variables Brand name (V4_Q007_A) and store name (V4_Q007_F) across conditions and test

interactions among independent variables generation (D001_RC_B), sex (D002), truncated race variable (D003_RC2), and truncated income variable (D008_RC).

Research Question 2.4: What are consumers' reactions to elements of grocery advertisements?

Research Objective 2.4.1: describe the degree of appeal for raw and cooked products in advertisements. The minimum, maximum, mean, and standard deviation for appeal of advertisements (V4_Q004_A, V4_Q004_C, V4_Q004_D, V4_Q004_E, V4_Q004_F, V4_Q004_J, V4_Q004_K, V4_Q004_N) were calculated by generation (D001_RC_B), sex (D002), race (D003_A through D003_F), truncated race variable (D003_RC2), income (D008) and truncated income variable (D008_RC).

A series of paired-sample t-tests were used to compare the appeal of raw and cooked products in the mock advertisement. A paired-sample *t*-test was used to compare the appeal of all raw products (V4_Q004_SV_R) and all cooked products (V4_Q004_SV_C) conditions. A paired-sample t-test was conducted to compare product appeal in raw chicken (V4_Q004_C) and cooked chicken (V4_Q004_E) conditions. A paired-sample t-test was conducted to compare product appeal in raw pork (V4_Q004_K) and cooked pork (V4_Q004_A) conditions. A paired-sample t-test was conducted to compare product appeal in raw beef (V4_Q004_N) and cooked beef (V4_Q004_F) conditions. A paired-sample *t*-test was conducted to compare product appeal in cooked chicken (V4_Q004_E) and prepared chicken (V4_Q004_J) conditions. A paired-sample *t*-test was conducted to compare product appeal in cooked beef (V4_Q004_F) and prepared beef (V4_Q004_D) conditions.

Research Objective 2.4.2: describe the degree of positivity or negativity associated with common terms found in grocery advertisements for animal-based proteins. The minimum, maximum, mean, and standard deviation for the relation of bad or good to terms (V4_Q006_A through V4_Q006_P) were calculated by generation (D001_RC_B), sex (D002), race (D003_A through D003_F), truncated race variable (D003_RC2), income (D008) and truncated income variable (D008_RC).

MANOVA was used to compare the mean scores of dependent variables the relation of bad or good to terms (V4_Q006_A through V4_Q006_P) across conditions and test interactions among independent variables generation (D001_RC_B), sex (D002), truncated race variable (D003_RC2), and truncated income variable (D008_RC).

Research Objective 2.4.3: describe and compare the degree of influence common terms found in grocery advertisements for animal-based proteins have on the food purchasing decisions of consumers. The minimum, maximum, mean, and standard deviation for the influence of terms (V4_Q005_A through V4_Q005_P were calculated by generation (D001_RC_B), sex (D002), race (D003_A through D003_F), truncated race variable (D003_RC2), income (D008) and truncated income variable (D008_RC).

MANOVA was used to compare the mean scores of dependent variables the influence of terms (V4_Q005_A through V4_Q005_P) across conditions and test interactions among independent variables generation (D001_RC_B), sex (D002), truncated race variable (D003_RC2), and truncated income variable (D008_RC).

CHAPTER V

QUANTITATIVE RESULTS

The purpose of this study was to discover current advertisement trends for animal-based food products then describe and compare the purchasing behaviors of consumers with their different personal and environmental determinants. A survey was used to collect quantitative data using a variety of methods over a five-month period. The data in this study were analyzed using IBM® SPSS® Statistics version 22.0 and followed the multivariate analysis procedures noted by Tabachnick and Fidell (2013). The research questions, as well as the specifics of the distribution methods, questionnaire design and content, population, and sample for the quantitative questionnaire are described in chapter IV. The results of data for this study will be presented in four parts, by research question. The alpha level for comparisons was set *a priori* at .05; however, multiple comparisons required adjustment to the alpha to address Type I error. Each adjustment will be addressed by analysis.

Research Question 2.1: What are consumers' animal-based food products purchasing behaviors?

Research Objective 2.1.1: The purpose of research objective 2.1.1 was to describe and compare the animal-based food products consumers purchase. Descriptive statistics (frequency and percent) was calculated to observe the products purchased (V4_Q008_A through V4_Q008F) by generation (D001_RC_B), sex (D002), race

(D0003_A through D003_F), (D003_RC2), and income level (D008), (D008_RC) using

cross tabs.

A chi-square (χ^2) test of independence was performed to examine the relation

between products purchased (V4_Q008_A through V4_Q008_F) and generation

(D001_RC_B). The relationship between these variables was not significant. The

greatest chi-square value was between the purchase of fish (V4_Q008_C) to generation χ^2 (8.882, $n = 215$) = .064, $p < .05$ and the least chi-square value was between the

purchase of lamb (V4_Q008_D) to generation χ^2 (1.457, $n = 215$) = .834, $p < .05$. Both

the descriptive and comparative analysis results for generation were presented in Table

6.

Table 6
Animal-based food products purchased across generations

	Purchased		Not Purchased		χ^2	p
	f	%	f	%		
Beef[1]					2.545	.637
Traditionalists	24	75.0	8	25.0		
Baby Boomers	69	80.2	17	19.8		
Gen X	46	82.1	10	17.9		
Millennials	36	87.8	5	12.2		
Chicken					5.058	.281
Traditionalists	30	93.8	2	6.3		
Baby Boomers	76	88.4	10	11.6		
Gen X	55	98.2	1	1.8		
Millennials	38	92.7	3	7.3		
Fish					8.882	.064
Traditionalists	22	68.8	10	31.3		
Baby Boomers	61	70.9	25	29.1		
Gen X	44	78.6	12	21.4		
Millennials	21	51.2	20	48.8		

Table 6 Continued

	Purchased		Not Purchased		χ^2	p
	f	%	f	%		
Lamb					1.457	.834
Traditionalists	4	12.5	28	87.5		
Baby Boomers	14	16.3	72	83.7		
Gen X	7	12.5	49	87.5		
Millennials	4	9.8	37	90.2		
Pork					2.720	.606
Traditionalists	22	68.8	10	31.3		
Baby Boomers	55	64.0	31	36.0		
Gen X	38	67.9	18	32.1		
Millennials	22	53.7	19	46.3		
Turkey					6.526	.163
Traditionalists	9	28.1	23	71.9		
Baby Boomers	28	32.6	58	67.4		
Gen X	25	44.6	31	55.4		
Millennials	21	51.2	20	48.8		

Note. [1] Decision to purchase animal-based food product (yes, no) by generation (Traditionalist, Baby Boomers, Gen X, Millennials)

A chi-square (χ^2) test of independence was performed to examine the relation between products purchased (V4_Q008_A through V4_Q008F) and sex (D002). The relationship between these variables was not significant. The relationship between these variables was not significant. The greatest chi-square was between the purchase of beef (V4_Q008_A) to sex χ^2 (3.503, $n = 213$) = .061, $p < .05$ and the least chi-square between the purchase of turkey (V4_Q008_F) to sex χ^2 (0.009, $n = 213$) = .923, $p < .05$. Results from the descriptive and comparative statistics were noted in Table 7.

Table 7
Animal-based food products purchased by sex

	Purchased		Not Purchased		χ^2	p
	f	%	f	%		
Beef[1]					3.503	.061
Male	69	88.5	9	11.5		
Female	105	77.8	30	22.2		
Chicken					0.925	.336
Male	74	94.9	4	5.1		
Female	123	91.1	12	8.9		
Fish					1.931	.165
Male	58	74.4	20	25.6		
Female	88	65.2	47	34.8		
Lamb					0.403	.526
Male	12	15.4	66	84.6		
Female	17	12.6	118	87.4		
Pork					0.553	.457
Male	52	66.7	26	33.3		
Female	83	61.5	52	38.5		
Turkey					0.009	.923
Male	30	38.5	48	61.5		
Female	52	38.5	83	61.5		

Note. [1] Decision to purchase animal-based food product (yes, no) by sex (Male, Female)

A chi-square (χ^2) test of independence was performed to examine the relation between products purchased (V4_Q008_A through V4_Q008F) and race (D003_A through D003_F), (D003_RC2). There was not a significant relationship between the purchase of products and the race variable. The greatest chi-square was between the purchase of lamb (V4_Q008_D) to white χ^2 (3.546, $n = 215$) = .060, $p < .05$ and the least chi-square between the purchase of pork (V4_Q008_E) to white χ^2 (0.005, $n = 215$) = .946, $p < .05$.Descriptive and comparative analyses results for the relation between products purchased and the race variable presented in Table 8.

Table 8

Animal-based food products purchased across races

	Purchased		Not Purchased		χ^2	p
	f	%	f	%		
Beef[1]						
American Indian/ Alaskan	4	80.0	1	20.0	0.009	.923
Asian	11	91.7	1	8.3	0.850	.356
Black/ African American	13	86.7	2	13.3	0.270	.603
White	134	81.7	30	18.3	0.013	.911
Other	18	72.0	7	28.0	1.720	.190
Chicken						
American Indian/ Alaskan	5	100	0	0.0	0.405	.524
Asian	11	91.7	1	8.3	0.018	.892
Black/ African American	15	100.0	0	0.0	1.276	.259
White	152	92.7	12	7.3	0.004	.947
Other	22	88.0	3	12.0	0.886	.347
Fish						
American Indian/ Alaskan	4	80.0	1	20.0	0.299	.585
Asian	10	83.3	2	16.7	1.248	.264
Black/ African American	13	86.7	2	13.3	2.394	.122
White	109	66.5	55	33.5	1.449	.229
Other	16	64.0	9	36.0	0.286	.593
Lamb						
American Indian/ Alaskan	1	20.0	4	80.0	0.199	.656
Asian	1	8.3	11	91.7	0.272	.602
Black/ African American	0	0.0	15	100.0	2.472	.116
White	26	15.9	138	84.1	3.546	.060
Other	1	4.0	24	96.0	2.140	.144
Pork						
American Indian/ Alaskan	4	80.0	1	20.0	0.584	.445
Asian	9	75.0	3	25.0	0.694	.405
Black/ African American	9	60.0	6	40.0	0.099	.753
White	104	63.4	60	36.6	0.005	.946
Other	12	48.8	13	52.0	3.163	.075
Turkey						
American Indian/ Alaskan	1	20.2	4	80.0	0.776	.378
Asian	2	16.7	10	83.3	2.660	.103
Black/ African American	8	53.3	7	46.7	1.393	.238
White	64	39.0	100	61.0	0.046	.830
Other	10	40.0	15	60.0	0.008	.928

Note. [1] Decision to purchase animal-based food product (yes, no) by race (American Indian/ Alaskan, Asian, Black/ African American, White, Other)

A chi-square (χ^2) test of independence was performed to examine the relation between products purchased (V4_Q008_A through V4_Q008F) and the truncated race variable (D003_RC2). The relationship between these the purchase of lamb (V4_Q008_D) to race was significant χ^2 (4.405, $n = 211$) = .036, $p < .05$. Both the descriptive and comparative analyses results are presented in Table 9.

Table 9
Animal-based food products purchased by truncated race variable

	Purchased		Not Purchased		χ^2	p
	f	%	f	%		
Beef[1]					0.010	.919
White	127	81.4	29	18.6		
Other	45	81.8	10	18.2		
Chicken					0.330	.566
White	144	92.3	12	7.7		
Other	52	94.5	3	5.5		
Fish					1.468	.226
White	103	66.0	53	34.0		
Other	42	76.4	13	23.6		
Lamb					4.405	.036
White	26	16.7	10	83.3		
Other	3	5.5	52	94.5		
Pork					0.797	.372
White	102	65.4	54	34.6		
Other	3	60.0	22	40.0		
Turkey					0.338	.561
White	62	39.7	94	60.3		
Other	20	36.4	35	63.6		

Note. [1] Decision to purchase animal-based food product (yes, no) by truncated race variable (White, Other)

A chi-square (χ^2) test of independence was performed to examine the relation between products purchased (V4_Q008_A through V4_Q008F) and income level (D008). The relationship between these the purchase of fish (V4_Q008_C) to income level was significant χ^2 (17.217, $N = 199$) = .004, $p < .05$. The relationship between these the purchase of lamb (V4_Q008_D) to income level was significant χ^2 (23.050, $n = 199$) = .000, $p < .05$. Both the descriptive and comparative analyses results were presented in Table 10.

Table 10
Animal-based food products purchased across income levels

	Purchased		Not Purchased		χ^2	p
	f	%	f	%		
Beef[1]					6.246	.283
<$30,000	23	79.3	6	30.7		
$30,000 - $49,999	26	72.2	10	27.8		
$50,000 - $99,999	47	79.7	12	20.3		
$100,000-$249,999	51	89.5	6	10.5		
>$250,000	12	85.7	2	14.3		
Chicken					7.290	.200
<$30,000	28	96.6	1	3.4		
$30,000 - $49,999	30	83.3	6	16.7		
$50,000 - $99,999	56	94.9	3	5.1		
$100,000-$249,999	53	93.0	4	7.0		
>$250,000	14	100.0	0	0.0		
Fish					17.217	.004
<$30,000	22	75.9	7	24.1		
$30,000 - $49,999	16	44.4	20	55.6		
$50,000 - $99,999	38	64.4	21	35.6		
$100,000-$249,999	44	77.2	13	22.8		
>$250,000	13	92.9	1	7.1		

Table 10 Continued

	Purchased		Not Purchased		χ^2	p
	f	%	f	%		
Lamb					23.050	.000
<$30,000	1	3.4	28	96.6		
$30,000 - $49,999	2	5.6	34	94.4		
$50,000 - $99,999	4	6.8	55	93.2		
$100,000-$249,999	14	24.6	43	75.4		
>$250,000	6	42.9	8	57.1		
Pork					5.217	.390
<$30,000	18	62.1	11	37.9		
$30,000 - $49,999	21	58.3	15	41.7		
$50,000 - $99,999	41	69.5	18	30.5		
$100,000-$249,999	34	59.6	23	40.4		
>$250,000	9	64.3	5	35.7		
Turkey					4.757	.446
<$30,000	11	37.9	18	62.1		
$30,000 - $49,999	10	27.8	26	72.2		
$50,000 - $99,999	24	40.7	35	59.3		
$100,000-$249,999	28	49.1	29	50.9		
>$250,000	4	28.6	10	71.4		

Note. [1] Decision to purchase animal-based food product (yes, no) by income level
(<$30,000, $30,000 - $49,999, $50,000 - $99,999, $100,000 - $249,999, >$250,000)

A chi-square (χ^2) test of independence was performed to examine the relation

between products purchased (V4_Q008_A through V4_Q008F) and the truncated

income level variable (D008_RC). The relationship between the purchase of beef

(V4_Q008_A) to income level was significant χ^2 (4.9, $N = 199$) = .02 $p < .05$. The

relationship between the purchase of chicken (V4_Q008_B) to income level was

significant χ^2 (6.3, $N = 199$) = .01 $p < .05$. The relationship between these the purchase

of fish (V4_Q008_C) to income level was significant χ^2 (14.7, $n = 199$) = .000, $p < .05$.

The relationship between these the purchase of lamb (V4_Q008_D) to income level was

significant χ^2 (19.2, $N = 199$) = .000, $p < .05$. Both the descriptive and comparative

analysis results for all products were presented in Table 11.

Table 11
Animal-based food products purchased across truncated income levels

	Purchased		Not Purchased		χ^2	P
	f	%	f	%		
Beef[1]					4.9	.02
<$30,000	23	79.3	6	30.7		
$30,000 - $49,999	26	72.2	10	27.8		
$50,000 - $99,999	47	79.7	12	20.3		
>$100,000	63	88.7	8	11.3		
Chicken					6.3	.01
<$30,000	28	96.6	1	3.4		
$30,000 - $49,999	30	83.3	6	16.7		
$50,000 - $99,999	56	94.9	3	5.1		
>$100,000	67	94.4	4	5.6		
Fish					14.7	.000
<$30,000	22	75.96	7	24.1		
$30,000 - $49,999	16	44.4	20	55.6		
$50,000 - $99,999	38	64.4	21	35.6		
>$100,000	57	80.3	14	19.7		
Lamb					19.2	.000
<$30,000	1	3.4	28	96.6		
$30,000 - $49,999	2	5.6	34	94.4		
$50,000 - $99,999	4	6.8	55	93.2		
>$100,000	4	6.8	55	93.2		
Pork					1.7	0.6
<$30,000	18	62.1	11	37.9		
$30,000 - $49,999	21	58.3	15	41.7		
$50,000 - $99,999	41	69.5	18	30.5		
>$100,000	43	60.6	28	39.4		
Turkey					2.8	0.4
<$30,000	11	37.9	18	62.1		
$30,000 - $49,999	10	27.8	26	72.2		
$50,000 - $99,999	24	40.7	35	59.3		
>$100,000	32	45.1	39	54.9		

Note. [1] Decision to purchase animal-based food product (yes, no) by truncated
income level (<$30,000, $30,000 - $49,999, $50,000 - $99,999, >$100,000)

Descriptive statistics (frequency and percent) were calculated to observe the products purchased (V4_Q008_A through V4_Q008_F) of psychographics (V4_Q010_A through V4_Q010_L) and can be viewed in (Appendix R). MANOVA was used to compare the mean scores of dependent variables products purchased (V4_Q008_A through V4_Q008_F) across conditions and test interactions among independent variables psychographics (V4_Q010_A through V4_Q010_L).

MANOVA was used to compare the mean scores of dependent variables beef products purchased (V4_Q008_A) across conditions and test interactions among independent variables psychographics (V4_Q010_A through V4_Q010_L). Box's test of equality of covariance was not significant ($p = .832 > .05$), which is an indicator that the assumption of equality of covariance was not violated (Field, 2009). Comparison groups were approximately equal in size, data are assumed to be homogeneous and the analyses will most likely be appropriate. MANOVA results were interpreted using the Wilk's lambda (Λ) statistic.

Results of the MANOVA indicated the effect of time of psychographics (V4_Q010_A through V4_Q010_L) on beef products purchased (V4_Q008_A) was not significant, $\Lambda = .894$ $F (12, 192.0) = 1.904$; $p = .036$ ($p < .005$); $\eta^2 = .106$; $1 - \beta = .897$, and a large effect size ($\eta_p^2 = .106$; Field, 2009). MANOVA results for psychographics on beef products purchased exceeded the threshold for power of analysis ($.897 \geq .80$); therefore, results were not due to chance or error.

MANOVA was used to compare the mean scores of dependent variables chicken products purchased (V4_Q008_B) across conditions and test interactions among

independent variables psychographics (V4_Q010_A through V4_Q010_L). Box's test of equality of covariance was not significant ($p = .054 > .05$), which is an indicator that the assumption of equality of covariance was not violated (Field, 2009). Comparison groups are approximately equal in size, data are assumed to be homogeneous and the analyses will most likely be appropriate. MANOVA results were interpreted using the Wilk's lambda (Λ) statistic.

Results of the MANOVA indicated the effect of time of psychographics on chicken products purchased was significant, $\Lambda = .824$ F (12, 192.0) = 3.428; $p = .000$ ($p < .005$); $\eta_p^2 = .176$; $1 - \beta = .996$, and a large effect size ($\eta_p^2 = .176$; Field, 2009). MANOVA results for (V4_Q010_A through V4_Q010_L) on (chicken products purchased (V4_Q008_B) exceeded the threshold for power of analysis ($.996 \geq .80$); therefore, significant results were not due to chance or error. This tells us there is a difference in the psychographic descriptors purchase of chicken compared to other psychographic descriptors.

After identifying the significant MANOVA, subsequent univariate analysis of variance (ANOVA) was carried out on each of the dependent variables, psychographics (V4_Q010_A through V4_Q010_L) and can be found in Table 12. A true Bonferroni correction can be calculated to adjust the alpha level to adjust for multiple comparisons and to account for Type I Error using the first equation below (Tabachnick & Fidell, 2013). However, Tabachnick and Fidell (2013) also noted that an alternate equation can be used as a "close approximation if all α_i are to be the same is where α_{fw} is the family

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wise error rate and p is the number of tests" (p. 272). The 12 comparisons for this objective yielded a Bonferroni correction value of ($p < .005$).

$$\alpha = 1 - (1 - \alpha_1)(1 - \alpha_2)...(1 - \alpha_p)$$

$$\alpha_i = \alpha_{fw}/p$$

Table 12
ANOVA psychographics and purchase of chicken products

Scale	df	SS	MS	F	P	ω^2	$1 - \beta$
I am active							
Between	1	2.573	2.573	1.767	.185	.004	0.263
Error	210	305.856	1.456				
I am concerned about how my food is produced							
Between	1	6.107	6.107	3.942	.048	.015	0.507
Error	210	325.364	1.549				
I am a foodie							
Between	1	9.506	9.506	4.138	.043	.014	0.526
Error	213	489.350	2.297				
I am health conscious							
Between	1	0.227	0.227	0.178	.673	-.004	0.070
Error	212	269.343	1.270				
I am knowledgeable about food							
Between	1	3.857	3.857	2.877	.091	.017	0.393
Error	213	153.535	1.435				
I buy whatever is on sale							
Between	1	13.607	13.607	7.546	.007	.033	0.781
Error	213	384.095	1.803				

Table 12 Continued

Scale	df	SS	MS	F	P	ω^2	$1 - \beta$
I buy easy to make foods							
Between	1	0.050	0.050	0.023	.688	.004	0.053
Error	212	451.207	2.128				
I eat out often							
Between	1	0.234	0.234	0.100	.752	.003	0.061
Error	212	493.523	12.328				
I like foods from my childhood							
Between	1	5.180	5.180	3.362	.068	.011	0.447
Error	212	326.614	1.541				
I like to grow my own food							
Between	1	9.999	9.999	4.708	.031	.008	0.579
Error	211	448.123	2.124				
I prefer locally grown foods							
Between	1	0.283	0.283	0.102	.749	.003	0.062
Error	213	587.950	2.760				
I prefer organic foods							
Between	1	1.682	1.682	0.679	.411	.002	0.130
Error	213	527.927	2.479				

Note. ** Indicates significant results ($p = < .005$)

The follow up ANOVAs reported there was not a significant difference between the purchase of chicken for the psychographic statements ($p < .005$).

MANOVA was used to compare the mean scores of dependent variables fish products purchased (V4_Q008_C) across conditions and test interactions among independent variables psychographics (V4_Q010_A through V4_Q010_L). Box's test of equality of covariance was not significant ($p = .718 > .05$), which is an indicator that the assumption of equality of covariance was not violated (Field, 2009). Comparison groups are approximately equal in size, data are assumed to be homogeneous and the analyses

will most likely be appropriate. MANOVA results were interpreted using the Wilk's

lambda (Λ) statistic.

Results of the MANOVA indicated the effect of time of psychographics on fish

products purchased was significant, $\Lambda = .827$ $F(12, 192.0) = 3.354$; ($p = .000 < .005$);

$\eta_p^2 = .106$; $1 - \beta = .996$, and a medium effect size ($\eta_p^2 = .173$; Field, 2009). MANOVA

results for psychographics on fish products purchased exceeded the threshold ($1 - \beta = \geq$

.80) for power of analysis; therefore, significant results were not due to chance or error.

This tells us there is a difference in the psychographic descriptors purchase of fish

compared to other psychographic descriptors.

After identifying the significant MANOVA, a subsequent ANOVA was carried

out on each of the dependent variables, psychographics (V4_Q010_A through

V4_Q010_L) and can be found in Table 13. Bonferroni correction was applied to each of

the subsequent ANOVAs to protect against inflated Type I error of the 12 analysis for

this research objective ($p < .005$) (Field, 2009).

Table 13
ANOVA psychographics and purchase of fish products

Scale	df	SS	MS	F	P	ω^2	$1 - \beta$
I am active							
Between	1	2.163	2.163	1.482	.225	.004	0.228
Error	210	306.267	1.458				
I am concerned about how my food is produced							
Between	1	8.979	8.979	1.767	.017	.015	0.668
Error	210	322.580	1.536				

Table 13 Continued

Scale	df	SS	MS	F	P	ω^2	$1 - \beta$
I am a foodie							
Between	1	19.439	19.439	8.637	.004	.014	0.833
Error	213	479.416	2.251				
I am health conscious							
Between	1	22.356	22.356	19.171	.000	-.004	0.992
Error	212	247.215	1.166				
I am knowledgeable about food							
Between	1	3.857	3.857	2.877	.091	.017	0.393
Error	213	284.766	1.337				
I buy whatever is on sale							
Between	1	0.083	0.083	3.533	.062	.033	0.465
Error	213	397.620	1.867				
I buy easy to make foods							
Between	1	22.369	22.369	11.057	.001	.004	0.912
Error	212	428.888	2.023				
I eat out often							
Between	1	0.342	.342	0.147	.702	.003	0.067
Error	212	493.415	2.327				
I like foods from my childhood							
Between	1	5.180	5.180	3.362	.068	.011	0.447
Error	212	326.614	1.541				
I like to grow my own food							
Between	1	9.999	9.999	4.708	.031	.008	0.579
Error	211	448.123	2.124				
I prefer locally grown foods							
Between	1	10.052	10.052	3.703	.056	.003	0.482
Error	213	587.181	2.714				
I prefer organic foods							
Between	1	0.611	0.611	0.246	.620	.002	0.078
Error	213	528.998	2.484				

Note. ** Indicates significant results ($p = < .005$)

ANOVA results indicated significant interactions between subjects in I am a foodie (V4_Q010_C) ($p = 0.004$, $\omega^2 = 0.014$, $1 - \beta = 0.833$), I am health conscious (V4_Q_010_D) ($p = 0.000$, $\omega^2 = -0.004$, $1 - \beta = 0.992$), and I buy easy to make foods (V4_Q010_G) ($p = 0.001$, $\omega^2 = -0.004$, $1 - \beta = 0.912$) for the effects on the purchase of chicken (V4_Q008_B). ANOVA results for I am a foodie, I am health conscious, and I buy easy to make foods exceeded the threshold ($1 - \beta = \geq .80$) for power of analysis; therefore, significant results were not due to chance or error.

A MANOVA was used to compare the mean scores of dependent variables lamb products purchased (V4_Q008_D) across conditions and test interactions among independent variables psychographics (V4_Q010_A through V4_Q010_L). Box's test of equality of covariance was not significant ($p = .090$), which was an indicator that the assumption of equality of covariance was not violated (Field, 2009). Comparison groups are approximately equal in size, data are assumed to be homogeneous and the analyses will most likely be appropriate. MANOVA results were interpreted using the Wilk's lambda (Λ) statistic.

Results of the MANOVA indicated the effect of time of psychographics on lamb products purchased was not significant, $\Lambda = .889$ $F (12, 192.0) = 1.992$; $p = .027$ ($p < .005$); $\eta_p^2 = .111$; $1 - \beta = .913$, Field, 2009). MANOVA results for psychographics on lamb products purchased exceeded the threshold ($1 - \beta = \geq .80$) for power of analysis; therefore, significant results were not due to chance or error.

MANOVA was used to compare the mean scores of dependent variables pork products purchased (V4_Q008_E) across conditions and test interactions among

independent variables psychographics (V4_Q010_A through V4_Q010_L). Box's test of

equality of covariance was significant $p = .048$ ($p > .05$), which is an indicator that the

assumption of equality of covariance was violated (Field, 2009). The results of this

MANOVA should be approached cautiously. MANOVA results were interpreted using

the Wilk's lambda (Λ) statistic.

Results of the MANOVA indicated the effect of time of psychographics on pork

products purchased was not significant, $\Lambda = .886$ $F (12, 192.0) = 1.054$; $p = .022$ ($p <$

$.005$); $\eta_p^2 = .114$; $1 - \beta = .923$, and a large effect size ($\eta_p^2 = .114$; Field, 2009).

MANOVA results for psychographics on pork products purchased exceeded the

threshold ($1 - \beta = \geq .80$) for power of analysis; therefore, significant results were not due

to chance or error.

MANOVA was used to compare the mean scores of dependent variables turkey

products purchased (V4_Q008_F) across conditions and test interactions among

independent variables psychographics (V4_Q010_A through V4_Q010_L). Box's test of

equality of covariance was not significant ($p = .700 > .05$), which is an indicator that the

assumption of equality of covariance was not violated (Field, 2009). Comparison groups

are approximately equal in size, data are assumed to be homogeneous and the analyses

will most likely be appropriate. MANOVA results were interpreted using the Wilk's

lambda (Λ) statistic.

Results of the MANOVA indicated the effect of time of psychographics on

turkey products purchased was not significant, $\Lambda = .925$ $F (12, 192.0) = 1.299$; $p = .222$

($p < .005$); $\eta_p^2 = .075$; $1 - \beta = .716$, and a medium effect size ($\eta_p^2 = .075$; Field, 2009).

MANOVA results for psychographics on turkey products purchased did not meet the minimum threshold for power of analysis .716 ($1 - \beta \geq .80$); therefore, the results of this analysis should be approached with caution.

Research Objective 2.1.2: describe the grocery shopping habits of consumers. Descriptive statistics (frequency and percent) were calculated to observe products purchased (V4_Q008_A through V4_Q008F) of shopping frequency (V4_Q009).

A chi-square test of independence was performed to examine the relation between products purchased (V4_Q008_A through V4_Q008F) and grocery shopping frequency (V4_Q009). The relationship between lamb was significant χ^2 (23.474, $n =$ 199) = .000, $p < .05$. Both the descriptive and comparative analysis results for all products are presented in Table 14.

Table 14
Animal-based food products purchased across grocery shopping frequency

	Purchased		Not Purchased		χ^2	p
	f	%	f	%		
Beef[1]					7.252	.123
Once per day	12	85.7	2	14.3		
Once per week	104	83.9	20	16.1		
Once every two weeks	29	82.9	6	17.1		
Once per month	6	100.0	0	0.0		
Other	24	66.7	14	33.3		
Chicken					5.169	.270
Once per day	14	100.0	0	0.0		
Once per week	117	94.4	7	5.6		
Once every two weeks	31	88.6	4	11.4		
Once per month	6	100.0	0	0.0		
Other	31	86.1	5	13.9		

Table 14 Continued

	Purchased		Not Purchased		χ^2	p
	f	%	f	%		
Fish					8.836	.065
Once per day	14	100.0	0	0.0		
Once per week	878	70.2	37	29.8		
Once every two weeks	21	60.0	14	40.0		
Once per month	3	50.0	3	50.0		
Other	24	66.7	14	33.3		
Lamb					23.474	.000
Once per day	5	35.7	9	64.3		
Once per week	14	11.3	110	88.7		
Once every two weeks	0	0.0	35	100.0		
Once per month	0	0.0	6	100.0		
Other	12	33.3	24	66.7		
Pork					6.068	.194
Once per day	12	85.7	2	14.3		
Once per week	80	64.5	44	35.5		
Once every two weeks	20	57.1	15	42.9		
Once per month	2	33.3	4	66.7		
Other	22	61.1	14	38.9		
Turkey					1.347	.853
Once per day	7	50.0	7	50.0		
Once per week	48	38.7	76	61.3		
Once every two weeks	12	34.3	23	65.7		
Once per month	3	50.0	3	50.0		
Other	14	38.9	22	61.1		

Note. [1] Decision to purchase animal-based food product (yes, no) by grocery shopping frequency level (Once per day, Once per week, Once every two weeks, Once per month, Other)

Research Question 2.2: How does environment relate to consumers' purchasing behaviors?

Research Objective 2.2.1: describe and compare where people live to their purchasing behaviors. Descriptive statistics (frequency and percent) were calculated to observe the products purchased (V4_Q008_A through V4_Q008F) of areas (ZIP_RC).

A chi-square (χ^2) test of independence was performed to examine the relation between products purchased and area. The relationship between lamb was significant χ^2 (27.112, $n = 199$) = .000, $p < .05$. Both the descriptive and comparative analysis results for all products are presented in Table 15.

Table 15
Animal-based food products purchased across area

	Purchased		Not Purchased			
	f	%	f	%	χ^2	p
Beef[1]					11.853	.065
Denver	17	65.4	9	34.6		
San Francisco/ Berkeley	36	76.6	11	23.4		
Fresno	17	77.3	5	22.7		
San Diego	41	91.1	4	8.9		
Bryan/ College Station	23	88.5	3	11.5		
Houston	22	91.7	2	8.3		
Dallas	13	81.3	3	18.8		
Chicken					3.690	.719
Denver	23	88.5	3	11.5		
San Francisco/ Berkeley	42	89.4	5	10.6		
Fresno	20	90.9	2	9.1		
San Diego	42	93.3	3	6.7		
Bryan/ College Station	25	96.2	1	3.8		
Houston	23	95.8	1	3.8		
Dallas	16	100.0	0	0.0		
Fish					4.799	.570
Denver	17	65.4	9	34.6		
San Francisco/ Berkeley	36	76.6	11	23.4		
Fresno	17	77.3	5	22.7		
San Diego	28	62.2	17	37.8		
Bryan/ College Station	17	65.4	9	34.6		
Houston	15	62.5	9	37.5		
Dallas	12	75.0	4	25.0		
Lamb					27.112	.000
Denver	2	7.7	24	92.3		
San Francisco/ Berkeley	16	34.0	31	66.0		
Fresno	1	4.5	21	95.5		

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Table 15 Continued

	Purchased		Not Purchased		χ^2	p
	f	%	f	%		
Pork					3.137	.791
San Diego	8	17.8	37	82.2		
Bryan/ College Station	0	0.0	26	100.0		
Houston	1	4.2	23	95.8		
Dallas	1	6.3	15	93.8		
Denver	14	53.8	12	46.2		
San Francisco/ Berkeley	29	61.7	18	38.3		
Fresno	14	63.6	8	36.4		
San Diego	29	64.4	16	35.6		
Bryan/ College Station	17	65.4	9	34.6		
Houston	17	70.8	7	29.2		
Dallas	12	75.0	4	25.0		
Turkey					6.663	.353
Denver	9	34.6	17	65.4		
San Francisco/ Berkeley	15	31.9	32	68.1		
Fresno	7	31.8	15	68.2		
San Diego	24	53.3	21	46.7		
Bryan/ College Station	9	34.6	17	64.4		
Houston	10	41.7	17	58.3		
Dallas	6	37.5	10	62.5		

Note. [1] Decision to purchase animal-based food product (yes, no) by area (Denver, San Francisco/ Berkeley, Fresno, San Diego, Bryan/ College Station, Houston, Dallas)

Research Objective 2.2.2: describe and compare the types of advertisements individuals use. Descriptive statistics (frequency and percent) were calculated to observe the products purchased (V4_Q008_A through V4_Q008F) of consumers' that use newspaper (V4_Q002), online (V4_Q001), and in-store (V4_Q003) advertisements. A chi-square (χ^2) test of independence was performed. Both the descriptive and comparative analysis results for all products are presented in Table 16.

Table 16
Animal-based food products purchased across grocery advertisement usage

	Purchased		Not Purchased			
	f	%	f	%	χ^2	p
Beef[1]						
Newspaper					1.766	.413
Always	23	82.1	5	17.9		
Sometimes	79	85.9	13	14.1		
Never	67	79.8	17	20.2		
Online					3.515	.172
Always	8	88.9	1	11.1		
Sometimes	36	92.6	3	7.4		
Never	129	80.1	32	19.9		
In-Store					3.616	.164
Always	33	89.2	4	10.8		
Sometimes	86	85.1	15	14.9		
Never	50	75.8	16	24.2		
Chicken						
Newspaper					4.453	.108
Always	28	100.0	0	0.0		
Sometimes	87	94.6	5	5.4		
Never	75	89.3	9	10.7		
Online					4.474	.107
Always	9	100.0	0	0.0		
Sometimes	39	100.0	0	0.0		
Never	147	91.3	14	8.7		
In-Store					3.548	.170
Always	37	100.0	0	0.0		
Sometimes	92	91.1	9	8.9		
Never	61	92.4	5	7.6		
Fish						
Newspaper					0.576	.750
Always	20	71.4	8	28.6		
Sometimes	61	66.3	31	33.7		
Never	59	70.2	25	29.8		
Online					2.027	.363
Always	5	55.6	4	44.6		
Sometimes	30	76.9	9	23.1		
Never	109	67.7	52	32.3		
In-Store					1.037	.596
Always	27	73.0	10	27.0		
Sometimes	71	70.3	30	29.7		
Never	42	63.6	24	36.4		

Table 16 Continued

	Purchased		Not Purchased			
	f	%	f	%	χ^2	p
Lamb						
Newspaper					3.607	.165
Always	2	7.1	26	92.9		
Sometimes	11	12.0	81	88.0		
Never	16	19.0	68	81.0		
Online					0.109	.947
Always	1	11.1	8	88.9		
Sometimes	6	15.4	33	84.6		
Never	24	14.9	137	85.1		
In-Store					0.820	.664
Always	4	10.8	33	89.2		
Sometimes	14	13.9	87	86.1		
Never	11	16.7	55	83.3		
Pork						
Newspaper					4.462	.107
Always	20	71.4	8	28.6		
Sometimes	65	70.7	27	29.3		
Never	46	54.8	38	45.2		
Online					1.595	.450
Always	4	44.4	5	55.6		
Sometimes	26	66.7	13	33.3		
Never	103	64.0	58	36.0		
In-Store					3.077	.215
Always	26	70.3	11	29.7		
Sometimes	68	67.3	33	32.7		
Never	37	56.1	29	43.9		
Turkey						
Newspaper					1.571	.456
Always	13	46.4	15	53.6		
Sometimes	37	40.2	55	59.8		
Never	30	35.7	54	64.3		
Online					4.320	.115
Always	3	33.3	6	66.7		
Sometimes	21	53.8	18	46.2		
Never	58	36.0	103	64.0		
In-Store					0.652	.722
Always	16	43.2	21	56.8		
Sometimes	40	39.6	61	60.4		
Never	24	36.4	42	63.6		

Note. [1] Decision to purchase animal-based food product (yes, no) by grocery
Newspaper, Online, and In-Store advertisement use (Always, Sometimes, Never)

Research Question 2.3: How do consumers' personal determinants

(psychographics) relate to their purchasing behaviors?

Research Objective 2.3.1: describe and compare the influence of quality cues

related to food purchases: convenience, cost, health, production process, and quality.

Descriptive statistics (minimum, maximum, mean and standard deviation) were

calculated to observe the importance of convenience, cost, health, quality, production

process (V4_Q010_G, V4_SV_C, V4_SV_H, V4_Q007_D, V4_SV_PP) by generation

(D001_RC_B), sex (D002), race (D003_A through D003_F), (D003_RC2), and income

level (D008), (D008_RC) and can be found in (Appendix S).

MANOVA was used to compare the mean scores of dependent variables

Convenience, Cost Importance, Health Importance, Quality, Production Process

Importance across conditions and test interactions among independent variable

generation (D001_RC_B). Box's test of equality of covariance was significant $p = .022$

($p > .05$), which is an indicator that the assumption of equality of covariance was

violated (Field, 2009). Therefore, the results of this analysis should be approached with

caution. MANOVA results were interpreted using the Wilk's lambda (Λ) statistic.

Results of the MANOVA indicated the effect of time of generation on

Convenience, Cost Importance, Health Importance, Quality, Production Process

Importance was not significant, $\Lambda = .867$ F (20, 627.792) = 1.385; $p = .122$ ($p < .005$);

$\eta_p^2 = .035$; $1 - \beta = .832$, and a small effect size ($\eta_p^2 = .035$; Field, 2009). MANOVA

results for generation on Convenience, Cost Importance, Health Importance, Quality,

and Production Process Importance exceeded the threshold ($1 - \beta = \geq .80$) for power of

analysis; therefore, significant results were not due to chance or error. This tells us there is a not a difference in importance of convenience, cost, health, quality, and production process by generations.

MANOVA was used to compare the mean scores of dependent variables Convenience, Cost Importance, Health Importance, Quality, Production Process Importance across conditions and test interactions among independent variable sex. Box's test of equality of covariance was significant ($p = .230 > .05$), which is an indicator that the assumption of equality of covariance was not violated (Field, 2009). Comparison groups are approximately equal in size, data are assumed to be homogeneous and the analyses will most likely be appropriate. MANOVA results were interpreted using the Wilk's lambda (Λ) statistic.

Results of the MANOVA indicated the effect of time of sex on Convenience, Cost Importance, Health Importance, Quality, Production Process Importance was not significant, $\Lambda = .948$ $F(5, 192.0) = 2.125$; $p = .064$ (sig. $p < .005$); $\eta_p^2 = .052$; $1 - \beta = .694$; Field, 2009). MANOVA results for sex on Convenience, Cost Importance, Health Importance, Quality, and Production Process Importance did not exceed the threshold for power of analysis ($.694 \geq .80$); therefore, significant results could be due to chance or error and analysis should be approached with caution. The results of this analysis tell us there is a not a difference in importance of convenience, cost, health, quality, and production process by sex.

MANOVA was used to compare the mean scores of dependent variables Convenience, Cost Importance, Health Importance, Quality, Production Process

Importance across conditions and test interactions among independent variable race (D003_RC2). Box's test of equality of covariance was not significant ($p = .682 > .05$), which was an indicator that the assumption of equality of covariance was not violated (Field, 2009). Comparison groups are approximately equal in size, data are assumed to be homogeneous and the analyses will most likely be appropriate. MANOVA results were interpreted using the Wilk's lambda (Λ) statistic.

Results of the MANOVA indicated the effect of time of race on Convenience, Cost Importance, Health Importance, Quality, Production Process Importance was not significant, $\Lambda = .959$ $F (5, 188.0) = 1.620$; $p = .157$ ($p < .005$); $\eta_p^2 = .041$; $1 - \beta = .556$. MANOVA results for race on Convenience, Cost Importance, Health Importance, Quality, and Production Process Importance did not exceeded the threshold for power of analysis $.556(1 - \beta \geq .80)$; therefore, significant results could be due to chance or error. Therefore, the results of this analysis should be approached with caution. The results of this analysis tell us there is a not a difference in importance of convenience, cost, health, quality, and production process by race.

MANOVA was used to compare the mean scores of dependent variables Convenience, Cost Importance, Health Importance, Quality, Production Process Importance across conditions and test interactions among independent variables income level (D008_RC). Box's test of equality of covariance was significant $p = .040$ ($p > .05$), which is an indicator that the assumption of equality of covariance was violated (Field, 2009). Therefore, the results of this analysis should be approached with caution. MANOVA results were interpreted using the Wilk's lambda (Λ) statistic.

Results of the MANOVA indicated the effect of time of income level on

Convenience, Cost Importance, Health Importance, Quality, Production Process

Importance was not significant, $\Lambda = .840$ $F (15, 477.978) = 2.078$; $p = .010$ ($p < .005$);

$\eta_p^2 = .950$; $1 - \beta = .950$. MANOVA results for income level on Convenience, Cost

Importance, Health Importance, Quality, and Production Process exceeded the threshold

($1 - \beta = \geq .80$) for power of analysis; therefore, significant results were not due to chance

or error. The results of this analysis tell us there is a not a difference in importance of

convenience, cost, health, quality, and production process by income level.

Research Objective 2.3.2: describe and compare the importance of brand name

and store name to consumers. Descriptive statistics (minimum, maximum, mean and

standard deviation) were calculated to observe importance of brand name (V4_Q007_A)

and store name (V4_007_F) of generation (D001_RC_B), sex (D002), race (D003_A

through D003_F), (D003_RC2), and income level (D008), (D008_RC) and can be found

in (Appendix T).

MANOVA was used to compare the mean scores of dependent variables brand

name and store name across conditions and test interactions among the independent

variable generation. Box's test of equality of covariance was significant ($p = .841 > .05$),

which is an indicator that the assumption of equality of covariance was not violated

(Field, 2009). Comparison groups are approximately equal in size, data are assumed to

be homogeneous and the analyses will most likely be appropriate. MANOVA results

were interpreted using the Wilk's lambda (Λ) statistic.

Results of the MANOVA indicated the effect of time of generation on brand name and store name was not significant, $\Lambda = .954$ $F (7, 412) = 1.215$; $p = .288$ ($p < .005$); $\eta_p^2 = .023$; $1 - \beta = .563$. MANOVA results for generation on brand name and store name did not meet the threshold for power of analysis ($1 - \beta = \geq .80$). Therefore, the results of this analysis should be approached with caution.

MANOVA was used to compare the mean scores of dependent variables brand name and store name across conditions and test interactions the among independent variable sex. Box's test of equality of covariance was not significant ($p = .625 > .05$), which was an indicator that the assumption of equality of covariance was not violated (Field, 2009). Comparison groups are approximately equal in size, data are assumed to be homogeneous and the analyses will most likely be appropriate. MANOVA results were interpreted using the Wilk's lambda (Λ) statistic.

Results of the MANOVA indicated the effect of time of sex on brand name and store name was not significant, $\Lambda = 1.00$ $F (2, 208.0) = 0.40$; $p = .961$ ($p < .005$); $\eta_p^2 = .000$; $1 - \beta = .056$. MANOVA results for sex on brand name and store name did not meet the threshold for power of analysis ($1 - \beta = \geq .80$). Therefore, the results of this analysis should be approached with caution.

MANOVA was used to compare the mean scores of dependent variables brand name and store name across conditions and test interactions among the independent variable race (D003_RC2). Box's test of equality of covariance was significant ($p = .168 > .05$), which is an indicator that the assumption of equality of covariance was not violated (Field, 2009). Comparison groups are approximately equal in size, data are

assumed to be homogeneous and the analyses will most likely be appropriate. MANOVA results were interpreted using the Wilk's lambda (Λ) statistic.

Results of the MANOVA indicated the effect of time of race on brand name and store name was not significant, $\Lambda = .990$ $F (2, 205) = 1.058$; $p = .349$ ($p < .005$); $\eta_p^2 = .010$; $1 - \beta = .234$. MANOVA results for race for brand name and store did not meet the threshold for power of analysis ($1 - \beta = \geq .80$). Therefore, the results of this analysis should be approached with caution.

MANOVA was used to compare the mean scores of dependent variables (brand name and store name across conditions and test interactions among independent variables income level (D008_RC). Box's test of equality of covariance was not significant ($p = .103 > .05$), which is an indicator that the assumption of equality of covariance was not violated (Field, 2009). Comparison groups are approximately equal in size, data are assumed to be homogeneous and the analyses will most likely be appropriate. MANOVA results were interpreted using the Wilk's lambda (Λ) statistic.

Results of the MANOVA indicated the effect of time of brand name and store name on income level was not significant, $\Lambda = .039$ $F (6, 376) = 2.534$; $p = .020$ ($p < .005$); $\eta^2 = .039$; $1 - \beta = .842$, and a medium effect size ($\eta_p^2 = .039$; Field, 2009). MANOVA results for income level on brand name and store exceeded the threshold ($1 - \beta = \geq .80$) for power of analysis; therefore, significant results were not due to chance or error. This tells us there was not an observed difference in the importance of brand name and store name by income level.

Research Question 2.4: What are consumers' reactions to elements of grocery

advertisements?

Research Objective 2.4.1: describe the degree of appeal for raw and cooked

products in advertisements. Descriptive statistics (minimum, maximum, mean and

standard deviation) were calculated to observe the appeal of advertisements

(V4_Q004_A, V4_Q004_C, V4_Q004_D, V4_Q004_E, V4_Q004_F, V4_Q004_J,

V4_Q004_K, V4_Q004_N) by generation (D001_RC_B), sex (D002), race (D003_A

through D003_F), (D003_RC2), and income level (D008), (D008_RC) and can be found

in (Appendix U).

A paired-sample t-test was conducted to compare the appeal of all raw products

(V4_Q004_SV_R) and all cooked products (V4_Q004_SV_C). There was a significant

difference in the appeal of advertisements containing cooked products and

advertisements containing raw products. Advertisements containing cooked products (*M*

= 12.0048, *SD* = 3.052) had a higher appeal than did those advertisements containing

raw products (*M* = 9.2667, *SD* = 3.101), *t* (209) = -12.863, *p* = .000. Results can be

viewed in Table 17.

Table 17
The appeal of raw and cooked products in advertisements

Construct	M	SD	t-value	df	p	Cohen's d
	-2.7381	3.0846	-12.863	209	.000	.89
Raw	9.2667	3.101				
Cooked	12.0048	3.052				

A series of paired-sample t-tests were conducted to compare the appeal of individual advertisements, with the results in Table 18. A Bonferroni correction was calculated to adjust the alpha level because of multiple comparisons to account for Type I Error (Tabachnick & Fidell, 2013). The five comparisons for research question 2.4.1 required a Bonferroni correction value of ($p < .001$).

A paired-sample t-test was conducted to compare product appeal in raw beef (V4_Q004_N) and cooked beef (V4_Q004_F) conditions. Advertisements containing a raw beef product (M = 3.682, SD = 1.3159) had a higher appeal than did those advertisements containing cooked beef products (*M* = 3.399, *SD* = 1.4102), *t* (222) = 2.902, *p* = .004. This tells us there was not a significant difference observed in the appeal of advertisements containing a raw beef product and the appeal of advertisements that contained a cooked beef product.

A paired-sample t-test was conducted to compare product appeal in raw chicken (V4_Q004_C) and cooked chicken (V4_Q004_E). Advertisements containing a cooked chicken product (*M* = 4.505, *SD* = 1.1533) had a higher appeal than did those advertisements containing raw chicken products (*M* = 3.412, *SD* = 1.3982), t (215) = -11.197, *p* = .000. This tells us there was a significant difference observed in the appeal

of advertisements containing a raw chicken product and the appeal of advertisements that contained a cooked chicken product.

A paired-sample *t*-test was conducted to compare product appeal in raw pork (V4_Q004_K) and cooked pork (V4_Q004_A) conditions. Advertisements containing a cooked pork product ($M = 4.120$, $SD = 1.2991$) had a higher appeal than did those advertisements containing raw pork products ($M = 2.241$, $SD = 1.4101$), $t(215) = -16.664$, $p = .000$. This tells us there was a significant difference observed in the appeal of advertisements containing a raw pork product and the appeal of advertisements that contained a cooked pork product.

A paired-sample *t*-test was conducted to compare product appeal in cooked beef (V4_Q004_f) and prepared beef (V4_Q004_D) conditions. Advertisements containing a cooked beef product ($M = 4.509$, $SD = 1.1515$) had a higher appeal than did those advertisements containing prepared beef products ($M = 3.974$, $SD = 1.3951$), $t(227) = 6.174$, $p = .000$. This tells us there was a significant difference observed in the appeal of advertisements containing a cooked beef product and the appeal of advertisements that contained a prepared beef product.

A paired-sample *t*-test was conducted to compare product appeal in cooked chicken (V4_Q004_E) and prepared chicken (V4_Q004_J) conditions. Advertisements containing a prepared chicken product ($M = 4.005$, $SD = 1.3385$) had a higher appeal than did those advertisements containing cooked chicken products ($M = 3.373$, $SD = 1.4023$), $t(216) = -7.140$, $p = .000$. This tells us there was a significant difference

observed in the appeal of advertisements containing a cooked chicken product and the

appeal of advertisements that contained a prepared chicken product.

Table 18
Appeal of raw, cooked, and prepared products in advertisements

Construct	M	SD	t-value	df	p	Cohen's d
Beef	0.2825	1.4538	2.902	222	.004	0.21
Raw	3.682	1.3159				
Cooked	3.399	1.4102				
Chicken	-1.093	1.4341	-11.197	215	.000	0.85
Raw	3.412	1.3982				
Cooked	4.505	1.1533				
Pork	-1.879	1.6578	-16.664	215	.000	1.39
Raw	2.241	1.4101				
Cooked	4.120	1.2991				
Beef	-0.6313	1.3026	-7.140	216	.000	0.46
Cooked	3.373	1.4023				
Prepared	4.004	1.3385				
Chicken	0.5351	1.3086	6.174	227	.000	0.42
Cooked	4.509	1.1515				
Prepared	3.974	1.3951				

Note. Adjusted alpha = .001

Research Objective 2.4.2: describe the degree of positivity or negativity

associated with common terms found in grocery advertisements for animal-based

proteins. Descriptive statistics (minimum, maximum, mean and standard deviation) were

calculated to observe the relation to bad or good of terms (V4_Q006_A through

V4_Q006_P) by generation (D001_RC_B), sex (D002), race (D003_A through

D003_F), (D003_RC2), and income level (D008), (D008_RC) and can be found in

(Appendix V).

MANOVA was used to compare the mean scores of dependent variables the relation to bad or good of terms across conditions and test interactions among independent variables generation. Box's test of equality of covariance was not significant $p = .000$ ($p > .05$), which is an indicator that the assumption of equality of covariance was violated (Field, 2009). Therefore, the results of this analysis should be approached with caution. MANOVA results were interpreted using the Wilk's lambda (Λ) statistic.

Results of the MANOVA indicated the effect of time of generation on the relation to bad or good of terms was not significant, $\Lambda = .608$ F (64, 627.718.689) = 1.522; $p = .007$ ($p < .005$); $\eta_p^2 = .117$ $1 - \beta = 1.0$. MANOVA results for generation on the relation to bad or good of terms exceeded the threshold ($1 - \beta = \geq .80$) for power of analysis; therefore, significant results were not due to chance or error. There was not an observed difference in the relation of bad to good of terms by generations.

MANOVA was used to compare the mean scores of dependent variables the relation to bad or good of terms across conditions and test interactions among independent variables sex. Box's test of equality of covariance was not significant $p = .000$ ($p > .05$), which is an indicator that the assumption of equality of covariance was violated (Field, 2009). Therefore, the results of this analysis should be approached with caution. MANOVA results were interpreted using the Wilk's lambda (Λ) statistic.

Results of the MANOVA indicated the effect of time of sex on the relation to bad or good of terms was not significant, $\Lambda = .859$ F (16, 185) = 1.897; $p = .023$ ($p < .005$); $\eta_p^2 = .141$; $1 - \beta = .949$. MANOVA results for sex on the relation to bad or good of

exceeded the threshold ($1 - \beta = \geq .80$) for power of analysis; therefore, significant results were not due to chance or error. There was not an observed difference in the relation of bad to good of terms by sex.

MANOVA was used to compare the mean scores of dependent variables (the relation to bad or good of terms across conditions and test interactions among independent variables race (D003_RC2). Box's test of equality of covariance was not significant $p = .000$ ($p > .05$), which is an indicator that the assumption of equality of covariance was violated (Field, 2009). Therefore, the results of this analysis should be approached with caution. MANOVA results were interpreted using the Wilk's lambda (Λ) statistic.

Results of the MANOVA indicated the effect of time of race on the relation to bad or good of terms was not significant, $\Lambda = .838$ $F (16, 183) = 2.199$; $p = .007$ ($p < .005$); $\eta_p^2 = .161$; $1 - \beta = .997$. MANOVA results for race on the relation to bad or good of terms exceeded the threshold ($1 - \beta = \geq .80$) for power of analysis; therefore, significant results were not due to chance or error. There was not an observed difference in the relation of bad to good of terms by race.

MANOVA was used to compare the mean scores of dependent variables the relation to bad or good of terms across conditions and test interactions among independent variables income level (D008_RC). Box's test of equality of covariance was not significant $p = .000$ ($p > .05$), which is an indicator that the assumption of equality of covariance was violated (Field, 2009). Therefore, the results of this analysis should be

approached with caution. MANOVA results were interpreted using the Wilk's lambda

(Λ) statistic.

Results of the MANOVA indicated the effect of time of income level on the

relation to bad or good of terms was not significant, $\Lambda = .700$ F (48, 491.545) = 1.302; p

$= .090$ ($p < .005$); $\eta^2 = .112$; $1 - \beta = .994$, and a large effect size ($\eta^2 = .112$; Field, 2009).

MANOVA results for income level on the relation to bad or good of terms exceeded the

threshold ($1 - \beta = \geq .80$) for power of analysis; therefore, significant results were not due

to chance or error. There was not an observed difference in the relation of bad and good

of terms by income level.

Research Objective 2.4.3: describe the degree of influence of common terms

found in grocery advertisements for animal-based proteins. Descriptive statistics

(minimum, maximum, mean and standard deviation) were calculated to observe the

influence of terms (V4_Q005_A through V4_Q005_P) by generation (D001_RC_B), sex

(D002), race (D003_A through D003_F), (D003_RC2), and income level (D008),

(D008_RC) and can be found in (Appendix W).

MANOVA was used to compare the mean scores of dependent variables the

influence of terms across conditions and test interactions among independent variables

generation. Box's test of equality of covariance was not significant $p = .002$ ($p > .05$),

which is an indicator that the assumption of equality of covariance was violated (Field,

2009). Therefore, the results of this analysis should be approached with caution.

MANOVA results were interpreted using the Wilk's lambda (Λ) statistic.

Results of the MANOVA indicated the effect of time of generation on the influence of terms was significant, $\Lambda = .575$ F (64, 627.703.029) = 1.667; $p = .001$ ($p <$ .005); $\eta^2 = .129$; $1 - \beta = 1.0$, and a large effect size ($\eta^2 = .129$; Field, 2009). MANOVA results for generation on the influence of terms exceeded the threshold ($1 - \beta = \geq .80$) for power of analysis; therefore, significant results were not due to chance or error. There was a significant difference observed in the influence of terms across generations.

After identifying the significant MANOVA, a subsequent univariate analysis of variance (ANOVA) was carried out on each of the dependent variables, influence of terms (V4_Q005_A through V4_Q005_P), with results shown in Table 19. A Bonferroni correction was calculated to adjust the alpha level because of multiple comparisons to account for Type I Error (Tabachnick & Fidell, 2013). The 16 comparisons for this research objective required a Bonferroni correction value of ($p < .005$).

Table 19
ANOVA influence of advertisement terms by generation

Scale	df	SS	MS	F	p	ω^2	$1 - \beta$
All Natural							
Between	4	12.285	2.071	1.120	.348	.015	0.349
Error	214	587.067	2.743				
Farm Raised							
Between	4	17.879	4.470	1.631	.168	.022	0.507
Error	213	583.900	2.741				

Table 19 Continued

Scale	df	SS	MS	F	p	ω^2	1 - β
Fresh							
Between	4	7.625	1.906	0.845	.497	.017	0.268
Error	211	475.245	2.252				
Gluten Free							
Between	4	10.507	2.627	0.946	.439	.013	0.297
Error	214	594.507	2.778				
Grade A							
Between	4	7.5445	1.886	0.723	.577	.010	0.231
Error	212	552.953	2.608				
Healthy							
Between	4	12.550	3.137	1.264	.285	.016	0.392
Error	214	531.377	2.483				
Lean							
Between	4	7.586	1.896	0.880	.477	.012	0.278
Error	213	458.859	2.154				
Local							
Between	4	4.979	1.245	0.276	.893	.004	0.110
Error	215	968.948	4.507				
Moist							
Between	4	8.358	2.090	0.765	.549	.011	0.243
Error	213	582.142	2.733				
No Added Antibiotics							
Between	4	16.200	4.050	1.596	.176	.021	0.488
Error	215	545.486	2.537				
**No Added Hormones							
Between	4	35.295	8.824	3.929	.004	.021	0.899
Error	215	482.864	2.246				
No Salt or Water Added							
Between	4	30.486	7.622	3.202	.014	.041	0.821
Error	216	514.147	2.380				
Organic							
Between	4	20.226	5.057	1.745	.141	.028	0.528
Error	213	617.315	2.898				
Tender							
Between	4	23.255	5.814	2.456	.047	.033	0.696
Error	212	501.841	2.367				

Table 19 Continued

Scale	df	SS	MS	F	p	ω^2	$1 - \beta$
USDA Inspected							
Between	4	3.526	1.416	0.230	.026	.019	0.899
Error	213	530.322	2.490				
Vegetarian Fed							
Between	4	11.584	2.896	0.885	.474	.008	0.279
Error	213	697.058	3.273				

Note. ** Indicates significant results ($p = < .005$)

ANOVA results indicated significant interactions between participants in No Added Hormones (V4_Q010_K) ($p = 0.004$, $\omega^2 = 0.021$, $1 - \beta = 0.899$),) for the effects of influence of terms on generation. ANOVA results for No Added Hormones exceeded the threshold for power of analysis ($\geq .80$); therefore, significant results were not due to chance or error.

MANOVA was used to compare the mean scores of dependent variables the influence of terms across conditions and test interactions among independent variables sex. Box's test of equality of covariance was significant $p = .019$ ($p > .05$), which is an indicator that the assumption of equality of covariance was violated (Field, 2009). Therefore, the results of this analysis should be approached with caution. MANOVA results were interpreted using the Wilk's lambda (Λ) statistic.

Results of the MANOVA indicated the effect of time of sex on the influence of terms was not significant, $\Lambda = .90$ $F (16, 181) = 1.258$; $p = .229$ ($p < .005$); $\eta_p^2 = .100$; $1 - \beta = .786$. MANOVA results for sex on the influence of terms did not meet the threshold for power of analysis.786 ($1 - \beta \geq .80$); therefore, the results of this analysis

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should be approached with caution. There was not an observed difference in the relation of bad to good of terms by sex.

MANOVA was used to compare the mean scores of dependent variables the influence of terms across conditions and test interactions among independent variables race (D003_RC2). Box's test of equality of covariance was not significant $p = .000$ ($p >$ .05), which is an indicator that the assumption of equality of covariance was violated (Field, 2009). Therefore, the results of this analysis should be approached with caution. MANOVA results were interpreted using the Wilk's lambda (Λ) statistic.

Results of the MANOVA indicated the effect of time of race on the influence of terms was not significant, $\Lambda = .832$ $F(16, 178) = 2.242$; $p = .006$ ($p < .005$); $\eta_p^2 = .952$; $1 - \beta = 1.0$. MANOVA results for race on the influence of terms exceeded the threshold ($1 - \beta = \geq .80$) for power of analysis; therefore, significant results were not due to chance or error. There was not an observed difference in the influence of terms by race.

MANOVA was used to compare the mean scores of dependent variables the influence of terms across conditions and test interactions among independent variables income level (D008_RC). Box's test of equality of covariance was not significant $p =$ .000 ($p > .05$), which is an indicator that the assumption of equality of covariance was violated (Field, 2009). Therefore, the results of this analysis should be approached with caution. MANOVA results were interpreted using the Wilk's lambda (Λ) statistic.

Results of the MANOVA indicated the effect of time of income level on the influence of terms was significant, $\Lambda = .632$ $F(48, 485.596) = 1.667$; $p = .004$ ($p <$ .005); $\eta_p^2 = .142$; $1 - \beta = 1.0$, and a large effect size ($\eta_p^2 = .142$; Field, 2009). MANOVA

results for income level on the influence of exceeded the threshold $(1 - \beta = \geq .80)$ for power of analysis; therefore, significant results were not due to chance or error. There was a significant difference observed in the influence of terms by income level.

Table 20
ANOVA influence of advertisement terms by income level

Scale	df	SS	MS	F	p	ω^2	$1 - \beta$
All Natural							
Between	3	18.027	6.009	2.310	.078	.023	.575
Error	196	509.953	2.602				
Farm Raised							
Between	3	19.835	6.612	2.480	.062	.032	.609
Error	194	517.175	2.666				
Fresh							
Between	3	6.401	2.134	1.000	.394	.010	.270
Error	192	409.696	2.134				
**Gluten Free							
Between	3	40.066	13.355	5.049	.002	.047	.914
Error	196	518.489	2.645				
Grade A							
Between	3	2.326	.775	0.301	.825	-.001	.107
Error	193	497.400	2.577				
Healthy							
Between	3	10.608	3.536	1.460	.227	.017	.383
Error	195	472.145	2.421				
Lean							
Between	3	5.378	1.793	0.840	.473	.009	.231

Table 20 Continued

Scale	df	SS	MS	F	p	ω^2	1 - β
Error	194	413.895	2.133				
Local							
Between	3	7.888	2.629	1.177	.320	.026	.313
Error	197	440.201	2.235				
Moist							
Between	3	24.955	8.318	3.199	.025	.025	.732
Error	194	504.525	2.601				
No Added Antibiotics							
Between	3	4.085	1.362	0.523	.667	.005	.156
Error	196	510.270	2.603				
No Added Hormones							
Between	3	1.021	0.340	0.146	.932	.009	.077
Error	196	456.479	2.329				
No Salt or Water Added							
Between	3	7.014	2.338	0.951	.417	.027	.258
Error	197	484.418	2.459				
Organic							
Between	3	23.270	7.757	2.660	.049	.026	.643
Error	194	565.724	2.916				
Tender							
Between	3	16.170	5.390	2.354	.073	.029	.584
Error	193	441.972	2.290				
USDA Inspected							
Between	3	28.219	8.765	3.201	.321	.023	.682
Error	194	524.487	2.310				
Vegetarian Fed							
Between	3	29.433	9.811	3.083	.029	.027	.715
Error	194	617.455	3.183				

Note. ** Indicates significant results ($p = < .005$)

After identifying the significant MANOVA, ANOVA was carried out on each of

the dependent variables, influence of terms (V4_Q005_A through V4_Q005_P), with

results shown in Table 20. A Bonferroni correction was calculated to adjust the alpha

level because of multiple comparisons to account for Type I Error (Tabachnick & Fidell, 2013). The 16 comparisons for this research objective required a Bonferroni correction value of ($p < .005$).

ANOVA results indicated significant interactions between subjects in Gluten Free (V4_Q010_D) ($p = 0.004$, $\omega^2 = 0.047$, $1 - \beta = 0.899$),) for the effects of influence of terms on income level. ANOVA results for Gluten Free exceeded the threshold ($1 - \beta = \geq .80$) for power of analysis; therefore, significant results were not due to chance or error.

CHAPTER VI

QUALITATIVE METHOD

Parallel to the quantitative survey data collection, qualitative data collection methods were used to gather consumers' perceptions of animal-based food products and advertising elements. Using face-to-face, semi-structured interviews, we asked participants in the Western United States questions to provide a deeper understanding of consumers' thoughts and behaviors and serve as a supplement to the quantitative data collected in this study. Webb (1996) noted the confidence in the findings of a study using quantitative research strategy can be enhanced by using more than one way of measuring a concept. Interviews were conducted face-to-face at locations a part of the five-week summer research trip through the Texas A&M University Department of Agricultural Leadership, Education, and Communications. It is important to note that because the data was collected in conjunction with the larger quantitative study, locations were selected at the discretion of the lead faculty member overseeing the larger study. This chapter describes the participants, research design, data collection protocol, data analysis, and trustworthiness.

Research Questions

RQ3.1: What are consumers' food purchasing behaviors?

  RO3.1.1 Describe the grocery shopping habits of consumers.

RQ3.2: How do consumers' personal determinants (psychographics) relate to their

  purchasing behaviors?

RO3.3.1 Describe the influence of quality cues related to food purchases

(convenience, cost, nutrition, production process, quality).

RQ3.3: What is the influence of advertisement elements on consumers' purchasing

behavior?

RO3.3.1 Describe what is associated with common terms found in grocery

advertisements for animal proteins.

Theory

Social cognitive theory (Bandura, 1986) guided the qualitative inquiry. The

purpose of the interviews was to describe how environmental and personal determinants

(cognitive and affective) influence consumers' purchasing behavior. The understanding

of each determinant allows for a deeper enlightenment to why consumers in the study

perform their respective purchasing behaviors. Individuals' personal determinants were

established through demographics (including age and ethnicity) and psychographics,

such as frequency of eating out and level of health concern. The purchasing behaviors of

consumers were considered the behavioral determinants. The environmental

determinants assessed included participants importance of brand, store, price, sales

promotion, and production method, as well as their response to common terms used to

modify the animal-based food products (such as "All Natural" and "Fresh").

Conceptually, grounded theory and the constant comparative method also served

as a guide for this study. Grounded theory is "theory that was derived from data,

systematically gathered and analyzed through the research process" (Bryman, 2012, p,

387). Using grounded theory allows the researcher to be opportunistic in the data

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collection approach. As Huberman and Miles (2002) explained, ''if a new data collection opportunity arises or if a new line of thinking emerges during the research, it makes sense to take advantage by altering data collection, if such an alteration is likely to better ground the theory or to provide new theoretical insights'' (p. 16). As noted previously, the qualitative data in this study were collected during the research trip, which caused much of the collection to be sporadic and opportunistic.

Sample

Qualitative interviews were performed at locations including public events and farmers markets. Fifteen participants served as the sample of this study. Individuals interviewed were purposively selected to include individuals of various ages and genders selected at the various locations that varied in size, duration, and purpose. Purposive sampling is a non-probability form of sampling to ensure there is variety in the sample and individual members differ from each other in terms of key characteristics relevant to the research questions (Bryman, 2012). It was necessary to recruit participants purposively due to the limited amount of time allowed for interviews on the trip. A map of the United States showing qualitative and quantitative data collection sites is displayed in Figure 6.

Figure 6. Qualitative and Quantitative Data Collection Locations

Procedures

Individuals were approached at random and asked if they would be willing to participate in an interview to assist in my personal thesis data collection. Each interview typically lasted 10 to 15 minutes, and consisted of unstructured, semi-structured, and structured questions derived from the quantitative paper instrument. Semi-structured interviews are interviews that take place after a researcher has familiarized themselves with the participants and has some prepared directional questions that helps to shape the interview before the interview takes place (Lincoln & Guba, 1985). An interview outline (protocol) acted as a guide for each qualitative interview. Utilizing a semi-structured method allowed for the interviews to remain on topic but also allowed for thick description and more free-flowing conversation and provided the opportunity for us to

ask follow-up questions. Basing the qualitative interview questions on the quantitative questionnaire provided credibility to the study because the questionnaire was derived heavily from the literature and the previously noted content analysis. However, the majority of the questions that were asked in the quantitative questionnaire were close ended thus did not allow for a deep understanding of the "why" behind the respondents' answers.

Analysis and Interpretation

The coding of qualitative data can be approached many ways (e.g., inductive, deductive, and discovering constructs from generative inquiry; Lincoln & Guba, 1985). The analysis of the data in this section of the study was approached inductively because the data stemmed from specific interviews. A grounded theory approach was used when analyzing the data, which is described as "emergent theory grounded in the relationships between the data and the categories into which they are coded" (Lindlof & Taylor 2011, p.250). However, our use of the grounded theory was not intended to develop a theory; therefore, we only used the constant comparative method associated with grounded theory. Using grounded theory in data analysis allows the codes and categories to change and evolve throughout the study without altering the terms of the framework.

Following each interview, all field notes and reflective and reflexive notes were typed into a field notes template (see Appendix T), an easy to reference Microsoft® Word document. An initial unrestricted form of open coding was performed while in the field by making notes for future interviews in line with statements. Open coding is line-by-line coding that allows the researcher to observe how the data will be addressed later

(Lindlof & Taylor, 2011). As interviews were conducted and typed into the field notes template, selected participant quotes and remarks were marked and notes regarding the statements were made in the observations section for future coding.

Each interview was saved individually in the field note template and named by the date of the interview (Julian date), location, and interview number. All transcripts were then entered in a Microsoft® Excel spreadsheet. Qualitative data were coded by Julian date, gender, and field note number. For example, 171_Male_001 was an interview conducted on June 20 (the 171st day of the year), with a male subject, and field note number one. Individual thoughts were placed in one cell adjacent to a cell containing the interview number to maintain an audit trail for future reference. The spreadsheet was then printed and each thought with its corresponding identifying information was separated for coding.

The individual thoughts were shuffled then with the assistance of another researcher organized into categories of best fit. Any thoughts or remarks that did not pertain to the research questions of this study were eliminated so only pertinent data were present in the categorization. As new categories emerged, the preliminary category title was written on a sheet of paper and the thoughts that belonged with the titles were placed in the corresponding pile. Once all thoughts were categorized, the preliminary category titles were organized on a white board to elaborate on overarching themes and determine if any further coding should be done. To achieve unanimous agreement on categorization and resolve any discrepancies both researchers reviewed each thought.

After the first categorization of data, two distinct overarching themes appeared in the thoughts and remarks content. In some cases, a code fit into more than one theme. In those cases, the thoughts and remarks were written with the corresponding identification on a piece of paper and put it in each category it fit. The thoughts were separated into two overarching themes: shopping habits and advertisement elements.

The contents of each theme were then coded individually. Four categories emerged in the shopping habits theme: convenience, health, price, and quality. Thoughts in the advertisement elements theme were coded as positive, skeptical, and negative.

For clarification purposes, the contents of the advertisement elements theme should be first categorized by term then further categorized as positive remarks, skeptical remarks, and negative remarks under each.

Due to time and location constraints, there was not a foreseeable way to reach data saturation. The five-week trip schedule only allowed for interviews in specific locations and times. All other times of the trip were set aside for educational and observational activities or distributing the quantitative questionnaires for this study. This made it difficult to increase the sample size and gather additional interviews.

Trustworthiness

According to Lincoln & Guba (1985), establishing trustworthiness includes providing evidence of credibility, transferability, dependability, and confirmability. Establishing trustworthiness is important to ensure that the study is true and dependable (Lindlof & Taylor, 2011). In establishing trustworthiness, two researchers conducted each interview, one always being myself.

The credibility of a study determines its acceptability to others (Bryman, 2012) and is crucial to the internal validity of the study (Lincoln & Guba, 1985). As suggested by Lincoln & Guba (1985), credibility was addressed in this study by maintaining a reflexive journal and peer debriefing. Both researchers took detailed observation and reflexive notes on the right-hand side of a Black n' Red™ notebook during the interview. Immediately following each interview the two researches debriefed to discuss the interview, provide additional description of the respondent, and reconcile any discrepancies to increase the confirmability of the study. Individual researchers noted their reflections on the left-hand side of the notebook. Providing personal thoughts established dependability for the study. Throughout the data collection process, I recorded my thoughts and attitudes related to the study by journaling reflectively and reflexively before, during, and after each interview. As noted by Ortlipp (2008), reflective journaling allows the researcher to acknowledge personal bias and create a notion of transparency in the research process.

Transferability is crucial to the external validity of a study (Lincoln & Guba, 1985). Lincoln and Guba (1985) noted the ability to infer that the presumed causal relationship can be generalized to and across alternate measures of the cause an affect across different types of persons, settings, and times is the key component of transferability and can be accomplished through thick, rich description.

Dependability is "the ability to determine whether the findings of an inquiry would be repeated if the inquiry were replicated with the same (or similar) subjects (respondents) in the same (or similar) context" (Lincoln & Guba, 1985, p. 290).

Confirmability ensures the findings of an inquiry are determined by the subjects (respondents) and conditions of the inquiry and not by the biases, motivation, interests, or perspectives of the inquirer (Lincoln & Guba, 1985). As suggested by Bryman (2012), the establishment of reliability in this study in regards to dependability was provided through an audit trail. The confirmability of this study was established through the audit trail.

CHAPTER VII

QUALITATIVE FINDINGS

The purpose of this study was to discover current advertisement trends for animal-based food products then describe and compare the purchasing behaviors of consumers with their different personal and environmental determinants.

Qualitative personal interviews were conducted with 15 individuals at various public venues including farmer's markets and the San Diego County Fair. Interviewees were asked to discuss their grocery purchasing habits and the motives that drives their purchases to provide a deeper understanding of the "why" related to consumers' purchasing decisions. Data collection for the qualitative element of this study was collected during the same time as the quantitative survey piece. The methods for the quantitative portion of this study can be found in chapter IV and the results in chapter V. It is important to note that because the data was collected during the five-week trip, settings varied and sample selection was purposive. The participants, research design, data collection protocol, data analysis and interpretation are discussed in detail in chapter VI along with the methods used to establish trustworthiness as recommended by Lincoln and Guba (1985)

The contents of each interview were coded and analyzed by two graduate students. Two themes appeared in the data: factors important in grocery shopping habits and the perspectives of grocery advertisement terminology. The findings of data for this study will be presented in two parts, by observed theme.

Theme One: Important Factors in Grocery Shopping Habits

Four categories emerged in the shopping habits theme: convenience, health, price, and quality. In reference to store location and also product purchases interviewees noted, convenience was noted as highly important. Convenient products were stressed as a top priority "I go there for the convenient meal items." (171_Male_002). Participants also stated "It's very routine; I go to the local supermarket because of its closeness" (171_Male_003). It was noted that when selecting a store, the nearest neighborhood markets were preferred, "they may not be the best for fresh fruits and vegetables, but they are close and do the trick" (172_Male_008).

Health was also noted as an important factor when purchasing groceries and selecting where to shop. One interviewee noted he and his wife frequent the weekly farmers market for fresh foods and quality and ingredients, but also that "we are out here for our health, primarily" (172_Male_007). Another noted that because of her diet "my wants are simple" and "I shop where I can find healthy, low calorie foods that fit my diet" (186_Female_016).

Price was also mentioned as being important in the food purchasing decisions of individuals. "I seek the highest quality for the best price I can get," (186_Male_017) said one participant. When selecting which items to purchase participants said, "I want the biggest deal I can get" (171_Male_002). When choosing where to shop, price was also a factor. "I tend to start there [grocery store frequented] to get anything I can at the best price" (171_Male_002), "I make a list, but there are also some deals that may only available that week" (171_Male_003), and "I look for things on sale" (171_Male_002).

Price discounts were also noted as influential in grocery store selection, "they have a discount for senior citizens and they also send out some coupons" (171_Male_007).

Food quality in products was also noted as a factor important to interviewees, "I come here because they have awesome bread. They also have the freshest fish; I love it" (172_Male_007). When selecting which items to purchase in the store one noted, "I really look for whatever is in season; I like it super fresh" (172_Female_009) and "When shopping I look at the quality of fruits and vegetables and judge how fresh they look" (172_Male_008). Product purchases can be driven by "the quality of food and then depending on what I am planning to create determines how often I shop a week" (186_Male_017).

Theme Two: Advertisement Terminology

Positive, skeptical, and negative perspectives of the following terms frequently found in grocery advertisements: "All Natural", "Farm Raised", "Fresh", Gluten Free", "Grade A", "Healthy", "Lean", "Local", "No Added Antibiotics", "No Added Hormones", "No Salt or Water Added", "Organic", "USDA Inspected", and "Vegetarian Fed". For ease of understanding, the findings for each term category will be reported separately.

Positive reactions to "All Natural" included "yes, very good" (172_Male_007) and "yes, bioenvironmental" (171_Male_003). Negative reactions by interviewees included "I don't need it" (186_Female_015) and "other things I am not picky on; local, natural, organic don't mean a whole lot. I grew up easting other things and I am fine" (171_Male_006). In reference to "All Natural" some interviewees were skeptical to the

term, "I am kind of leery and skeptical. There is no definition" (186_Female_016). Another subject noted they were "skeptical, it is a cliché catch word. When anything like that is used, it is no longer about the food. It is about the marketing" (186_Male_017) and "I am slightly suspicious. It seems good, but one wonders what does it actually mean? It is just a marketing scheme" (172_Male_008). The lack of a distinct definition for "All Natural" led one to state, "It is false. After several nutrition classes, I've learned things are not always as they're seen. Natural, 99% fat free, they all do not have clear definition" (171_Male_004). One interviewee related "All Natural" to sunshine "It is really the only thing we can verify as natural" (172_Male_010).

Only positive perspectives were noted in reference to "Farm Raised." Some interviewees noted the term to portray the product as "tasty" (172_Male_007), and others simply noted the term as a positive association "good" (172_Male_004), and "that is really good" (186_Female_016).

The term "Fresh" also only received positive perspectives from interviewees, "always good" (186_Female_016), "awesome" (171_Male_004), "positive" (172_Male_008), and "tasty" (172_Male_007). One interviewee said "Fresh sounds nice. I hope it is fresh and hasn't spent three months in a cooler somewhere" (186_Female_014).

In reference to "Gluten Free", positive and skeptical remarks were found in the data. One interviewee noted "Gluten Free; as "good, I do it sometimes, just not right now" (172_Male_007). Others referred to the term, "it is a fad" (186_Male_017) and "I do not have a strong opinion on it, a lot do though" (172_Male_008).

Positive and negative perspectives were mentioned in reference to "Grade A." Some mentioned, "Grade A is good" (172_Male_010), "I would buy that" (186_Female_015), and "good" (172_Male_007). Another interviewee associated the term as a negative, "I don't like Grade A. I wouldn't want it on my food. It sounds bad" (172_Male_008).

The term "healthy" generated positive and skeptical remarks among interviewees. Some interviewees regarded "healthy" as "fresh" (172_Female_009), "yes!" (186_Female_015), and "healthy, yes, awesome" (172_Male_007). An interviewee skeptical of the term posed the question, "why must this be such a common thing" (172_Male_008). Another noted they were "skeptical" (186_Female_016) and a product labeled with this term "is not necessarily healthy. Read the label" (186_Female_014). Healthy was noted as "a hard term. It is slightly cheap and often over used" (172_Male_008).

The term "Lean" only received positive remarks. Participants' responses included statements such as "good" (172_Male_007) and "yes, for sure" (186_Female_015).

Positive and negative remarks were presented in reference to the term "local." Although some subjects said, "I support it" (186_Female_015) and viewed the term as "good" (172_Male_008), (172_Male_007), others said, "Local is a lot better for your health." Some viewed the term "local" as a bad thing because of the price the interviewees associated with it, "it is more expensive" (171_Male_003) and "I grew up eating other things and I am fine; why spend more?" (171_Male_006).

In reference to the terminology "No Added Antibiotics," positive reactions to the marking of the absence of antibiotics and negative responses regarding antibiotics were presented. One interviewee noted, "antibiotics are bad" (172_Male_007) and another "I don't want them or hormones or any additive in my foods" (186_Female_014).

In regards to "No Added Hormones," positive, negative, and skeptical associations were linked to the label. Some interviewees thought of hormones poorly "they are bad. There is no way I am touching anything with that [hormones in the product]" (172_Male_007) and "When I hear hormones, I think artificial" (171_Male_003). An individual noted," Hormones seem negative, but I don't know" (172_Male_008), but another said, "I don't pay attention to that really" (171_Male_002).

Positive remarks were made in reference to "No Salt or Water Added" in a food label. "I would prefer it not have it. It grosses me out." (186_Fenale_015) and "weird" (186_Female_014) were the most distinct remarks.

"Organic" sparked positive, negative, and skeptical remarks. One interviewee viewed organic foods as tastier and healthier, "The best food is here. It is organic food, which is good and tasty" (172_Male_007). Some linked organic to the healthiness of the food, "I really try to eat organic, it's healthier" (172_Male_007), "the nutritional value is here" (186_Female_016), and "organic, is really good for you" (172_Female_009). "Fresh" was associated with organic (171_Male_004) and one interviewee said, "Organic is less pesticides and less toxic. Everything else and inside the perimeter of the store is processed junk." (186_Female_014). Other interviewees deemed "Organic" as "a fad word" (186_Male_017) and were skeptical of the term because "there are so many

different regulations. I don't think anyone really knows what it means"
(186_Female_015). There were also a non-preference for "Organic"; "I am not picky on
organic, local or natural. I don't think they mean a whole lot. I grew up eating other
things and I am fine." (171_Male_006).

"USDA Inspected" induced positive, negative, and skeptical responses from
interviewees. Positive perspectives included: "USDA Inspected is preferred"
(172_Male_007), "awesome" (171_Male_002), and "healthy" (171_Male_004). Another
interview said, "It [USDA Inspected] sounds like a bank being FDIC insured. I wouldn't
mind if my food wasn't inspected though. I would probably assume it was more local
and fresh." (172_Male_008). Another skeptical interviewee stated, "It seems like a good
thing. You have to put it on foods for most people to buy it" (186_Female_015). A more
negative perspective was seen in "it's a great idea, but the government has control. They
can get paid off really easy. I don't think it really adds value." (186_Female_014), "I
don't think it is done how we are made to believe" (186_Female_014).

The terminology "Vegetarian Fed" sparked skeptical remarks, "it seems positive,
but not necessary probably" (172_Male_008), "vegetarian fed is probably not a
necessity" (172_Male_007). Lack of knowledge led to some skepticism, "I haven't done
much research. It can be a good thing if pesticides aren't put on what animals are fed."
(186_Female_014).

CHAPTER VIII

DISCUSSION

Summary of the Study

The purpose of this study was to discover current advertisement trends for animal-based food products and describe and compare consumers' purchasing behaviors of animal-based food products with their personal and environmental determinants. This study sought to first gather the grocery advertisement elements through a quantitative content analysis then assessed consumers' perspectives of animal-based food products and advertisements with a quantitative questionnaire and qualitative in-person interviews.

Research has been conducted on many aspects of consumer decision-making (Lavidge, 1961; Ramey, 1964; Zanoli, 2002; Zajonc, 1982; Carneiro et al, 2005). In regards to food decision-making, research has focused on sensory preference and its relationship to food choice and the quality cues that determine consumer food purchases (Gutman, 1982; Ajzen & Fishbein, 1975; Darby & Karni, 1973; Oliver, 1980; 1993; Grunert, 2004; Grunert, 2002; Steenkamp, 1990). The demographics of age, sex, race, and annual household income level have been noted of importance in consumer decision making (Glanz et al, 1998; Kristal et al, 1995; Glanz et al, 1994; Lin, 1995; Steptoe et al, 1995; Wardle & Steptoe, 1991). Therefore, the demographics of generation, sex, race, and household income were used as comparative statistics in this study.

Newspaper grocery sales circulars are an influential medium that stores use for promotion and serve as an important source of information for consumer (Verbeke, 2005; Glanz, 2007: Jahns, 2014). Protein foods are advertised most frequently in grocery sales circulars (Martin-Biggers, 2013), with greatest portion of space on the front page of supermarket sales circulars devoted to these products (Jahns, 2014). However, little research has been conducted to examine consumers' perceptions of grocery circular advertisement elements in relation to product quality cues. Therefore, this study used Bandura's social cognitive theory (1985) to examine consumers' perceptions of animal-based food products and advertisements.

Understanding consumers' purchasing and information-seeking behavior is crucial to developing effective marketing for animal-based food products. This information can assist companies in developing influential advertising and promotional campaigns that drive consumers' visits to grocery stores and, ultimately, generate higher sales. An understanding of the personal, environmental, and behavioral determinants that drive consumers' purchases allows for segment-based marketing and for stores to compete on more than product price. In addition, by understanding the concerns and wants most important to consumers' purchasing behavior, product development can be better focused. Producers who understand their targeted consumer segments may develop differentiated products that provide the company with a competitive advantage.

Further, the benefit of understanding consumers' food purchasing behavior does not lie solely in food marketers and product developers. Health professionals, public policy makers, and economists should be interested in the determinants that drive

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consumers' food purchases as well. In addition, communicators in the agricultural industry could communicate more effectively with a better understanding of consumers' reactions to modifying terms frequently used to describe animal-based food products in advertisements.

This study was a part of a larger study that focused on data collection methods; therefore, there are limitations in the sampling and methods of this study. Though the use of face-to-face interaction in the questionnaire delivery methods did show an increase in response, logistically other methods of survey data collection might be more appropriate. For future research, web-based surveys are recommended for data collection. Also, the population and sampling of future studies could be refined and better focused. As a part of the larger study, there were many questions included in the questionnaire that were not directly relevant to the aims of this study but were related to the other five projects in the data collection. For future research, a refined instrument focused solely on the aims of this study could shorten the instrument but also better gather data. The intent of this study was to be able to generalize the perceptions of consumers as a whole. However, consumers are so diverse it is difficult to suggest the findings of this study could mirror all consumers. The findings are relevant and generalizable to all consumers in the specific or similar demographic areas of the United States as those selected for the larger study.

Summary of Findings

This section will present a summary of the findings in two sections. First the findings of the quantitative content analysis will be presented, followed by the findings

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of the quantitative questionnaire and qualitative interviews. Each section will be broken down into its specific research questions and respective objectives with a summary of descriptive and inferential statistics.

Content Analysis

The purpose of research question 1.1 was to describe the types of animal-based food products present in the three-month sample of grocery sales circulars. Based on the quantitative results, advertisements for pork products were present in grocery sales circulars most frequently, followed by beef, chicken, turkey, seafood, and lamb. It is important to note that only three lamb advertisements were found in the content analysis. This limits the degree to which advertisement elements of lamb product advertisements could be generalized, and percentages presented for lamb advertisements should be approached with this low number in mind. The sample of grocery sales circulars was obtained during the months of September and November 2013. It cannot be determined that the frequency of advertisements for different types of animal-based food products is not seasonal, because the sample was not collected over a longer period of time. Therefore, these results can only be generalized to the months in the sample of this study.

The purpose of research question 1.2 was to describe the sizes of the animal-based food advertisements (one-eighth of one page or less; one-eighth of one page to one-fourth of one page; one-fourth of a page to one-half of a page; greater than one-half of a page but less than one page; greater than one page). Based on the quantitative results, the majority of each product's advertisements were placed in the one-eighth of

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one page or less group, followed by advertisements ranging from one-eighth of one page to one-fourth of one page and the one-fourth of a page to one half of a page size range. Few advertisements were placed in the greater than one-half of a page but less than one page category, and only three advertisements, two chicken and one turkey, compromised a whole page advertisement.

The purpose of research question 1.3 was to describe the visual presentation of products in animal-based food advertisements. Based on the quantitative results, 90.9% of the advertisements were visual advertisements. Advertisements with a visual element contained cooked products most frequently. Raw products were presented the second most frequent, and a small number of advertisements presented a visual of both a raw and cooked product in a single advertisement.

The purpose of research question 1.4 was to describe how frequent brand name and price were presented in animal-based food advertisements. The research question also aimed to describe if the product was advertised as on sale. Based on the quantitative results, a brand name was present in the majority of advertisements analyzed and was most common in turkey advertisements, followed by pork, chicken, beef, seafood, and lamb. The high frequency in turkey products could be related to Thanksgiving, a United States national holiday in which turkey is a staple food. Price was displayed in an overwhelming majority of the advertisements and was most frequent in pork, beef, seafood, chicken, turkey, and lamb. The majority of advertisements did not present the product as on sale. Of the types of animal-based products observed in advertisements,

beef advertisements most frequently presented the product as on sale, followed by seafood, turkey, pork, and chicken.

The purpose of research question 1.5 was to identify terms in animal-based food advertisements that modify the product but were not related to product type, brand name, store name, price, or if the product was on sale. This was approached inductively but presented using descriptive statistics (frequency and percent) to summate the presence of each modifying term found. Based on the quantitative results, a total of 54 modifying terms were found. The 15 most frequently used modifying terms found in advertisements were Fresh, USDA Inspected, Grade A, All Natural, Lean, Farm Raised, Moist, No Salt or Water Added, Gluten Free, Healthy, No Antibiotics, Tender, Vegetarian Fed, Local, and No Added Hormones.

Quantitative and Qualitative

The purpose of research question 2.1 was to understand consumers' animal-based food product purchasing behaviors. Research objective 2.1.1 aimed to describe and compare the animal-based food products consumers purchase by their demographics (generation, sex, race, income level). Based on the nonparametric comparison results, there was an observed significant relationship between the purchase of lamb products and white consumers and non-white consumers. There also was an observed significant relationship between the purchase of beef products, chicken product, fish products, and lamb products and the income levels of consumers.

A MANOVA was used to compare the mean scores of products purchased across conditions and test interactions among psychographic descriptors in separate analyses.

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Based on the quantitative results, a significant difference was observed in the purchase of chicken products by psychographics. When subsequent ANOVAs were carried out on each of the psychographic descriptors, there were not significant differences between the purchase of chicken and the statements. However, the data included in this study were analyzed conservatively. In future research, a Bonferroni adjustment may not be necessary, thus, yield more significant findings with a *priori* alpha level of .05. Therefore, results that may have been significant ($p \leq .05$) before the Bonferroni adjustment should be considered for future study. This includes the psychographic statements "I am concerned about how my food is purchased," "I am a foodie," "I buy whatever is on sale," and "I like to grow my own foods."

There was also an observed significant relationship between the purchase of fish products and the psychographic descriptors. After identifying the significant MANOVA, a subsequent ANOVA was carried out on each of the psychographics and a significant difference existed for statements "I am a foodie," "I am health conscious," and "I buy easy to make foods." The data included in this study were analyzed conservatively. In future research, a Bonferroni adjustment may not be necessary, thus, yield more significant findings with a *priori* alpha level of .05. Therefore, results that may have been significant ($p \leq .05$) before the Bonferroni adjustment should be considered for future study. This includes the statements "I am concerned about how my food is produced," "I am a foodie," "I am health conscious," "I buy easy to make food," and "I like to grow my own food."

The purpose of research objective 2.1.2 was to describe and compare the grocery shopping habits of consumers. Based on the quantitative results of a nonparametric comparison, there was a significant relationship between the purchase of lamb products and grocery shopping frequency.

Research question 2.2 aimed to understand how environment relates to consumers' purchasing behaviors. Research objective 2.2.1 aimed to describe and compare where people live to their animal-based food product purchasing behaviors. Based on the quantitative results of the nonparametric comparison, there was a significant difference observed between the purchase of lamb products and consumers' location.

The purpose of research question 2.3 was to understand how consumers' personal determinates relate to their purchasing behaviors. Research objective 2.3.1 aimed to describe and compare the influence of quality cues related to food purchases: convenience, cost, health, production process, and quality. Due to previous research (Glanz et al, 1998; Kristal et al, 1995; Glanz et al, 1994; Lin, 1995; Steptoe et al, 1995, Wardle & Steptoe, 1991), differences among demographics in relation to the importance of convenience, cost, health, quality and production process were expected. However, based on the quantitative results from a MANOVA used to compare the mean scores of convenience, cost, health, production process, and quality across generation, sex, race, and income level, no significant differences were found.

Although there were no observed significant relations among generation, sex, race, and income level for the importance of convenience, cost, health, quality, or

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production process variables in this study, there was evidence that these quality cues were important in the qualitative section of this study. The grocery shopping habits theme that emerged from the qualitative data in this study showed that different consumers placed different levels of importance on categories of quality cues. The theme contained four categories convenience, health, price, and quality. Interviewees noted all four to be influences on both the grocery store they chose and the food products they purchased. The convenience category was composed of statements similar to "I go there for the convenient meal items" (171_Male_002). Cost importance was represented by comments such as, "I look for things on sale," (171_Male_002). In the category for health importance, consumer statements similar to "we are out here for our health, primarily" (172_Male_007) support the importance. Statements such as "I seek the highest quality for the best price I can get" (186_Male_017) composed the quality importance category.

There was evidence that the quality cues for convenience, cost, health, and quality were important to consumers. However, because there was a contradiction to the literature, further research should be conducted with these key demographics to observe whether the importance of these quality cues does vary by demographics. If, in fact, the demographics of generation, sex, race, and income level do not relate to the importance of quality cues for convenience, cost, health, production process, and quality then marketing to segments based on demographics is not necessary and marketers should be advertising to consumers based on different factors than demographics.

Research objective 2.3.2 aimed to describe and compare the importance of brand name and store name to consumers. Based on the quantitative results from a MANOVA used to compare the importance of brand name and store name across generation, sex, race, and income level, there were no significant relationships observed for these variables.

The purpose of research question 2.4 was to understand consumers' reactions to elements of grocery advertisements. Research objective 2.4.1 aimed to describe the degree of appeal for raw and cooked products in animal-based food advertisements. Based on the quantitative results of a paired-sample t-test, consumers found advertisements with a cooked animal-based food product more appealing than advertisements with raw animal-based food products.

Consumers found advertisements that contained a cooked chicken product significantly more appealing than containing raw chicken products. Advertisements that contained a cooked pork product were more appealing to consumers than advertisements that contained a raw pork product. Consumers found advertisements with a cooked beef product more appealing than a prepared beef product. Advertisements with a prepared chicken product were found more appealing than advertisements with a cooked chicken product. In future research, a Bonferroni adjustment may not be necessary, thus, yield more significant findings with a *priori* alpha level of .05. Therefore, results that may have been significant ($p \leq .05$) before the Bonferroni adjustment should be considered for future study. At a *priori* alpha level of .05, there would have been an observed

significant difference in the appeal of an advertisement for a raw beef product over and an advertisement with a cooked beef product.

The purpose of research objective 2.4.2 was to describe the degree of positivity or negativity associated with common terms found in grocery advertisements for animal-based food products. Based on the quantitative results of this study, there were no significant differences in the degree of positivity or negativity consumers relation to bad or good of the modifying terms across generation, sex, race, and income level.

Although significant relationships were not observed between these variables, qualitative data provided evidence that consumers have a positive, negative, or skeptical perception of these commonly utilized terms in advertisements: All Natural, Farm Raised, Fresh, Gluten Free, Grade A, Healthy, Lean, Local, No Added Antibiotics, No Added Hormones, No Salt or Water Added, Organic, USDA Inspected, and Vegetarian Fed. Statements such as "I would buy that" (186_Female_015) represented the positive consumer perceptions of each individual term. "I am kind of leery and skeptical. There is no definition" (186_Female_016) is an example of a statement that represented a skeptical consumer perception of a term. The negative consumer perception category for each term includes phrases such as, "a hard term. It is slightly cheap and often over used" (172_Male_008).

The purpose of research objective 2.4.3 was to describe the influence of common terms found in grocery advertisements for animal-based food products. Based on the quantitative results of a MANOVA used to compare the mean scores of the influence of terms across generation, sex, race, and income level, there was an observed significant

relationship between generation and to the influence of terms. The follow-up ANOVAs reported there was a difference in the influence of "No Added Hormones" across generations. However, the data included in this study were analyzed conservatively. In future research, a Bonferroni adjustment may not be necessary, thus, yield more significant findings with a *priori* alpha level of .05. The influence of the terms No Added Hormones, No salt or water added, Tender, and USDA Inspected would have been considered significantly different across generations before the Bonferroni adjustment and should be considered for future research.

Based on the quantitative results of a MANOVA used to compare the mean scores of the influence of commonly used modifying terms across income levels, there was an observed significant relationship between consumers' income level and to the degree of influence the modifying terms have on their purchasing decisions. The follow-up ANOVAs reported there was a difference in the influence of Gluten Free across income levels. The data included in this study were analyzed conservatively. In future research, a Bonferroni adjustment may not be necessary, thus, yield more significant findings with a *priori* alpha level of .05. The influence of the terms Gluten Free, Moist, Organic, and Vegetarian Fed would have been considered significantly different across generations before the Bonferroni adjustment and should be considered for future research.

Recommendations

Recommendations, based on the findings and results of this study, will be presented in two sections. The recommendations for academia and future researchers

will be discussed and will be followed by the recommendations for industry members and practitioners.

Academia and Future Researchers

It has been noted that animal-based protein products make up the largest percentage of weekly grocery sales circulars (Martin-Briggers, 2013; Jahns, 2014). However, this is the first study to focus its analysis on animal-based food products. The random sample of advertisements only contained three advertisements for lamb products. Due to the small number, further studies should be conducted to better describe the trends of advertisements for lamb products. Further, the aim of this study was to simply describe the frequency of each product type and the elements of each. Therefore, it is recommended further research be done to compare the advertisement elements of differing types of animal-based food products including the size, visual presentation, and modifying terms utilized in each. In addition, the sample of our study only encompassed advertisements for the months of September, October, and November in 2013. Further research should be done on across a longer period of time to observe the frequency of the animal-based food products advertised by type.

This study described the types of visual presentation found in advertisements of animal-based food product advertisements. The frequency of visuals with a raw, cooked, and dual presentation of both was observed. However, two types of cooked product visuals were found: a visual of a cooked product (a cooked steak) and a visual of a prepared product (a cheeseburger). Further research should be conducted to determine

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the presence of cooked product visuals and prepared product visuals in animal-based food advertisements.

Based on the quantitative results in this study, there was a significant relationship between consumers' purchase of chicken products and psychographic descriptors and a significant relationship between consumers' purchase of fish products and the psychographic descriptors. In future research, a Bonferroni adjustment may not be necessary. Therefore, it is recommended the psychographic statements "I am concerned about how my food is purchased," "I am a foodie," " I buy whatever is on sale," and "I like to grow my own foods," be included in future research to determine the relation of these psychographic determinants on consumers purchases of chicken products. In addition, it is recommend further research include the psychographic statements "I am concerned about how my food is produced," "I am a foodie," "I am health conscious," "I buy easy to make food," and "I like to grow my own food" studying whether or not consumers purchase fish products.

The contradiction of this study's results to previous research on the relationship of age, sex, race, and income to the importance of convenience, cost, health, production process and quality calls for more studies. Therefore, further research should be conducted to better understand the importance of these quality cues across demographics. Further, approaching a study on demographics relationship to the importance of convenience, cost, health, production process, and quality both quantitatively and qualitatively would equate a better understanding of the relationship.

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The appeal of raw animal-based food products and cooked animal-based food products should be further investigated. Consumers find cooked animal-based food products more appealing in advertisements than raw animal-based food products. However, the quantitative results of this study suggest consumers' find raw beef more appealing than cooked beef. Consumers find cooked chicken and pork products more appealing in advertisements than raw products of each. A prepared chicken product was more appealing in advertisements than a cooked chicken product; however, a cooked beef product was more appealing than a prepared beef product. Further investigation of the appeal of raw and cooked animal-based food products in advertisements by product type should be conducted to confirm the results of this study.

The relation to bad or good of the commonly used modifying terms: All Natural, Farm Raised, Fresh, Gluten Free, Grade A, Healthy, Lean, Local, Moist, No Added Hormones, No Added Antibiotics, No Salt or Water Added, Organic, Tender, USDA Inspected, Vegetarian Fed, found in this study did not show any differences across demographics. However, the influence of these terms differed across generation and income level. Also, there were distinct perspectives for the terms found in the qualitative section of this study. Therefore, further research should be conducted on the influence of these terms and consumers' understanding of each term because additional studies would assist companies with their marketing and communication efforts.

The instrument used in this study contained questions not directly related to this study's research questions because it was a part of a larger study. A more refined instrument that only addresses the inquiries of this study should be used in a duplicate

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study. This would allow for the data collected to be more focused. A large amount of quantitative data was collected in this study. However, the data collection methods were not the most efficient in terms of time and cost. Future research should utilize an online survey method to reach more consumers in various demographic areas. In addition, further qualitative studies should be performed to better understand consumers.

Industry Members and Practitioners

Consumer segments are different in their food purchasing decision-making and information search process. In this study, the advertisement elements grocery sales circulars currently use for animal-based food products were observed. The majority of advertisements analyzed in this study were smaller than one-eighth of a page. Our results found that 90.9% of animal-based food product advertisements in grocery circulars have a visual, and the majority of product visuals were of cooked products.

Marketers of animal-based food products should use a visual in advertisements. Advertisements should contain cooked product visuals because consumers find advertisements with cooked animal-based food products more appealing than advertisements with raw animal-based food products. However, marketers should consider the animal-based food product type when developing advertisements. Although there were not significant differences found, it is important to note consumers found a raw beef product more appealing than a cooked beef product. When presenting a prepared product in the advertisement, marketers should use caution because consumers' found prepared chicken products more appealing than cooked chicken products, but

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cooked beef products more appealing than prepared beef products. The type of prepared product could change the level of appeal the advertisement has to consumers.

The majority of grocery circular advertisements in this study presented a brand name and price in animal-based food product advertisements. Therefore, food marketers should also feature these two elements in their products, as consumers may look for them.

Understanding the target consumer segment for the animal-based food product is crucial for the marketing of food products. Consumers of different generations and income levels varied in the degree of influence the modifying terms had on their product purchasing decisions. Marketers should use the terms Gluten Free, Moist, No Added Hormones, No Salt or Water Added, Organic, Tender, USDA Inspected, and Vegetarian Fed carefully as they have different levels of influence on consumers of differing ages and income levels.

Consumers had positive, negative, and skeptical perceptions of modifying terms. When utilizing modifying terms with animal-based food products that do not directly describe the product's brand name, price, type or sales promotion, food marketers should be careful in their presentation. A clear definition of the term should be present on advertisements, so consumers fully understand the term. Communicators should be more transparent and descriptive in their message to assist in consumers' understanding of the terms used in animal-based food product advertisements.

Conclusions

The descriptive results of this study indicated grocery sales circular advertisements for animal-based food products are generally one-eighth of a page or less and have a visual presentation of the product. In addition, product visuals in advertisements varied in presentation: a raw product, a cooked product, or a prepared product. Also, the majority of animal-based food advertisements presented the brand name of the product and the price. Further, animal-based food advertisements in grocery circulars contained 54 modifying terms to describe the products.

The comparative results of this study indicated there are differences in the purchase of lamb products by consumers' race, consumers' grocery shopping frequency, and consumers' location. Quantitative results indicate a difference in the purchase of beef, chicken, fish, and lamb products by consumers' income levels. Multivariate analysis indicated there is a difference in the purchase of chicken products and fish products based on consumers' psychographic descriptors. According to the multivariate analyses of this study, the importance of brand name, convenience, cost, health, production process, quality, and store name did not vary by consumers' generation, sex, race, or household income. However, convenience, cost, health, and quality were stated of high importance by consumers interviewed in the qualitative section of this study.

At large, consumers found cooked animal-based food products more appealing in advertisements than raw animal-based food products. Consumers indicated raw beef products were more appealing than cooked beef products. Advertisements with cooked

chicken and pork products were more appealing than raw chicken and pork products.

The influence of modifying terms varied across generations and income levels.

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APPENDIX A

	Social Cognitive Theory	
Concept

Environmental Determinants	**Personal Determinants**	Behavioral Determinants
Dimensions

SEE APPENDIX D, APPENDIX E, AND APPENDIX F		SEE APPENDIX B AND APPENDIX C
Subdimensions

	Psychographics	

Further
subdimensions
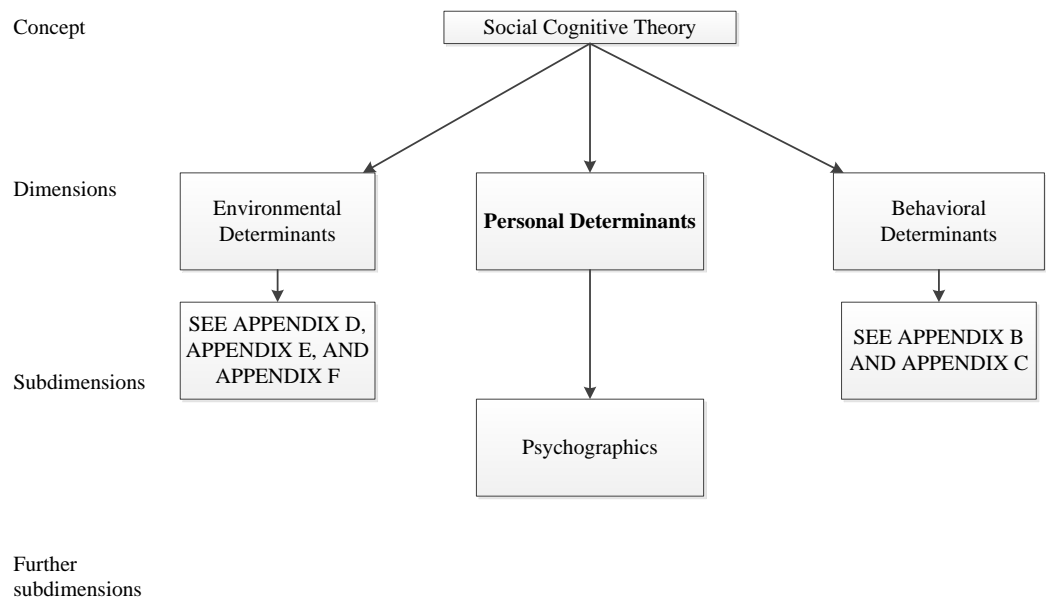
Personal Determinants of This Study

APPENDIX B

		Social Cognitive Theory	
Concept			
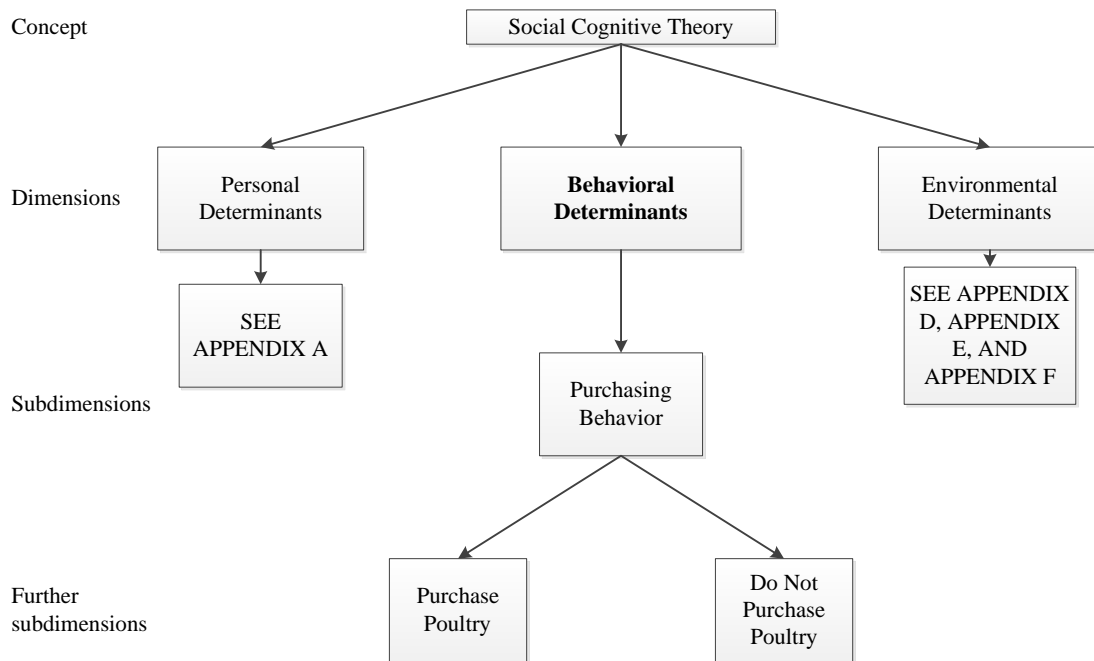
Behavioral Determinants of This Study: Product Purchases

APPENDIX C

	Social Cognitive Theory	
Concept

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        ┌─────────────────────────────┐
        │   Social Cognitive Theory   │
        └─────────────────────────────┘
```

Dimensions

Personal Determinants	**Behavioral Determinants**	Environmental Determinants

SEE APPENDIX A		SEE APPENDIX D, APPENDIX E, AND APPENDIX F

Subdimensions

	Purchasing Behavior	

Further subdimensions

	Grocery Shopping Frequency	
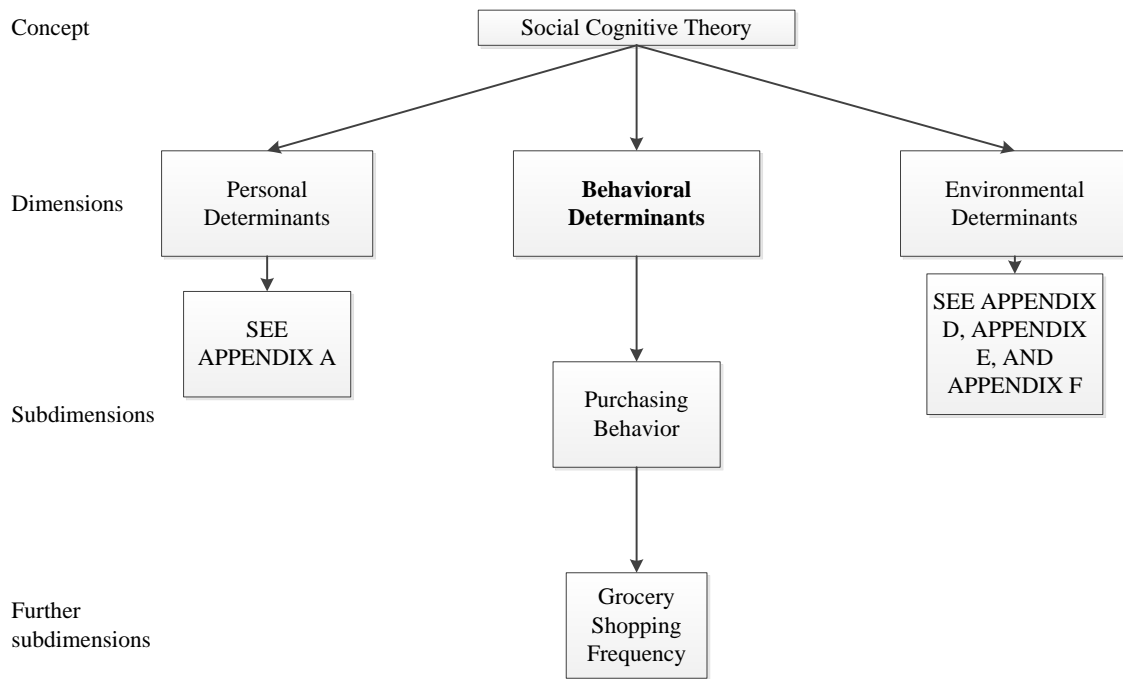
Behavioral Determinants of This Study: Grocery Shopping Frequency

APPENDIX D

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                        ┌──────────────────────────┐
Concept                 │ Social Cognitive Theory  │
                        └──────────────────────────┘
                       ╱             │             ╲
                      ╱              │              ╲
                     ╱               │               ╲
          ┌─────────────┐    ┌──────────────┐    ┌─────────────┐
Dimensions│  Personal   │    │Environmental │    │ Behavioral  │
          │ Determinants│    │ Determinants │    │Determinants │
          └─────────────┘    └──────────────┘    └─────────────┘
                 │            ╱      │      ╲             │
          ┌─────────────┐    ╱       │       ╲    ┌──────────────────┐
          │SEE APPENDIX A│  ╱        │        ╲   │ SEE APPENDIX B   │
          └─────────────┘ ╱         │         ╲  │ AND APPENDIX C   │
                         ╱          │          ╲ └──────────────────┘
              ┌──────────────┐ ┌──────────┐ ┌──────────────┐
              │   Grocery    │ │ Living   │ │   Grocery    │
Subdimensions │Advertisement │ │ Location │ │Advertisement │
              │     Use      │ │          │ │   Elements   │
              └──────────────┘ └──────────┘ └──────────────┘
                                    │
                              ┌──────────┐
Further                       │ ZIP Code │
subdimensions                 └──────────┘
```
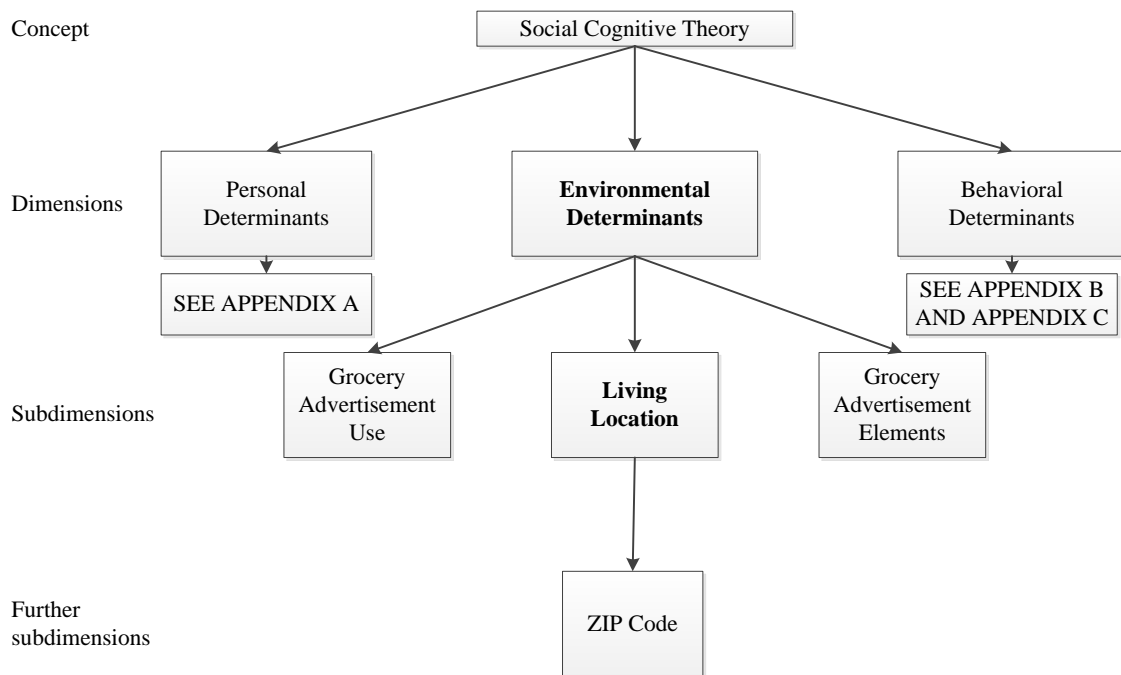
Environmental Determinants of This Study: Living Location

APPENDIX E

```
Concept                              ┌─────────────────────────┐
                                     │  Social Cognitive Theory │
                                     └─────────────────────────┘

Dimensions        ┌──────────────┐   ┌──────────────┐   ┌──────────────┐
                  │   Personal   │   │ Environmental │   │  Behavioral  │
                  │ Determinants │   │ Determinants  │   │ Determinants │
                  └──────────────┘   └──────────────┘   └──────────────┘
                  ┌──────────────┐                      ┌──────────────┐
                  │ SEE APPENDIX A│                     │ SEE APPENDIX B│
                  └──────────────┘                      │ AND APPENDIX C│
                                                        └──────────────┘

Subdimensions     ┌──────────────┐  ┌──────────────┐   ┌──────────────┐
                  │ Living Location│ │   Grocery    │   │   Grocery    │
                  └──────────────┘  │ Advertisement│   │ Advertisement│
                                    │     Use      │   │   Elements   │
                                    └──────────────┘   └──────────────┘

Further
subdimensions      ┌────────┐   ┌──────────┐   ┌──────────┐
                   │ Online │   │ Newspaper│   │ In-Store │
                   └────────┘   └──────────┘   └──────────┘
```

Environmental Determinants of This Study: Grocery Advertisement Channel

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APPENDIX F

| Concept | Social Cognitive Theory |
| | |

| Dimensions | Personal Determinants | Environmental Determinants | Behavioral Determinants |

| | SEE APPENDIX A | | SEE APPENDIX B AND APPENDIX C |

| Subdimensions | Living Location | Grocery Advertisement Elements | Grocery Advertisement Use |

| Further subdimensions | Terms | Product Presentation | Common Market Beliefs |

| Indicators | All Natural, Farm Raised, Fresh, Gluten Free, Grade A, Healthy, Lean, Local, Moist, No Added Hormones, No Antibiotics, No Salt or Water Added, Tender, USDA Inspected, Vegetarian Fed | Raw | Cooked | Raw and Cooked | Prepared | Brand, Price, Production Method, Quality, Sales Promotion |

Environmental Determinants of This Study: Grocery Advertisement Elements

APPENDIX G

ADVERTISEMENT: Only the front page of each advertisement will be analyzed.

NAMING: A copy of each advertisement should be saved with the original file name followed by the name of the advertisement.

Name	Date modified	Type	Size
02645_319_StoreA -001	11/14/2013 3:49 PM	Adobe Acrobat D...	263 KB

NUMBERING:
Each advertisement should be numbered starting with (1) in the top left corner of the advertisement moving top to bottom and left to right. A copy of each product advertised should be saved as well with the corresponding numbering in excel.

Advertisement 001

STORE

Indicate the full name of the store for which the advertisement is for.

Store Name

ZIP CODE

Indicate the zip code from which the advertisement was obtained. This is indicated by the first 5 numbers in the name of the file.

Zip Code

ANIMAL PRODUCT

Indicate (1) if the product being advertised is chicken
Indicate (2) if the product being advertised is turkey
Indicate (3) if the product being advertised is beef
Indicate (4) if the product being advertised is pork
Indicate (5) if the product being advertised is seafood
Indicate (6) if the product being advertised is lamb
Indicate (7) if the product being advertised is other
AP OTHER TEXT

If the animal product being advertised was indicated as other (7) provide any text that indicates what the product is.

BRAND

Indicate (1) if the brand is clearly evident and immediately recognizable
Indicate (2) if the brand is unclear; a complete examination of the ad was necessary to
determine the advertising brand

PRICE

Indicate (1) if the price is clearly evident and immediately recognizable
Indicate (2) if the price is unclear

Price

immediately

Price is unclear

SALE

Indicate (1) if the advertisement displays the product as on sale

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Indicate (2) if the product is not advertised as on sale

On Sale

On Sale

PRESENTATION

Indicate (1) if the product advertised is presented cooked
Indicate (2) if the product advertised is presented raw
Indicate (3) if the product advertised is not presented in a picture
Indicate (4) if the product advertised is presented both raw and cooked

Presented cooked (1)	Presented raw (2)	Product is not presented in

Presented both raw and

cooked (4)

TERMS

Indicate (1) if the advertisement contains additional terms
Indicate (0) if the advertisement does not contain any additional terms

Indicate (1) if the advertisement contains "Restaurant Quality"
Indicate (0) if the advertisement does not contain "Restaurant Quality"

Indicate (1) if the advertisement contains "Lean"
Indicate (0) if the advertisement does not contain "Lean"

Indicate (1) if the advertisement contains "All Natural"
Indicate (0) if the advertisement does not contain "All Natural"

Indicate (1) if the advertisement contains "Heart Healthy"
Indicate (0) if the advertisement does not contain "Heart Healthy"

Indicate (1) if the advertisement contains "Fresh"
Indicate (0) if the advertisement does not contain "Fresh"

Indicate (1) if the advertisement contains "USDA Inspected"
Indicate (0) if the advertisement does not contain "USDA Inspected"

Indicate (1) if the advertisement contains "Moist"
Indicate (0) if the advertisement does not contain "Moist"

Indicate (1) if the advertisement contains "Tender"
Indicate (0) if the advertisement does not contain "Tender"

Indicate (1) if the advertisement contains "Hand Trimmed"
Indicate (0) if the advertisement does not contain "Hand Trimmed"

Indicate (1) if the advertisement contains "Juicy"
Indicate (0) if the advertisement does not contain "Juicy"

Indicate (1) if the advertisement contains "No Salt or Water Added"
Indicate (0) if the advertisement does not contain "No Salt or Water Added"

Indicate (1) if the advertisement contains "Extra Meaty"
Indicate (0) if the advertisement does not contain "Extra Meaty"

Indicate (1) if the advertisement contains "Grain Fed"
Indicate (0) if the advertisement does not contain "Grain Fed"

Indicate (1) if the advertisement contains "Natural Juice"
Indicate (0) if the advertisement does not contain "Natural Juice"

Indicate (1) if the advertisement contains "Gluten Free"
Indicate (0) if the advertisement does not contain "Gluten Free"

Indicate (1) if the advertisement contains "Hearty Recommendation"
Indicate (0) if the advertisement does not contain "Hearty Recommendation"

Indicate (1) if the advertisement contains "Healthy"
Indicate (0) if the advertisement does not contain "Healthy"

Indicate (1) if the advertisement contains "Local"
Indicate (0) if the advertisement does not contain "Local"

Indicate (1) if the advertisement contains "Vegetarian Fed"
Indicate (0) if the advertisement does not contain "Vegetarian Fed"

Indicate (1) if the advertisement contains "No Antibiotics"
Indicate (0) if the advertisement does not contain "No Antibiotics"

Indicate (1) if the advertisement contains "No Added Hormones"
Indicate (0) if the advertisement does not contain "No Added Hormones"

Indicate (1) if the advertisement contains "Farm Raised"
Indicate (0) if the advertisement does not contain "Farm Raised"

Indicate (1) if the advertisement contains "No Cages"
Indicate (0) if the advertisement does not contain "No Cages"

Indicate (1) if the advertisement contains "No Crates"
Indicate (0) if the advertisement does not contain "No Crates"

Indicate (1) if the advertisement contains "No Crowding"
Indicate (0) if the advertisement does not contain "No Crowding"

Indicate (1) if the advertisement contains "Responsibly Farmed"
Indicate (0) if the advertisement does not contain "Responsibly Farmed"

Indicate (1) if the advertisement contains "Minimally Processed"
Indicate (0) if the advertisement does not contain "Minimally Processed"

Indicate (1) if the advertisement contains "No Added Ingredients"
Indicate (0) if the advertisement does not contain "No Added Ingredients"

Indicate (1) if the advertisement contains "Farm"
Indicate (0) if the advertisement does not contain "Farm"

Indicate (1) if the advertisement contains "Natural"
Indicate (0) if the advertisement does not contain "Natural"

Indicate (1) if the advertisement contains "No Artificial Ingredients"
Indicate (0) if the advertisement does not contain "No Artificial Ingredients"

Indicate (1) if the advertisement contains "No Preservatives"
Indicate (0) if the advertisement does not contain "No Preservatives"

Indicate (1) if the advertisement contains "Rich"
Indicate (0) if the advertisement does not contain "Rich"

Indicate (1) if the advertisement contains "Flavorful"
Indicate (0) if the advertisement does not contain "Flavorful"

Indicate (1) if the advertisement contains "Grade A"
Indicate (0) if the advertisement does not contain "Grade A"

Any word(s) part of the advertisement that does not indicate the type of animal product, cut of meat, brand, price or if the product is on sale should be added in an additional column in excel beginning with the column heading Terms_37.

Indicate (1) if the advertisement contains the found term
Indicate (0) if the advertisement does not contain the found term

SIZE

Indicate (1) if the size of product presented is 1/8 of one page or less
Indicate (2) if the size of product presented is greater than 1/8 of one page and 1/4 of one page or less
Indicate (3) if the size of product presented is greater than 1/4 of one page and 1/2 of one page or less
Indicate (4) if the size of product presented is greater than 1/2 of one page and less than one page
Indicate (5) if the size of product presented is one page or more

APPENDIX H

Variable	Label	Type	Scale	Page
V4_Q004_N	[V4 – Q36] Product Appeal: Raw Burger	Scale (interval)	"Very Repulsive" =1 thru "Very appealing" =6	CE-P36
V4_Q004_O	[V4 – Q37] Product Appeal: On Sale Chicken	Scale (interval)	"Very Repulsive" =1 thru "Very appealing" =6	CE-P37
V4_Q004_P	[V4 – Q38] Product Appeal: Dual Presentation Chicken	Scale (interval)	"Very Repulsive" =1 thru "Very appealing" =6	CE-P38
V4_Q005_A	[V4 – Q39] Influence: All Natural	Scale (interval)	"Not at all influential" =1 thru "Very Influential" =6	CE-P39
V4_Q005_B	[V4 – Q39] Influence: Farm Raised	Scale (interval)	"Not at all influential" =1 thru "Very Influential" =6	CE-P39
V4_Q005_C	[V4 – Q39] Influence: Fresh	Scale (interval)	"Not at all influential" =1 thru "Very Influential" =6	CE-P39
V4_Q005_D	[V4 – Q39] Influence: Gluten Free	Scale (interval)	"Not at all influential" =1 thru "Very Influential" =6	CE-P39
V4_Q005_E	[V4 – Q39] Influence: Grade A	Scale (interval)	"Not at all influential" =1 thru "Very Influential" =6	CE-P39
V4_Q005_F	[V4 – Q39] Influence: Healthy	Scale (interval)	"Not at all influential" =1 thru "Very Influential" =6	CE-P39
V4_Q005_G	[V4 – Q39] Influence: Lean	Scale (interval)	"Not at all influential" =1 thru "Very Influential" =6	CE-P39
V4_Q005_H	[V4 – Q39] Influence: Local	Scale (interval)	"Not at all influential" =1 thru "Very Influential" =6	CE-P39
V4_Q005_I	[V4 – Q39] Influence: Moist	Scale (interval)	"Not at all influential" =1 thru "Very Influential" =6	CE-P39
V4_Q005_J	[V4 – Q39] Influence: No Added Hormones	Scale (interval)	"Not at all influential" =1 thru "Very Influential" =6	CE-P39
V4_Q005_K	[V4 – Q39] Influence: No Antibiotics	Scale (interval)	"Not at all influential" =1 thru "Very Influential" =6	CE-P39
V4_Q005_L	[V4 – Q39] Influence: No Salt or Water Added	Scale (interval)	"Not at all influential" =1 thru "Very Influential" =6	CE-P39
V4_Q005_M	[V4 – Q39] Influence: Organic	Scale (interval)	"Not at all influential" =1 thru "Very Influential" =6	CE-P39
V4_Q005_N	[V4 – Q39] Influence: Tender	Scale (interval)	"Not at all influential" =1 thru "Very Influential" =6	CE-P39
V4_Q005_O	[V4 – Q39] Influence: USDA Inspected	Scale (interval)	"Not at all influential" =1 thru "Very Influential" =6	CE-P39
V4_Q005_P	[V4 – Q39] Influence: Vegetarian Fed	Scale (interval)	"Not at all influential" =1 thru "Very Influential" =6	CE-P39
V4_Q006_A	[V4 – Q40] Bad/Good: All Natural	Scale (interval)	"Very Bad" =1 thru "Very Good" =6	CE-P40
V4_Q006_B	[V4 – Q40] Bad/Good: Farm Raised	Scale (interval)	"Very Bad" =1 thru "Very Good" =6	CE-P40
V4_Q006_C	[V4 – Q40] Bad/Good: Fresh	Scale (interval)	"Very Bad" =1 thru "Very Good" =6	CE-P40
V4_Q006_D	[V4 – Q40] Bad/Good: Gluten Free	Scale (interval)	"Very Bad" =1 thru "Very Good" =6	CE-P40
V4_Q006_E	[V4 – Q40] Bad/Good: Grade A	Scale (interval)	"Very Bad" =1 thru "Very Good" =6	CE-P40
V4_Q006_F	[V4 – Q40] Bad/Good: Healthy	Scale (interval)	"Very Bad" =1 thru "Very Good" =6	CE-P40

QUANTITATIVE DATA CODING SHEET
LINDY FROEBEL – POULTRY

Variable	Label	Type	Values	Code
V4_Q006_G	[V4 – Q40] Bad/Good: Lean	Scale (interval)	"Very Bad"=1 thru "Very Good"=6	CE-P40
V4_Q006_H	[V4 – Q40] Bad/Good: Local	Scale (interval)	"Very Bad"=1 thru "Very Good"=6	CE-P40
V4_Q006_I	[V4 – Q40] Bad/Good: Moist	Scale (interval)	"Very Bad"=1 thru "Very Good"=6	CE-P40
V4_Q006_J	[V4 – Q40] Bad/Good: No Added Hormones	Scale (interval)	"Very Bad"=1 thru "Very Good"=6	CE-P40
V4_Q006_K	[V4 – Q40] Bad/Good: No Antibiotics	Scale (interval)	"Very Bad"=1 thru "Very Good"=6	CE-P40
V4_Q006_L	[V4 – Q40] Bad/Good: No Salt or Water Added	Scale (interval)	"Very Bad"=1 thru "Very Good"=6	CE-P40
V4_Q006_M	[V4 – Q40] Bad/Good: Organic	Scale (interval)	"Very Bad"=1 thru "Very Good"=6	CE-P40
V4_Q006_N	[V4 – Q40] Bad/Good: Tender	Scale (interval)	"Very Bad"=1 thru "Very Good"=6	CE-P40
V4_Q006_O	[V4 – Q40] Bad/Good: USDA Inspected	Scale (interval)	"Very Bad"=1 thru "Very Good"=6	CE-P40
V4_Q006_P	[V4 – Q40] Bad/Good: Vegetarian Fed	Scale (interval)	"Very Bad"=1 thru "Very Good"=6	CE-P40
V4_Q007_A	[V4 – Q41] CMB: Brand	Scale (interval)	"Not at all important"=1 thru "Very Important"=6	CE-P41
V4_Q007_B	[V4 – Q41] CMB: Price	Scale (interval)	"Not at all important"=1 thru "Very Important"=6	CE-P41
V4_Q007_C	[V4 – Q41] CMB: Production Method	Scale (interval)	"Not at all important"=1 thru "Very Important"=6	CE-P41
V4_Q007_D	[V4 – Q41] CMB: Quality of Product	Scale (interval)	"Not at all important"=1 thru "Very Important"=6	CE-P41
V4_Q007_E	[V4 – Q41] CMB: On Sale	Scale (interval)	"Not at all important"=1 thru "Very Important"=6	CE-P41
V4_Q007_F	[V4 – Q41] CMB: Store Name	Scale (interval)	"Not at all important"=1 thru "Very Important"=6	CE-P41
V4_Q008_A	[V4 – Q42] Purchase: Beef	Nominal (Dichotomous)	Yes=1; No=2	CE-P42
V4_Q008_B	[V4 – Q42] Purchase: Chicken	Nominal (Dichotomous)	Yes=1; No=2	CE-P42
V4_Q008_C	[V4 – Q42] Purchase: Fish	Nominal (Dichotomous)	Yes=1; No=2	CE-P42
V4_Q008_D	[V4 – Q42] Purchase: Lamb	Nominal (Dichotomous)	Yes=1; No=2	CE-P42
V4_Q008_E	[V4 – Q42] Purchase: Pork	Nominal (Dichotomous)	Yes=1; No=2	CE-P42
V4_Q008_F	[V4 – Q42] Purchase: Turkey	Nominal (Dichotomous)	Yes=1; No=2	CE-P42
V4_Q009	[V4 – Q43] Grocery Shopping Frequency	Nominal	Once per day=1;Once per week=2; Once every two weeks=3;Once per month=4;Other=5	CE-P43
V4_Q010_A	[V4 – Q44] I am: Active	Scale (interval)	"Not at all like Me" = 1 thru "Exactly like Me" = 6	CE-P44
V4_Q010_A	[V4 – Q44] I am: Concerned about how my food is produced	Scale (interval)	"Not at all like Me" = 1 thru "Exactly like Me" = 6	CE-P44

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QUANTITATIVE DATA CODING SHEET
LINDY FROEBEL – POULTRY

V4_Q010_B	I am: a "Foodie"	Scale (interval)	"Not at all like Me" = 1 thru "Exactly like Me" = 6	CE-P44
V4_Q010_C	I am: Health Conscious	Scale (interval)	"Not at all like Me" = 1 thru "Exactly like Me" = 6	CE-P44
V4_Q010_D	[V4 – Q44] I am: Knowledgeable about food	Scale (interval)	"Not at all like Me" = 1 thru "Exactly like Me" = 6	CE-P44
V4_Q010_E	[V4 – Q44] I buy: whatever food is on sale	Scale (interval)	"Not at all like Me" = 1 thru "Exactly like Me" = 6	CE-P44
V4_Q010_F	[V4 – Q44] I buy: easy-to-make foods	Scale (interval)	"Not at all like Me" = 1 thru "Exactly like Me" = 6	CE-P44
V4_Q010_G	[V4 – Q44] I: eat out often	Scale (interval)	"Not at all like Me" = 1 thru "Exactly like Me" = 6	CE-P44
V4_Q010_H	[V4 – Q44] I like: foods from my childhood	Scale (interval)	"Not at all like Me" = 1 thru "Exactly like Me" = 6	CE-P44
V4_Q010_I	[V4 – Q44] I like to: grow my own food	Scale (interval)	"Not at all like Me" = 1 thru "Exactly like Me" = 6	CE-P44
V4_Q010_J	[V4 – Q44] I prefer: locally grown foods	Scale (interval)	"Not at all like Me" = 1 thru "Exactly like Me" = 6	CE-P44
V4_Q010_K	[V4 – Q44] I prefer: organic	Scale (interval)	"Not at all like Me" = 1 thru "Exactly like Me" = 6	CE-P44

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DIGITAL MEDIA RESEARCH
AND DEVELOPMENT LAB
TEXAS A&M UNIVERSITY

Quant Data Code Sheet.Docx.
2/23/15 – Lindy Froebel

APPENDIX I

Table 1.
Modifying terms utilized in animal-based product advertisements

	Total (n =1575)		Beef (n = 426)		Chicken (n = 267)		Lamb (n = 3)		Pork (n = 445)		Seafood (n = 142)		Turkey (n = 147)		Other (n = 145)	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%
Terms	935	59.4	322	75.6	160	59.9	0	0.0	346	77.8	31	21.8	62	42.2	14	9.7
99% Fat Free	4	0.3	0	0.0	2	0.7	0	0.0	0	0.0	0	0.0	1	0.7	1	0.7
All Natural	75	4.8	6	1.4	22	8.2	0	0.0	31	7.0	3	2.1	13	8.8	0	0.0
Animal Welfare Impact	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.7	0	0.0
Extra Meaty	4	0.3	0	0.0	1	0.4	0	0.0	3	0.7	0	0.0	0	0.0	0	0.0
Farm	3	0.2	1	0.2	1	0.4	0	0.0	1	0.2	0	0.0	0	0.0	0	0.0
Farm Raised	15	1.0	0	0.0	0	0.0	0	0.0	0	0.0	15	10.6	0	0.0	0	0.0
Fat Free	3	0.2	0	0.0	1	0.4	0	0.0	1	0.2	1	0.7	0	0.0	0	0.0
Flavorful	3	0.2	2	0.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Free Range	2	0.1	1	0.2	1	0.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Fresh	255	16.2	59	13.8	98	36.7	0	0.0	55	12.4	21	14.8	17	11.6	5	3.4
Fresh Cut	6	0.4	3	0.7	1	0.4	0	0.0	0	0.0	2	1.4	0	0.0	0	0.0
From USA	1	0.1	1	0.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Frozen	20	1.3	2	0.5	3	1.1	0	0.0	2	0.4	0	0.0	10	6.8	3	2.1
Fully Cooked	2	0.1	0	0.0	0	0.0	0	0.0	2	0.4	0	0.0	0	0.0	0	0.0
Gluten Free	9	0.6	0	0.0	2	0.7	0	0.0	3	0.7	0	0.0	3	2.0	1	0.7
Grade A	83	5.3	1	0.2	41	15.4	0	0.0	3	0.7	2	1.4	36	24.5	0	0.0
Grain Fed	1	0.1	0	0.0	0	0.0	0	0.0	1	0.2	0	0.0	0	0.0	0	0.0
Great on the Grill	1	0.1	1	0.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Hand Trimmed	1	0.1	0	0.0	1	0.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Healthy	9	0.6	0	0.0	5	1.9	0	0.0	1	0.2	1	0.7	2	1.4	0	0.0
Heart Healthy	2	0.1	0	0.0	1	0.4	0	0.0	0	0.0	0	0.0	1	0.7	0	0.0

Table 1 Continued

	Total (n =1575)		Beef (n = 426)		Chicken (n = 267)		Lamb (n = 3)		Pork (n = 445)		Seafood (n = 142)		Turkey (n = 147)		Other (n = 145)	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%
Hearty Recommendation	2	0.1	1	0.2	0	0.0	0	0.0	1	0.2	0	0.0	0	0.0	0	0.0
Juicy	4	0.3	2	0.5	2	0.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Kitchen Ready	1	0.1	0	0.0	1	0.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Lean	47	3.0	26	6.1	1	0.4	0	0.0	14	3.1	0	0.0	4	2.7	2	1.4
Local	6	0.4	0	0.0	4	1.5	0	0.0	1	0.2	0	0.0	1	0.7	0	0.0
Locally Grown	3	0.2	0	0.0	2	0.7	0	0.0	1	0.2	0	0.0	0	0.0	0	0.0
Low Salt	3	0.2	0	0.0	1	0.4	0	0.0	2	0.4	0	0.0	0	0.0	0	0.0
Minimally Processed	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	0.7	1	0.7	0	0.0
Moist	14	0.9	0	0.0	2	0.7	0	0.0	11	2.5	0	0.0	0	0.0	1	0.7
Natural	10	0.6	1	0.2	2	0.7	0	0.0	6	1.3	1	0.7	0	0.0	0	0.0
Natural Juice	1	0.1	0	0.0	0	0.0	0	0.0	1	0.2	0	0.0	0	0.0	0	0.0
No Added Hormones	6	0.4	2	0.5	2	0.7	0	0.0	1	0.2	0	0.0	1	0.7	0	0.0
No Added Ingredients	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.7	0	0.0
No Additives	2	0.1	0	0.0	2	0.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
No Antibiotics	9	0.6	6	1.4	2	0.7	0	0.0	0	0.0	0	0.0	1	0.7	0	0.0
No Artificial Ingredients	1	0.1	0	0.0	1	0.4	0	0.0	0	0.0	1	0.7	0	0.0	0	0.0
No Cages	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	0.7	1	0.7	0	0.0
No Crates	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.7	0	0.0
No Crowding	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.7	0	0.0
No Moisture Added	2	0.1	0	0.0	1	0.4	0	0.0	1	0.2	0	0.0	0	0.0	0	0.0
No Preservatives	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0	2	1.4	1	0.7	0	0.0
No Salt or Water Added	10	0.6	3	0.7	0	0.0	0	0.0	7	1.6	0	0.0	0	0.0	0	0.0
No Solution Added	4	0.3	1	0.2	2	0.7	0	0.0	1	0.2	0	0.0	0	0.0	0	0.0
Reduced Sodium	1	0.1	0	0.0	0	0.0	0	0.0	1	0.2	0	0.0	0	0.0	0	0.0
Responsibly Farmed	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.7	0	0.0
Restaurant Quality	2	0.1	2	0.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

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Table 1 Continued

	Total (n =1575)		Beef (n = 426)		Chicken (n = 267)		Lamb (n = 3)		Pork (n = 445)		Seafood (n = 142)		Turkey (n = 147)		Other (n = 145)	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%
Rich	3	0.2	2	0.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Skinless	2	0.1	0	0.0	2	0.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Tender	9	0.6	2	0.5	3	1.1	0	0.0	2	0.4	0	0.0	0	0.0	2	1.4
USDA Inspected	127	8.1	21	4.9	79	29.6	0	0.0	22	4.9	0	0.0	4	2.7	1	0.7
Vegetarian Fed	7	0.4	5	1.2	2	0.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Water Added	2	0.1	0	0.0	0	0.0	0	0.0	2	0.4	0	0.0	0	0.0	0	0.0

APPENDIX J

Larger Study Methods

The data collection for this study was conducted in Colorado, California, and Texas (Denver, CO; Berkeley, CA; San Francisco, CA; Fresno, CA; San Diego, CA; Bryan/College Station, TX; Houston, TX; Dallas, TX). Research in Colorado and California was conducted as part of a five-week study away trip, a high impact experience program, through the Department of Agricultural Leadership, Education and Communications (ALEC) at Texas A&M University. The group of researchers consisted of a mix of six graduate and eleven undergraduate researchers led by one faculty member, for a total of 18 researchers.

Research in Texas was conducted as part of a fall 2014 Fundamentals of Research Course (AGCJ 491/ALEC 695) through the Department of Agricultural Leadership, Education and Communication at Texas A&M University. This group of researches consisted of 11 graduate and 15 undergraduate researches led by one faculty member, for a total of 27 researchers. For both the summer and fall data collection researchers with a project represented by one of the questionnaires in the study, referred to as the lead researchers, as well as the faculty member were the same.

Data for six consumer engagement projects were collected during the duration of the summer trip and fall course. A questionnaire that was distributed for each project associated with the overarching data collection had an identical set of the demographic and media consumption questions in the front portion of the questionnaire. Many of the media consumption, frequency of media consumption, and demographics questions

included the first section were drawn from Nielsen's U.S. *Digital Consumer Report*; e.g., How many working radios do you have in your home? Using questions drawn from Nielsen and Pew questionnaires allowed us to compare our data to the data collected by Nielsen and Pew Research. The second part of the questionnaires contained consumer engagement questions unique to each student research project:

- Form 1: Perceptions of live music events (Millenials)

- Form 2: Perceptions of Millennials

- Form 3: Public perceptions of animals and use

- Form 4: Perceptions of meat products in grocery store advertisements (perceptions of poultry products)

- Form 5: Perceptions of agriculture

- Form 6: Perceptions of radio

The design and layout of the questionnaires were kept consistent to avoid altering the response rate. Dillman et al. (2009) stated that the design and layout of a questionnaire could influence a participant's decision to take the questionnaire and affect the way they answer the questions. Each questionnaire was made into an 8.5" X 7" booklet using the same heavy weight cover. The design on the front cover was also kept consistent (see Appendix K).

A conceptual diagram of the forms of the questionnaire is included in Figure 6. The content in form four of the questionnaire: Perceptions of meat products in grocery store advertisements (perceptions of animal-based food products) was specific to the aims and research questions of this study and will be specifically addressed in the next section.

Additionally, the procedures used to address validity and reliability of form four of the questionnaire will also be described in the next section.

	Section 1	Section 2
Form 1	Media Consumption and Demographics	Live Music
Form 2	Media Consumption and Demographics	Millennials
Form 3	Media Consumption and Demographics	Animal Use
Form 4	Media Consumption and Demographics	Meat Products
Form 5	Media Consumption and Demographics	Agriculture
Form 6	Media Consumption and Demographics	Radio Listening Habits

Questionnaire Content by Form

Data Collection

After the questionnaires were printed, they were organized for distribution. Before each round of data collection, the student researchers met and assembled the questionnaire packets. To randomly distribute the six forms of the questionnaire,

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questionnaires were sequentially aggregated in numerical order from form one to form six. The Julian date (day of the year 001 to 365), zip code, and sample number were recorded on the back page of each questionnaire as the packets were assembled. The Julian date, zip code, and sample number were noted so the date and location of distribution could be determined. Each questionnaire was packed in plastic door hanging bag with a cover letter (*Appendix L*).The cover letter that was included in the packets, was hand signed by one of the student researchers. As the questionnaire packets were assembled they were placed in plastic bins, each with a specific distribution location and method assigned.

Mail survey

The developed questionnaire was sent via USPS mail to residents in Bryan/College Station, TX; Houston, TX; and Dallas, TX. The primary reason for distributing questionnaires via USPS is because the data for this study were collected as part of a large survey methods research study in which a mail component was needed. Addresses were obtained from randomly selected zip codes established by a random number generator in Microsoft Excel. The questionnaire was mailed a pre-paid return envelope *(Appendix I)* and a cover letter *(Appendix H)* that pertained information on the

scope of the study in a Digital Media Research & Development Lab (a Texas A&M affiliation) envelope (*Appendix J*). Dillman (2009) noted that it has been concluded that people are more likely to cooperate if there is a legitimate authority associated with the

request (i.e., sponsorship) and if the request comes from a person or entity that is liked or trusted.

Hand Delivery Survey Distribution

Mail surveys or phone interviews are often used because of their cost efficiency and out of convenience in comparison to personal interviews that allow the researcher to establish a greater level of report and understanding through face-to-face communication. The hand delivery method of survey distribution aims to capitalize on the strengths of each approach. In the hand delivery data collection method trained researchers go door-to-door to distribute a questionnaire to randomly selected and eligible residents with the use of face-to-face communication. Potential respondents are then notified that the researcher will be back after a specific period of time to retrieve the completed questionnaire (Steele, 2001)

A total of four hand delivery survey distribution methods were utilized in the project: Drop-off/Mail-back (DOMB), Drop-off/Pick-up (DOPU), Variable Drop-off/Mail-back (VDOMB), and Variable Drop-off/Pick-up (VDOPU). The procedures of each survey distribution method for this project were as follows. A group leader trained on the proper recording techniques served as the decision-maker of each research group. Leaders recorded the house number of each residence on the route, if the residence was visited and if not why, if contact was made with the resident, if the resident agreed to participate or opted out (said no). These leaders were also trained to ensure the trustworthiness of the data collected by documenting thick description of the area and

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taking digital pictures of the location and any material that could be important to display the qualities of the area.

During the questionnaire drop-off, each researcher went door-to-door and was instructed to follow a developed script *(Appendix K)*. The researchers wer to first introduce themselves, inform the resident they were a student at Texas A&M University and next indicate they were not there selling or soliciting anything. The researchers then explained the purpose of the research study and gave a questionnaire packet to the resident. Depending on the method variety, the researchers indicated, "We will be leaving the area. Please place the questionnaire in the provided pre-paid envelope in the nearest post office box and send it to us at your convenience." Or "We will be back on the specified date and time to pick up the completed survey. Please place the questionnaire in the door hanger bag and leave it on your door." Finally the researchers thanked the resident for their time and indicated the appreciation for their participation. The script (*Appendix K*) was altered to indicate the correct times and dates or if the questionnaire should be returned by prepaid envelope in the mail depending on the method variety.

<center>*DOMB*</center>

The DOMB variation was utilized in Denver, CO. In the DOMB variation researchers went door to door handing out questionnaires to residents or leaving them at residences by hanging a to be completed and then mailed back using a business reply (pre-paid) envelope (*Appendix I*). Researchers went door-to-door encouraging potential respondents to complete a questionnaire and mail the given questionnaire by placing the

completed questionnaire in the pre-paid envelope provided at their convenience, but the sooner the better. In addition to a questionnaire and pre-paid envelope residents were given a brochure with information on the Texas A&M Digital Media Research and Development Lab and a cover letter about the scope of the projects for their reference.

If the residents were not at home, a questionnaire, pre-paid envelope, brochure and cover letter were left at every household in a clear, plastic door hanger bag. Cover letters were placed to face outward in the plastic bag and were printed on colored paper in hopes of catching the resident's eye and increase the likelihood the questionnaire package was opened and the questionnaire completed. Questionnaires were not left at the homes where residents opted out (said no) to participating or that had an obstacle to safely delivering the questionnaire to the front door. These obstacles included locked gates, blockades to the residence, and unsafe surroundings.

DOMB Limitations

Residents not being home, locked gates not allowing the researcher to get to the door, unsafe surroundings, and obstructions to the residence were all limitations to the study. Due to the time required to distribute the allotted number of questionnaires in one day, residences were visited at different times of the day. A lack of contact with residents could be a limitation to this method variety. Only interacting with potential respondents once could also be noted as a limitation.

DOPU

The DOPU variation was employed in Berkeley, CA; San Francisco, CA; and Fresno, CA. In the DOPU method researchers went door to door handing out

questionnaire packets containing a questionnaire, brochure about the project, and a cover letter in a door hanger bag. Researchers left a questionnaire packet at every residence unless it was deemed unsafe or inaccessible to be picked up two days later.

Researchers went door-to-door encouraging potential respondents to complete the given questionnaire and informing residents the researcher would be back in two days at a specified time to retrieve the completed questionnaire. For residents' reference they were also given a brochure with information on the Texas A&M Digital Media Research and Development Lab and a cover letter about the scope of the projects indicating the resident could use the door hanger bag to place the questionnaire in case they were not going to be home at the given time of questionnaire pick-up.

Questionnaire packets including a questionnaire, brochure and cover letter were left at every household, even if the residents were not home. The cover letter was printed on colored paper and placed facing outward in the clear plastic door hanger bag to draw attention to the packet and allow the resident to easily read the letter. Homes where residents opted out (said no) to participating in the questionnaire or that had an obstacle to safely delivering the questionnaire to the front door (e.g., loose dog, locked gate, unsafe surrounding, including drug dealers) were not given or left with a questionnaire.

DOPU Limitations

The same obstacles of locked gates and loose dogs interfered with the number of houses visited as in the DOMB variety. The amount of time needed to distribute (drop-off) questionnaires was a limitation as in DOMB variety as well. The distribution duration ranged from nine to 10 hours, per group; the amount of time needed to retrieve

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(pick-up) completed questionnaires also ranged from nine to ten hours. Another issue encountered when using this variety was the inability to confirm if a resident received questionnaire when face-to-face contact was not made and a questionnaire was left hanging on the resident's front door. During the retrieval period (pick-up), residents were encountered who said he or she never received a questionnaire.

VDOMB

The VDOMB method was used for residents in Bryan/College Station, TX; Dallas, TX; and Houston, TX. In the VDOMB variation researchers went door to door handing out questionnaires to residents but only left questionnaires and a business reply (pre-paid) envelope with residents when face-to-face contact was made, and residents verbally agreed to participate in the study.

Researchers went door-to-door encouraging potential respondents to complete a questionnaire and mail the given questionnaire by placing the completed questionnaire in the pre-paid envelope provided at their convenience, but the sooner the better. Residents who agreed to participate in the questionnaire were instructed to place their completed questionnaire in the nearest outgoing mailbox at their earliest convenience. Upon request, a brochure was given to residents providing information about Texas A&M Digital Media Research and Development Lab and the scope of the projects for their reference. Homes where contact was not made with the resident, the resident opted out (said no) to participating in the questionnaire or that had an obstacle to safely delivering the questionnaire to the front door (e.g., loose dog, locked gate, unsafe surrounding) were not given or left with a questionnaire.

VDOMB Limitations

The VDOMB method variety of data collection decreased the number of questionnaires distributed in a day because contact with a resident was necessary in order to distribute one. The restrictions of locked gates and loose dogs continued to be a limitation in the hand delivery method.

VDOPU

The VDOPU method was used for residents in San Diego, CA; Bryan/College Station, TX; Houston, TX; and Dallas, TX. In the VDOPU variation researchers went door to door handing out questionnaires to residents but only left questionnaires and a door hanger bag with residents when face-to-face contact was made, and residents verbally agreed to participate in the study. In this variety researchers returned in the same day to retrieve the completed questionnaire.

Researchers went door-to-door during the morning hours encouraging potential respondents to complete a questionnaire and informed residents they would be back that same afternoon to retrieve the completed questionnaire. Residents who agreed to participate in the questionnaire were instructed to place their completed questionnaire in the provided door hanger bag to be picked up at the specified time that afternoon. Upon request, a brochure was given to residents providing information about Texas A&M Digital Media Research and Development Lab and the scope of the projects for their reference. Homes where contact was not made with the resident, the resident opted out (said no) to participating in the questionnaire or that had an obstacle to safely delivering

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the questionnaire to the front door (e.g., loose dog, locked gate, unsafe surrounding) were not give/left with a questionnaire.

In the VDOPU variety researchers returned to the residences that agreed to complete the questionnaire to retrieve it. The drop-off and pick-up of questionnaires was conducted in the same day in hopes of increasing urgency in potential respondents. If the resident had failed to complete the questionnaire a business reply (pre-paid) envelope was provided if the resident agreed to mail the survey back as soon as possible.

During the fall data collection the VDOPU and VDOMB varieties were performed simultaneously in each group in their respective zip code. One half of the researchers in each group in each zip code distributed questionnaires with the VDOPU variety on one side of the street. On the opposing side of the street the remaining half of the researchers in each group in each zip code distributed questionnaires using the VDOMB variety. After the beginning street was randomly selected, the researchers distributed questionnaires to other residents on nearby and adjacent streets as in each other method varieties.

VDOPU Limitations

Residents not being home, locked gates not allowing the researcher to get to the door, unsafe surroundings, and obstructions to the residence were all limitations to this delivery method. A smaller number of questionnaires were distributed because of the necessity of making contact with a potential respondent. Retrieving questionnaires on the same day as delivery decreased the number of hours in the day for distribution also decreasing the number of questionnaires left with residents.

APPENDIX K

JD ☐☐☐

Z ☐☐☐☐☐

Sample ☐☐☐

SS ☐☐☐

Consumer
Engagement
Survey

Let your voice
be heard!

Digital Media Research & Development
267 AGLS
600 John Kimbrough Blvd.
College Station, TX 77843-2116

TEXAS A&M
UNIVERSITY
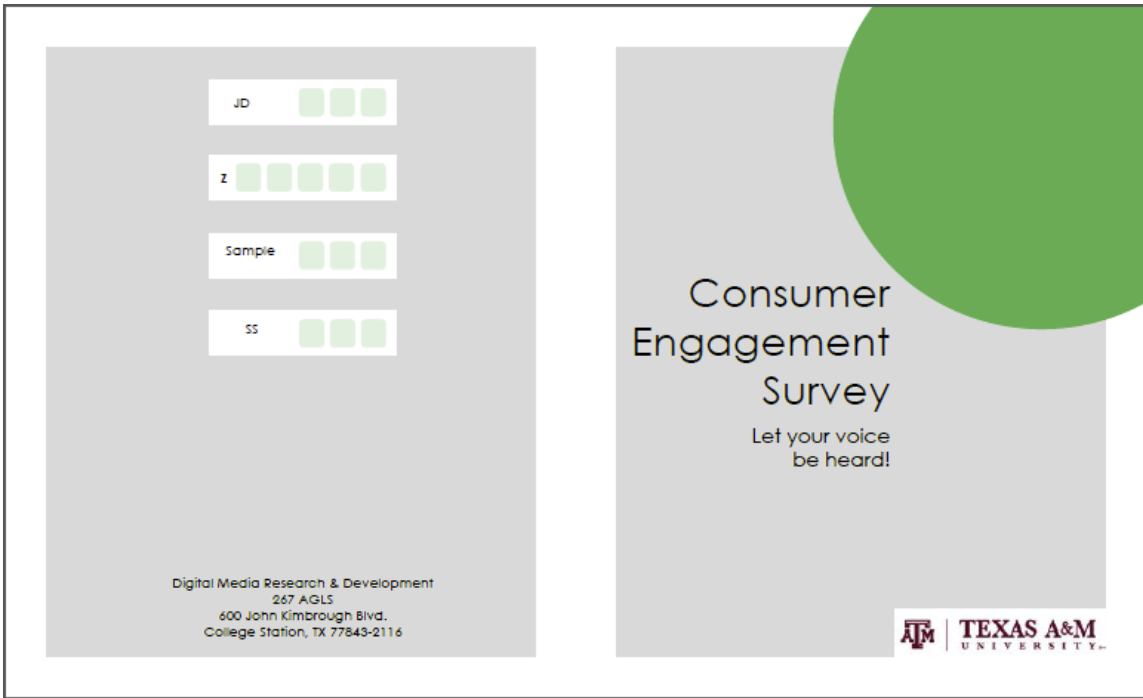
Thank you for your input!

We appreciate the time you took to answer our survey. Your input is very valuable to us. Be assured that we will not share any of your information, as confidentiality is very important to us.

If you have any further questions regarding this project please contact us at:

Digital Media Research & Development
267 AGLS
600 John Kimbrough Blvd.
College Station, TX 77843-2116

Lindy Froebel
Project Lead

lindyfroebel@neo.tamu.edu
(979) 458-7990

Questions?

Your input is very valuable to us. Be assured that we will not share any of your information, as confidentiality is very important to us. Remember this survey is completely optional.

If you have any questions regarding this project please contact us at:

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College Station, TX 77843-2116

Lindy Froebel
Project Lead

lindyfroebel@neo.tamu.edu
(979) 458-7990

Please fully answer all of the questions using a mark or writing in the answer. These questions refer to you only so please answer accordingly. **All answers will be kept confidential.**

Marking Instructions:

Correct: ■   Incorrect: ⊘ ◻   *When answering questions completely fill in the box.*

1. In what year were you born?   ▢▢▢▢ |1|9|7|5|
   Y Y Y Y   *(Example)*

2. What is your sex?
   ◻ Male   ◻ Female

3. What is your race? *(Please select "yes" or "no" for each)*

Yes No
◻   ◻   American Indian or Alaska Native
◻   ◻   Asian
◻   ◻   Black or African American
◻   ◻   Native Hawaiian or other Pacific Islander
◻   ◻   White
◻   ◻   Other [＿＿＿＿＿＿＿＿＿]

4. Are you of Hispanic, Latino, or Spanish origin?
   ◻ Yes   ◻ No

5. Do you speak Spanish in the home?
   ◻ Yes   ◻ No **(If no, skip next question)**

If you answered "no" to Question 5 please skip Question 6.

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45. Before you received this survey, had you ever heard of Texas A&M Univeristy?
    ◻ Yes   ◻ No

46. In case you are selected for a future consumer engagement study, please provide your email address and phone number below. Be assured that this information will be kept confidential and that we will not reveal or sell your information to anyone. *(Please fill in the blanks)*

(▢▢▢) ▢▢▢ - ▢▢▢▢

[＿＿＿＿＿＿＿＿＿＿＿＿＿]
(Email Address)

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43. How often do you shop for groceries?
    ◻ Once per day
    ◻ Once per week
    ◻ Once every two weeks
    ◻ Once per month
    ◻ Other [＿＿＿＿＿＿＿＿＿]

Indicate the level to which the following statements describe you 1-6. 1 being "Not at all like me" and 6 being "Exactly like me."

Marking Instructions:

Correct: ■   Incorrect: ⊘ ◻   *When answering questions completely fill in the box.*

44. Indicate the level to which the following statements describe you.

	Not at all like me					Exactly like me
	①	②	③	④	⑤	⑥
I am active.	①	②	③	④	⑤	⑥
I am concerned about how my food is produced.	①	②	③	④	⑤	⑥
I am a "Foodie" (Food Enthusiast).	①	②	③	④	⑤	⑥
I am health conscious.	①	②	③	④	⑤	⑥
I am knowledgable about food.	①	②	③	④	⑤	⑥
I buy whatever food is on sale.	①	②	③	④	⑤	⑥
I buy easy-to-make foods.	①	②	③	④	⑤	⑥
I eat out often.	①	②	③	④	⑤	⑥
I don't care about what I eat.	①	②	③	④	⑤	⑥
I like foods from my childhood.	①	②	③	④	⑤	⑥
I like to grow my own food.	①	②	③	④	⑤	⑥
I prefer locally grown foods.	①	②	③	④	⑤	⑥
I prefer organic.	①	②	③	④	⑤	⑥

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If you answered "no" to Question 5 please skip Question 6.

6. Thinking about languages you speak in the home, would you say you speak?
   ◻ Only Spanish in the home
   ◻ Mostly Spanish, but some English
   ◻ Spanish and English equally
   ◻ Mostly English, but some Spanish
   ◻ Only English

7. How many people live in your household? *(Please fill in the blanks)*
   ▢▢ Adults   ▢▢ Children *(under 18 years of age)*

8. What is your household income?
   ◻ Less than $30,000
   ◻ $30,000 - $49,999
   ◻ $50,000 - $99,999
   ◻ $100,000 - $249,999
   ◻ More than $250,000

9. Including yourself, does anyone in your home have a working cell phone?
   ◻ Yes   ◻ No

10. Including yourself, does anyone in your home have a working smartphone?
    ◻ Yes   ◻ No

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11. How many working TV sets are in your home?

- ○ 0
- ○ 1
- ○ 2
- ○ 3
- ○ 4
- ○ 5+

12. What time of day do you usually watch TV on weekdays and weekends?
(Please select "yes" or "no" for each item)

Yes	No	Weekdays	Yes	No	Weekends
○	○	Morning	○	○	Morning
○	○	Afternoon	○	○	Afternoon
○	○	Evening	○	○	Evening

13. What are the top three TV shows you currently watch on a regular basis?

1. _____
2. _____
3. _____

14. How many working computers with Internet access are in your home (including tablets, desktops, and laptops)?

- ○ 0
- ○ 1
- ○ 2
- ○ 3
- ○ 4
- ○ 5+

3

Indicate the level of importance the following criteria are to your food purchasing decisions. Please rate each item 1-6. 1 being "Not at all important and 6 being "Very Important."

Marking Instructions:

Correct: ■   Incorrect: ⊘ ○ *When answering questions completely fill in the box.*

41. Indicate the level of importace of the following criteria are to your food purchasing decisions.

	Not at all important					Very important
	①	②	③	④	⑤	⑥
Brand	①	②	③	④	⑤	⑥
Price	①	②	③	④	⑤	⑥
Production Method (e.g., organic, traditional, grain-fed, grass-fed)	①	②	③	④	⑤	⑥
Quality	①	②	③	④	⑤	⑥
On Sale	①	②	③	④	⑤	⑥
Store Name	①	②	③	④	⑤	⑥

42. Indicate whether you purchase each of the following food products at least once a month. *(Please select "yes" or "no" for each item)*

Yes	No	
○	○	Beef
○	○	Chicken
○	○	Fish
○	○	Lamb
○	○	Pork
○	○	Turkey

12

Indicate the degree to which you associate each of the following with bad or good. Please rate each item 1-6. 1 being "Very Bad" and 6 being "Very Good."

Marking Instructions:

Correct: ■   Incorrect: ⊘ ○ *When answering questions completely fill in the box.*

40. Indicate the degree to which you associate each of the following with bad or good.

	Very Bad					Very Good
	①	②	③	④	⑤	⑥
All Natural	①	②	③	④	⑤	⑥
Farm Raised	①	②	③	④	⑤	⑥
Fresh	①	②	③	④	⑤	⑥
Gluten Free	①	②	③	④	⑤	⑥
Grade A	①	②	③	④	⑤	⑥
Healthy	①	②	③	④	⑤	⑥
Lean	①	②	③	④	⑤	⑥
Local	①	②	③	④	⑤	⑥
Moist	①	②	③	④	⑤	⑥
No Added Hormones	①	②	③	④	⑤	⑥
No Antibiotics	①	②	③	④	⑤	⑥
No Salt or Water Added	①	②	③	④	⑤	⑥
Organic	①	②	③	④	⑤	⑥
Tender	①	②	③	④	⑤	⑥
USDA Inspected	①	②	③	④	⑤	⑥
Vegetarian Fed	①	②	③	④	⑤	⑥

11

15. What time of day do you usually access the Internet on weekdays and weekends? *(Please select "yes" or "no" for each item)*

Yes	No	Weekdays	Yes	No	Weekends
○	○	Morning	○	○	Morning
○	○	Afternoon	○	○	Afternoon
○	○	Evening	○	○	Evening

16. What are the top three websites you visit on a regular basis?

1. _____
2. _____
3. _____

17. How many working radios are in your home (not inlcuding cell phones and/or smart phones)?

- ○ 0
- ○ 1
- ○ 2
- ○ 3
- ○ 4
- ○ 5+

18. What time of day do you usually listen to the radio on weekdays and weekends? *(Please select "yes" or "no" for each item)*

Yes	No	Weekdays	Yes	No	Weekends
○	○	Morning	○	○	Morning
○	○	Afternoon	○	○	Afternoon
○	○	Evening	○	○	Evening

4

19. What genre best describes the radio station you listen to most often?
   (Please select one)
   - ○ Country
   - ○ Hip Hop / R&B
   - ○ Mix / Adult Contemporary
   - ○ News / Talk / Sports
   - ○ Rap / Urban
   - ○ Rock
   - ○ Christian
   - ○ Other

20. Before grocery shopping, how often do you consult online advertisements?
   - ○ Always
   - ○ Sometimes
   - ○ Never

21. Before grocery shopping, how often do you consult newspaper advertisements?
   - ○ Always
   - ○ Sometimes
   - ○ Never

22. While grocery shopping, how often do you read the in-store advertisements?
   - ○ Always
   - ○ Sometimes
   - ○ Never

5

Indicate the degree of influence the following have on your food purchasing decisions. Please rate each item 1-6. 1 being "Not at all influential" and 6 being "Very influential."

Marking Instructions:

Correct: ■   Incorrect: ⊘ ○   *When answering questions completely fill in the box.*

39. Indicate the degree of influence the following have on your food purchasing decisions.

	Not at all influential					Very influential
	①	②	③	④	⑤	⑥
All Natural	①	②	③	④	⑤	⑥
Farm Raised	①	②	③	④	⑤	⑥
Fresh	①	②	③	④	⑤	⑥
Gluten Free	①	②	③	④	⑤	⑥
Grade A	①	②	③	④	⑤	⑥
Healthy	①	②	③	④	⑤	⑥
Lean	①	②	③	④	⑤	⑥
Local	①	②	③	④	⑤	⑥
Moist	①	②	③	④	⑤	⑥
No Added Hormones	①	②	③	④	⑤	⑥
No Antibiotics	①	②	③	④	⑤	⑥
No Salt or Water Added	①	②	③	④	⑤	⑥
Organic	①	②	③	④	⑤	⑥
Tender	①	②	③	④	⑤	⑥
USDA Inspected	①	②	③	④	⑤	⑥
Vegetarian Fed	①	②	③	④	⑤	⑥

10

The following pictures may be seen in grocery store advertisements. Please rate each image 1-6. 1 being "Very repulsive" and 6 being "Very appealing"

Marking Instructions:

Correct: ■   Incorrect: ⊘ ○   *When answering questions completely fill in the box.*

35. Very repulsive ① ② ③ ④ ⑤ ⑥ Very appealing

36. Very repulsive ① ② ③ ④ ⑤ ⑥ Very appealing

37. Very repulsive ① ② ③ ④ ⑤ ⑥ Very appealing

38. Very repulsive ① ② ③ ④ ⑤ ⑥ Very appealing

9

The following pictures may be seen in grocery store advertisements. Please rate each image 1-6. 1 being "Very repulsive" and 6 being "Very appealing"

Marking Instructions:

Correct: ■   Incorrect: ⊘ ○   *When answering questions completely fill in the box.*

23. Very repulsive ① ② ③ ④ ⑤ ⑥ Very appealing

24. Very repulsive ① ② ③ ④ ⑤ ⑥ Very appealing

25. Very repulsive ① ② ③ ④ ⑤ ⑥ Very appealing

26. Very repulsive ① ② ③ ④ ⑤ ⑥ Very appealing

6

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The following pictures may be seen in grocery store advertisements. Please rate each image 1-6. 1 being "Very repulsive" and 6 being "Very appealing"

Marking Instructions:
Correct: ■   Incorrect: ⊘ ◯   *When answering questions completely fill in the box.*

Whole Chicken
77¢ per lb.

27. Very repulsive ① ② ③ ④ ⑤ ⑥ Very appealing

Ground Beef
$2.99 per lb.

28. Very repulsive ① ② ③ ④ ⑤ ⑥ Very appealing

Beef Bone-In Ribeye Steaks
$4.99 per lb.

29. Very repulsive ① ② ③ ④ ⑤ ⑥ Very appealing

Whole Turkey
77¢ per lb.

30. Very repulsive ① ② ③ ④ ⑤ ⑥ Very appealing

7

The following pictures may be seen in grocery store advertisements. Please rate each image 1-6. 1 being "Very repulsive" and 6 being "Very appealing"

Marking Instructions:
Correct: ■   Incorrect: ⊘ ◯   *When answering questions completely fill in the box.*

Beef Bone-In Ribeye Steaks
$4.99 per lb.

31. Very repulsive ① ② ③ ④ ⑤ ⑥ Very appealing

Whole Chicken
77¢ per lb.

32. Very repulsive ① ② ③ ④ ⑤ ⑥ Very appealing

Boneless Center Cut Pork Chops
77¢ per lb.

33. Very repulsive ① ② ③ ④ ⑤ ⑥ Very appealing

Boneless Skinless Chicken Breasts
$1.79 per lb.

34. Very repulsive ① ② ③ ④ ⑤ ⑥ Very appealing

8

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APPENDIX L

Your household was randomly selected to participate in a consumer engagement survey. As you've probably heard in the news lately, market research is incredibly valuable to our economy and to the success of many industries. This summer, our research team, from Texas A&M University, is traveling across the Western U.S. conducting this important market research.

In this bag, there is one consumer engagement survey. We ask that you please take approximately 15 to 20 minutes to complete the survey. Other than your time, there is NO cost to you and your participation is completely voluntary. However, your participation is very valuable and enables undergraduate and graduate students at Texas A&M University to engage in research that contributes to solving real-world problems.

How does this work?

We will only be in your area for three days. We have left you a consumer engagement survey with you today, along with more information regarding the study. After you complete the survey, please place it in the clear bag and hang it on your door. One of the student researchers will stop by your home to pick up your completed survey **Sunday, July 6, 2014** during the **between 12:00 p.m. and 4:00 p.m**.

We truly value your participation and trust. Thank you for being an anonymous voice of consumer research.

Sincerely,

APPENDIX M

BUSINESS REPLY MAIL
FIRST-CLASS MAIL   PERMIT NO. 148   COLLEGE STATION TX

POSTAGE WILL BE PAID BY ADDRESSEE

DIGITAL MEDIA RESEARCH AND DEVELOPMENT LAB
AGRICULTURAL LEADERSHIP, EDUCATION,
 AND COMMUNICATIONS
600 JOHN KIMBROUGH BOULEVARD
2116 TAMU
COLLEGE STATION TX 77843-9988

APPENDIX N

DIGITAL MEDIA RESEARCH
AND DEVELOPMENT LAB
TEXAS A&M UNIVERSITY
2116 TAMU, College Station, TX 77843-2116

APPENDIX O

Script

DOPU

Hi my name is_____. I m a student at Texas A&M University and we are conducting survey research for a school project in the area today. Would you help us by taking a brief survey and leaving it in this bag on your door? Our team will be back after _____ to pick them up.

Thank you, we appreciate your help.

DOMB

Hi my name is_____. I m a student at Texas A&M University and we are conducting survey research for a school project in the area today. Would you help us by taking a brief survey and using this business reply to mail it back to our office?

Thank you, we appreciate your help.

APPENDIX P

QUANTITATIVE DATA CODING SHEET
CONSUMER PERCEPTIONS OF POULTRY PRODUCTS AND ADVERTISEMENTS — FROEBEL

Variable	Description (Label)	Type	Coding	Item
D001	[VA - Q1] Year Born	Scale	(YYYY)	CE-D1
D002	[VA - Q2] Sex	Nominal	1=Male 2=Female	CE-D2
D003_A	[VA - Q3] Race: American Indian/Alaskan Native	Nominal	American Indian or Alaska Native: Yes =1; No=2	CE-D3
D003_B	[VA - Q3] Race: Asian	Nominal	Asian: Yes=1; No=2	CE-D3
D003_C	[VA - Q3] Race: Black/ African American	Nominal	Black or African American: Yes=1; No=2	CE-D3
D003_D	[VA - Q3] Race: Native Hawaiian or other Pacific Islander	Nominal	Native Hawaiian or other Pacific Islander: Yes=1; No=2	CE-D3
D003_E	[VA - Q3] Race: White	Nominal	White: Yes=1; No=2	CE-D3
D003_F	[VA - Q3] Race: Other	Nominal	Other: Yes=1; No=2	CE-D3
D003_G	[VA - Q3] Race: Other	String		CE-D3
D004	[VA - Q4] Spanish Descent	Nominal	Yes=1 No=2	CE-D4
D005	[VA - Q5] Speak Spanish in the home	Nominal	Yes=1 No=2	CE-D5
D005_A	[VA - Q6] Languages in the home	Nominal	Only Spanish=1; Mostly Spanish=2; English and Spanish=3; Mostly English=4; Only English=5	CE-D6
D006_A	[VA — Q7] Members in Household: Adult	Scale	Adult: (NN)	CE-D7
D006_B	[VA — Q7] Members in Household: Children	Scale	Children: (NN)	CE-D7
D007	[VA — Q8] Household Income	Ordinal	<$30,000=1; $30,000-$49,999=2; $50,000-$99,999=3; $100,000-$249,999=4; >$250,000=5	CE-D8
D008	[VA — Q9] Working cell phone	Nominal	Yes=1 No=2	CE-D9
D009	[VA — Q10] Working smartphone	Nominal	Yes=1 No=2	CE-D10
D010	[VA — Q11] Working TV sets	Ordinal	0=1; 1=2; 2=3; 3=4; 4=5; 5+=6	CE-D11
D011_A	[VA — Q12] TOD TV Weekday Morning	Nominal	Weekdays: Morning Yes=1 No=2	CE-D12
D011_B	[VA — Q12] TOD TV Weekday Afternoon	Nominal	Weekdays: Afternoon Yes=1 No=2	CE-D12
D011_C	[VA — Q12] TOD TV Weekday Evening	Nominal	Weekdays: Evening Yes=1 No=2	CE-D12
D011_D	[VA — Q12] TOD TV Weekend Morning	Nominal	Weekends: Morning Yes=1 No=2	CE-D12
D011_E	[VA — Q12] TOD TV Weekend Afternoon	Nominal	Weekends: Afternoon Yes=1 No=2	CE-D12
D011_F	[VA — Q12] TOD TV Weekend Evening	Nominal	Weekends: Evening Yes=1 No=2	CE-D12
D012_A	[VA — Q13] Top 3 TV shows: 1	String		CE-D13

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Variable	Description	Type	Values	Code
D012_B	[VA – Q13] Top 3 TV shows: 2	String		CE-D13
D012_C	[VA – Q13] Top 3 TV shows: 3	String		CE-D13
D013	[VA – Q14] Working Computers	Ordinal	0=1; 1=2; 2=3; 3=4; 4=5; 5+=6	CE-D14
D014_A	[VA – Q15] TOD Internet Weekday Morning	Nominal	Weekdays: Morning Yes=1 No=2	CE-D15
D014_B	[VA – Q15] TOD Internet Weekday Afternoon	Nominal	Weekdays: Afternoon Yes=1 No=2	CE-D15
D014_C	[VA – Q15] TOD Internet Weekday Evening	Nominal	Weekdays: Evening Yes=1 No=2	CE-D15
D014_D	[VA – Q15] TOD Internet Weekend Morning	Nominal	Weekends: Morning Yes=1 No=2	CE-D15
D014_E	[VA – Q15] TOD Internet Weekend Afternoon	Nominal	Weekends: Afternoon Yes=1 No=2	CE-D15
D014_F	[VA – Q15] TOD Internet Weekend Evening	Nominal	Weekends: Evening Yes=1 No=2	CE-D15
D015_A	[VA – Q16] Top 3 websites visited: 1	String		CE-D16
D015_B	[VA – Q16] Top 3 websites visited: 2	String		CE-D16
D015_C	[VA – Q16] Top 3 websites visited: 3	String		CE-D16
D016	[VA – Q17] Working Radios	Ordinal	0=1; 1=2; 2=3; 3=4; 4=5; 5+=6	CE-D1731
D017_A	[VA – Q18] TOD Radio Weekday Morning	Nominal	Weekdays: Morning Yes=1 No=2	CE-D18
D017_B	[VA – Q18] TOD Radio Weekday Afternoon	Nominal	Weekdays: Afternoon Yes=1 No=2	CE-D18
D017_C	[VA – Q18] TOD Radio Weekday Evening	Nominal	Weekdays: Evening Yes=1 No=2	CE-D18
D017_D	[VA – Q18] TOD Radio Weekend Morning	Nominal	Weekends: Morning Yes=1 No=2	CE-D18
D017_E	[VA – Q18] TOD Radio Weekend Afternoon	Nominal	Weekends: Afternoon Yes=1 No=2	CE-D18
D017_F	[VA – Q18] TOD Radio Weekend Evening	Nominal	Weekends: Evening Yes=1 No=2	CE-D18
D018	[VA – Q19] Radio Station Genre	Nominal	Country=1; Hip Hop/R&B=2; Mix/Adult Contemporary=3; News/Talk/Sports=4; Rap/Urban=5; Rock=6; Christian=7; Other=8	CE-D19
D019	[VA – Q20; V4 – Q45; V5 – Q120] Texas	Nominal	1=Yes 2=No	CE-D20

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Variable	A&M Description (Label)	Type	Coding	Item
V4_Q001	[V4 – Q20] Online Advertisements	Nominal	Always=1; Sometimes=2; Never=3	CE-P20
V4_Q002	[V4 – Q21] Newspaper Advertisements	Nominal	Always=1; Sometimes=2; Never=3	CE-P21
V4_Q003	[V4 – Q22] In-Store Advertisements	Nominal	Always=1; Sometimes=2; Never=3	CE-P22
V4_Q004_A	[V4 – Q23] Product Appeal: Cooked Pork	Scale (interval)	"Very Repulsive"=1 thru "Very appealing"=6	CE-P23
V4_Q004_B	[V4 – Q24] Product Appeal: On Sale Beef	Scale (interval)	"Very Repulsive"=1 thru "Very appealing"=6	CE-P24
V4_Q004_C	[V4 – Q25] Product Appeal: Raw Chicken	Scale (interval)	"Very Repulsive"=1 thru "Very appealing"=6	CE-P25
V4_Q004_D	[V4 – Q26] Product Appeal: Prepared Burger	Scale (interval)	"Very Repulsive"=1 thru "Very appealing"=6	CE-P26
V4_Q004_E	[V4 – Q27] Product Appeal: Cooked Chicken	Scale (interval)	"Very Repulsive"=1 thru "Very appealing"=6	CE-P27
V4_Q004_F	[V4 – Q28] Product Appeal: Cooked Burger	Scale (interval)	"Very Repulsive"=1 thru "Very appealing"=6	CE-P28
V4_Q004_G	[V4 – Q29] Product Appeal: Raw Beef	Scale (interval)	"Very Repulsive"=1 thru "Very appealing"=6	CE-P29
V4_Q004_H	[V4 – Q30] Product Appeal: Dual Presentation Turkey	Scale (interval)	"Very Repulsive"=1 thru "Very appealing"=6	CE-P30
V4_Q004_I	[V4 – Q31] Product Appeal: Cooked Beef	Scale (interval)	"Very Repulsive"=1 thru "Very appealing"=6	CE-P31
V4_Q004_J	[V4 – Q32] Product Appeal: Prepared Chicken	Scale (interval)	"Very Repulsive"=1 thru "Very appealing"=6	CE-P32
V4_Q004_K	[V4 – Q33] Product Appeal: Raw Pork	Scale (interval)	"Very Repulsive"=1 thru "Very appealing"=6	CE-P33
V4_Q004_L	[V4 – Q34] Product Appeal: Not On Sale Chicken	Scale (interval)	"Very Repulsive"=1 thru "Very appealing"=6	CE-P34
V4_Q004_M	[V4 – Q35] Product Appeal: Not On Sale Beef	Scale (interval)	"Very Repulsive"=1 thru "Very appealing"=6	CE-P35
V4_Q004_N	[V4 – Q36] Product Appeal: Raw	Scale (interval)	"Very Repulsive"=1 thru "Very appealing"=6	CE-P36

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	Burger		
V4_Q004_O	[V4 – Q37] Product Appeal: On Sale Chicken	Scale (interval)	"Very Repulsive"=1 thru "Very appealing"=6	CE-P37
V4_Q004_P	[V4 – Q38] Product Appeal: Dual Presentation Chicken	Scale (interval)	"Very Repulsive"=1 thru "Very appealing"=6	CE-P38
V4_Q005_A	[V4 – Q39] Influence: All Natural	Scale (interval)	"Not at all Influential"=1 thru "Very Influential"=6	CE-P39
V4_Q005_B	[V4 – Q39] Influence: Farm Raised	Scale (interval)	"Not at all influential"=1 thru "Very Influential"=6	CE-P39
V4_Q005_C	[V4 – Q39] Influence: Fresh	Scale (interval)	"Not at all influential"=1 thru "Very Influential"=6	CE-P39
V4_Q005_D	[V4 – Q39] Influence: Gluten Free	Scale (interval)	"Not at all influential"=1 thru "Very Influential"=6	CE-P39
V4_Q005_E	[V4 – Q39] Influence: Grade A	Scale (interval)	"Not at all influential"=1 thru "Very Influential"=6	CE-P39
V4_Q005_F	[V4 – Q39] Influence: Healthy	Scale (interval)	"Not at all influential"=1 thru "Very Influential"=6	CE-P39
V4_Q005_G	[V4 – Q39] Influence: Local	Scale (interval)	"Not at all influential"=1 thru "Very Influential"=6	CE-P39
V4_Q005_H	[V4 – Q39] Influence: Lean	Scale (interval)	"Not at all influential"=1 thru "Very Influential"=6	CE-P39
V4_Q005_I	[V4 – Q39] Influence: Moist	Scale (interval)	"Not at all influential"=1 thru "Very Influential"=6	CE-P39
V4_Q005_J	[V4 – Q39] Influence: No Added Hormones	Scale (interval)	"Not at all influential"=1 thru "Very Influential"=6	CE-P39
V4_Q005_K	[V4 – Q39] Influence: No Antibiotics	Scale (interval)	"Not at all influential"=1 thru "Very Influential"=6	CE-P39
V4_Q005_L	[V4 – Q39] Influence: No Salt or Water Added	Scale (interval)	"Not at all influential"=1 thru "Very Influential"=6	CE-P39
V4_Q005_M	[V4 – Q39] Influence: Organic	Scale (interval)	"Not at all influential"=1 thru "Very Influential"=6	CE-P39
V4_Q005_N	[V4 – Q39] Influence: Tender	Scale (interval)	"Not at all influential"=1 thru "Very Influential"=6	CE-P39
V4_Q005_O	[V4 – Q39] Influence: USDA Inspected	Scale (interval)	"Not at all influential"=1 thru "Very Influential"=6	CE-P39
V4_Q005_P	[V4 – Q39] Influence: Vegetarian Fed	Scale (interval)	"Not at all influential"=1 thru "Very Influential"=6	CE-P39
V4_Q006_A	[V4 – Q40] Bad/Good: All Natural	Scale (interval)	"Very Bad"=1 thru "Very Good"=6	CE-P40
V4_Q006_B	[V4 – Q40] Bad/Good: Farm Raised	Scale (interval)	"Very Bad"=1 thru "Very Good"=6	CE-P40
V4_Q006_C	[V4 – Q40] Bad/Good: Fresh	Scale (interval)	"Very Bad"=1 thru "Very Good"=6	CE-P40
V4_Q006_D	[V4 – Q40] Bad/Good: Gluten Free	Scale (interval)	"Very Bad"=1 thru "Very Good"=6	CE-P40
V4_Q006_E	[V4 – Q40] Bad/Good: Grade A	Scale (interval)	"Very Bad"=1 thru "Very Good"=6	CE-P40
V4_Q006_F	[V4 – Q40] Bad/Good: Healthy	Scale (interval)	"Very Bad"=1 thru "Very Good"=6	CE-P40
V4_Q006_G	[V4 – Q40] Bad/Good: Lean	Scale (interval)	"Very Bad"=1 thru "Very Good"=6	CE-P40
V4_Q006_H	[V4 – Q40] Bad/Good: Local	Scale (interval)	"Very Bad"=1 thru "Very Good"=6	CE-P40

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Variable	Label	Measure	Values	Code
V4_Q006_I	[V4 – Q40] Bad/Good: Moist	Scale (interval)	"Very Bad"=1 thru "Very Good"=6	CE-P40
V4_Q006_J	[V4 – Q40] Bad/Good: No Added Hormones	Scale (interval)	"Very Bad"=1 thru "Very Good"=6	CE-P40
V4_Q006_K	[V4 – Q40] Bad/Good: No Antibiotics	Scale (interval)	"Very Bad"=1 thru "Very Good"=6	CE-P40
V4_Q006_L	[V4 – Q40] Bad/Good: No Salt or Water Added	Scale (interval)	"Very Bad"=1 thru "Very Good"=6	CE-P40
V4_Q006_M	[V4 – Q40] Bad/Good: Organic	Scale (interval)	"Very Bad"=1 thru "Very Good"=6	CE-P40
V4_Q006_N	[V4 – Q40] Bad/Good: Tender	Scale (interval)	"Very Bad"=1 thru "Very Good"=6	CE-P40
V4_Q006_O	[V4 – Q40] Bad/Good: USDA Inspected	Scale (interval)	"Very Bad"=1 thru "Very Good"=6	CE-P40
V4_Q006_P	[V4 – Q40] Bad/Good: Vegetarian Fed	Scale (interval)	"Very Bad"=1 thru "Very Good"=6	CE-P40
V4_Q007_A	[V4 – Q41] CMB: Brand	Scale (interval)	"Not at all important"=1 thru "Very Important"=6	CE-P41
V4_Q007_B	[V4 – Q41] CMB: Price	Scale (interval)	"Not at all important"=1 thru "Very Important"=6	CE-P41
V4_Q007_C	[V4 – Q41] CMB: Production Method	Scale (interval)	"Not at all important"=1 thru "Very Important"=6	CE-P41
V4_Q007_D	[V4 – Q41] CMB: Quality of Product	Scale (interval)	"Not at all important"=1 thru "Very Important"=6	CE-P41
V4_Q007_E	[V4 – Q41] CMB: On Sale	Scale (interval)	"Not at all important"=1 thru "Very Important"=6	CE-P41
V4_Q007_F	[V4 – Q41] CMB: Store Name	Scale (interval)	"Not at all important"=1 thru "Very Important"=6	CE-P41
V4_Q008_A	[V4 – Q42] Purchase: Beef	Nominal (Dichotomous)	Yes=1; No=2	CE-P42
V4_Q008_B	[V4 – Q42] Purchase: Chicken	Nominal (Dichotomous)	Yes=1; No=2	CE-P42
V4_Q008_C	[V4 – Q42] Purchase: Fish	Nominal (Dichotomous)	Yes=1; No=2	CE-P42
V4_Q008_D	[V4 – Q42] Purchase: Lamb	Nominal (Dichotomous)	Yes=1; No=2	CE-P42
V4_Q008_E	[V4 – Q42] Purchase: Pork	Nominal (Dichotomous)	Yes=1; No=2	CE-P42
V4_Q008_F	[V4 – Q42] Purchase: Turkey	Nominal (Dichotomous)	Yes=1; No=2	CE-P42
V4_Q009	[V4 – Q43] Grocery Shopping Frequency	Nominal	Once per day=1;Once per week=2; Once every two weeks=3;Once per month=4;Other=5	CE-P43
V4_Q010_A	[V4 – Q44] I am: Active	Scale (interval)	"Not at all like Me" = 1 thru "Exactly like Me" = 6	CE-P44

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Quantitative_Data_Coding_Sheet.Docx.
2/23/15 – Lindy Froebel

QUANTITATIVE DATA CODING SHEET
CONSUMER PERCEPTIONS OF POULTRY PRODUCTS AND ADVERTISEMENTS — FROEBEL

V4_Q010_A	[V4 – Q44] I am: Concerned about how my food is produced	Scale (interval)	"Not at all like Me" = 1 thru "Exactly like Me" = 6	CE-P44
V4_Q010_B	I am: a "Foodie"	Scale (interval)	"Not at all like Me" = 1 thru "Exactly like Me" = 6	CE-P44
V4_Q010_C	I am: Health Conscious	Scale (interval)	"Not at all like Me" = 1 thru "Exactly like Me" = 6	CE-P44
V4_Q010_D	[V4 – Q44] I am: Knowledgeable about food	Scale (interval)	"Not at all like Me" = 1 thru "Exactly like Me" = 6	CE-P44
V4_Q010_E	[V4 – Q44] I buy: whatever food is on sale	Scale (interval)	"Not at all like Me" = 1 thru "Exactly like Me" = 6	CE-P44
V4_Q010_F	[V4 – Q44] I buy: easy-to-make foods	Scale (interval)	"Not at all like Me" = 1 thru "Exactly like Me" = 6	CE-P44
V4_Q010_G	[V4 – Q44] I: eat out often	Scale (interval)	"Not at all like Me" = 1 thru "Exactly like Me" = 6	CE-P44
V4_Q010_H	[V4 – Q44] I like: foods from my childhood	Scale (interval)	"Not at all like Me" = 1 thru "Exactly like Me" = 6	CE-P44
V4_Q010_I	[V4 – Q44] I like to: grow my own food	Scale (interval)	"Not at all like Me" = 1 thru "Exactly like Me" = 6	CE-P44
V4_Q010_J	[V4 – Q44] I prefer: locally grown foods	Scale (interval)	"Not at all like Me" = 1 thru "Exactly like Me" = 6	CE-P44
V4_Q010_K	[V4 – Q44] I prefer: organic	Scale (interval)	"Not at all like Me" = 1 thru "Exactly like Me" = 6	CE-P44

APPENDIX Q

Aim: What influences consumers' perceptions of animal-based food products and advertisements?		
Recode		
Research Objective	**Root Variable(s)**	**New Variable and Code**
Recode age in to generational groups.	Age D001 *Scale/Interval*	Generation [D001_RC_B] 1 = Traditionalists 1901-1944 2 = Baby Boomer 1945-1960 3 = Generation X 1961-1979 4 = Millennials 1980-1995 *Nominal*

```
┌─────────────────────────┐        ┌─────────────────────┐        ┌──────────────────────────────────┐
│                         │        │      Zip Code       │        │              Area                │
│ Recode zip codes in to  │───────▶│        ZIP          │───────▶│            [ZIP_RC ]             │
│        areas.           │        │      Nominal        │        │                                  │
│                         │        │                     │        │          1 = Denver              │
└─────────────────────────┘        └─────────────────────┘        │     80207 , 80239 , 80220        │
                                                                   │   2 = San Francisco/Berkeley     │
                                                                   │ 94705 , 94707 , 94118 , 94127    │
                                                                   │          3 = Fresno              │
                                                                   │        93703 , 93706             │
                                                                   │         4 = San Diego            │
                                                                   │ 92065 , 92029 , 92210 , 92064 , 92128 │
                                                                   │        , 92130 , 92106           │
                                                                   │    5 = Bryan/College Station     │
                                                                   │     77802 , 77807 , 77840        │
                                                                   │          6 = Houston             │
                                                                   │     77493 , 77375 , 77064        │
                                                                   │          7 = Dallas              │
                                                                   │     75227 , 75236 , 75241        │
                                                                   │            Nominal               │
                                                                   └──────────────────────────────────┘
```

Compute Cost Importance.

Price
V4_Q007_B
Scale/Interval

On Sale
V4_Q007_E
Scale/Interval

I buy whatever food is on sale
V4_Q010_E
Scale/Interval

Cost Importance
[V4_SV_C]

```
┌────────────────────────────┐        ┌──────────────────────────────┐   ┌──────────────────────────────┐
│                            │───────▶│         I am active          │──▶│      Health Importance       │
│  Compute Health Importance.│        │         V4_Q010_A            │   │          [V4_SV_H]           │
│                            │        │        Scale/Interval        │   │                              │
│                            │        │                              │   │                              │
│                            │        │     I am health conscious    │   │                              │
│                            │        │         V4_Q010_C            │   │                              │
│                            │        │        Scale/Interval        │   │                              │
└────────────────────────────┘        └──────────────────────────────┘   └──────────────────────────────┘

┌──────────────────────────────────┐  ┌──────────────────────────────┐   ┌──────────────────────────────┐
│                                  │  │      Production Method       │   │ Production Process Importance │
│ Compute Production Process       │──▶│         V4_Q007_C            │──▶│         [V4_SV_PP]           │
│ Importance.                      │  │        Scale/Interval        │   │                              │
│                                  │  │                              │   │                              │
│                                  │  │ I am concerned about how my  │   │                              │
│                                  │  │         food is              │   │                              │
│                                  │  │        produced.             │   │                              │
│                                  │  │         V4_Q010_A            │   │                              │
│                                  │  │        Scale/Interval        │   │                              │
└──────────────────────────────────┘  └──────────────────────────────┘   └──────────────────────────────┘
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┌────────────────────────────┐         ┌──────────────────┐         ┌──────────────────────┐
│ Recode Race Variable in to │         │       Race       │         │ Truncated Race Variable │
│ Truncated Race Variable.   │────────▶│     D003_A       │         │     [D003_RC_2]      │
│                            │         │     D003_B       │         │                      │
│                            │         │     D003_C       │         │    1 = White         │
│                            │         │     D003_D       │────────▶│    2 = Non-White     │
│                            │         │     D003_E       │         │    Nominal           │
│                            │         │     D003_F       │         │                      │
│                            │         │    Nominal       │         │                      │
└────────────────────────────┘         └──────────────────┘         └──────────────────────┘


┌────────────────────────────┐         ┌──────────────────┐         ┌──────────────────────┐
│ Recode Income Variable in  │         │      Income      │         │ Truncated Income Variable │
│ to Truncated Income        │────────▶│       D008       │         │     [D008_RC]        │
│ Variable.                  │         │     Nominal      │────────▶│                      │
│                            │         │                  │         │  1 = <$30,000        │
│                            │         │                  │         │  2 = $30,000 - $49,999 │
│                            │         │                  │         │  3 = $50,000 - $99,999 │
│                            │         │                  │         │  4 = > $100,000      │
│                            │         │                  │         │  Nominal             │
└────────────────────────────┘         └──────────────────┘         └──────────────────────┘
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Aim: What influences consumers' perceptions of animal-based food products and advertisements?

RQ2.1 (QUAN): What are consumers' animal-based food products purchasing behaviors?

Research Objective	**Variable(s)**	**Analyses**
RO2.1.1: Describe and compare what products consumers buy.	Products Purchased V4_Q008_A V4_Q008_B V4_Q008_C V4_Q008_D V4_Q008_E V4_Q008_F *Nominal* Generation D001_RC_B *Nominal*	**Crosstabs** **ƒ and %** **Chi-Square** Products Purchased V4_Q008_A V4_Q008_B V4_Q008_C V4_Q008_D V4_Q008_E V4_Q008_F *Nominal* by Generataion D001_RC_B *Nominal*

```
┌─────────────────────────┐          ┌─────────────────────────┐
│                         │          │       Crosstabs         │
│                         │          │        ƒ and %          │
│                         │          │      Chi-Square         │
│   Products Purchased    │          │                         │
│      V4_Q008_A          │          │   Products Purchased    │
│      V4_Q008_B          │          │      V4_Q008_A          │
│      V4_Q008_C          │          │      V4_Q008_B          │
│      V4_Q008_D          │─────────▶│      V4_Q008_C          │
│      V4_Q008_E          │          │      V4_Q008_D          │
│      V4_Q008_F          │          │      V4_Q008_E          │
│       Nominal           │          │      V4_Q008_F          │
│                         │          │       Nominal           │
│         Sex             │          │         by              │
│        D002             │          │        Sex              │
│       Nominal           │          │       D002              │
│                         │          │       Nominal           │
└─────────────────────────┘          └─────────────────────────┘

┌─────────────────────────┐          ┌─────────────────────────┐
│                         │          │       Crosstabs         │
│                         │          │        ƒ and %          │
│   Products Purchased    │          │                         │
│      V4_Q008_A          │          │   Products Purchased    │
│      V4_Q008_B          │          │      V4_Q008_A          │
│      V4_Q008_C          │          │      V4_Q008_B          │
│      V4_Q008_D          │          │      V4_Q008_C          │
│      V4_Q008_E          │          │      V4_Q008_D          │
│      V4_Q008_F          │          │      V4_Q008_E          │
│       Nominal           │─────────▶│      V4_Q008_F          │
│                         │          │       Nominal           │
│        Race             │          │         by              │
│       D003_A            │          │        Race             │
│       D003_B            │          │       D003_A            │
│       D003_C            │          │       D003_B            │
│       D003_D            │          │       D003_C            │
│       D003_E            │          │       D003_D            │
│       D003_F            │          │       D003_E            │
│       Nominal           │          │       D003_F            │
│                         │          │       Nominal           │
└─────────────────────────┘          └─────────────────────────┘
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┌─────────────────────────┐              ┌─────────────────────────┐
│                         │              │        Crosstabs        │
│                         │              │        ƒ and %          │
│                         │              │       Chi-Square        │
│   Products Purchased    │              │                         │
│     V4_Q008_A           │              │   Products Purchased    │
│     V4_Q008_B           │              │     V4_Q008_A           │
│     V4_Q008_C           │              │     V4_Q008_B           │
│     V4_Q008_D           │     ────►    │     V4_Q008_C           │
│     V4_Q008_E           │              │     _Q008_D             │
│     V4_Q008_F           │              │     V4_Q008_E           │
│     Nominal             │              │     V4_Q008_F           │
│                         │              │     Nominal             │
│  Truncated Race Variable│              │        by               │
│     D003_RC_2           │              │  Truncated Race Variable│
│     Nominal             │              │     D003_RC_2           │
│                         │              │     Nominal             │
└─────────────────────────┘              └─────────────────────────┘


┌─────────────────────────┐              ┌─────────────────────────┐
│                         │              │        Crosstabs        │
│                         │              │        ƒ and %          │
│                         │              │                         │
│   Products Purchased    │              │   Products Purchased    │
│     V4_Q008_A           │              │     V4_Q008_A           │
│     V4_Q008_B           │              │     V4_Q008_B           │
│     V4_Q008_C           │              │     V4_Q008_C           │
│     V4_Q008_D           │     ────►    │     _Q008_D             │
│     V4_Q008_E           │              │     V4_Q008_E           │
│     V4_Q008_F           │              │     V4_Q008_F           │
│     Nominal             │              │     Nominal             │
│                         │              │        by               │
│     Income              │              │     Income              │
│     D008                │              │     D008                │
│     Nominal             │              │     Nominal             │
└─────────────────────────┘              └─────────────────────────┘
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┌─────────────────────────┐              ┌─────────────────────────┐
│                         │              │         Crosstabs       │
│                         │              │         ƒ and %         │
│                         │              │        Chi-Square       │
│                         │              │                         │
│   Products Purchased    │              │   Products Purchased    │
│      V4_Q008_A          │              │      V4_Q008_A          │
│      V4_Q008_B          │              │      V4_Q008_B          │
│      V4_Q008_C          │─────────────▶│      V4_Q008_C          │
│      V4_Q008_D          │              │      _Q008_D            │
│      V4_Q008_E          │              │      V4_Q008_E          │
│      V4_Q008_F          │              │      V4_Q008_F          │
│      Nominal            │              │      Nominal            │
│                         │              │        by               │
│ Truncated Income Variable│              │ Truncated Income Variable│
│      D008_RC            │              │      D008_RC            │
│      Nominal            │              │      Nominal            │
│                         │              │                         │
└─────────────────────────┘              └─────────────────────────┘
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Products Purchased
V4_Q008_A
V4_Q008_B
V4_Q008_C
V4_Q008_D
V4_Q008_E
V4_Q008_F
Nominal

Psychographics
V4_Q010_A
V4_Q010_B
V4_Q010_C
V4_Q010_D
V4_Q010_E
V4_Q010_F
V4_Q010_G
V4_Q010_H
V4_Q010_I
V4_Q010_J
V4_Q010_K
V4_Q010_L
Scale/Interval

Crosstabs
f **and %**

Products Purchased
V4_Q008_A
V4_Q008_B
V4_Q008_C
V4_Q008_D
V4_Q008_E
V4_Q008_F
Nominal
by
Psychographics
V4_Q010_A
V4_Q010_B
V4_Q010_C
V4_Q010_D
V4_Q010_E
V4_Q010_F
V4_Q010_G
V4_Q010_H
V4_Q010_I
V4_Q010_J
V4_Q010_K
V4_Q010_L
Scale/Interval

Products Purchased	MANOVA
V4_Q008_A	DV:
V4_Q008_B	Products Purchased
V4_Q008_C	V4_Q008_A
V4_Q008_D	V4_Q008_B
V4_Q008_E	V4_Q008_C
V4_Q008_F	V4_Q008_D
Nominal	V4_Q008_E
	V4_Q008_F
	Nominal
	by
Psychographics	IV:
V4_Q010_A	Psychographics
V4_Q010_B	V4_Q010_A
V4_Q010_C	V4_Q010_B
V4_Q010_D	V4_Q010_C
V4_Q010_E	V4_Q010_D
V4_Q010_F	V4_Q010_E
V4_Q010_G	V4_Q010_F
V4_Q010_H	V4_Q010_G
V4_Q010_I	V4_Q010_H
V4_Q010_J	V4_Q010_I
V4_Q010_K	V4_Q010_J
V4_Q010_L	V4_Q010_K
Scale/Interval	V4_Q010_L
	Scale/Interval

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RO2.1.2: Describe the grocery habits of consumers.

Products Purchased
V4_Q008_A
V4_Q008_B
V4_Q008_C
V4_Q008_D
V4_Q008_E
V4_Q008_F
Nominal

Grocery Shopping Frequency
V4_Q009
Nominal

Crosstabs
***ƒ* and %**

Products Purchased
V4_Q008_A
V4_Q008_B
V4_Q008_C
V4_Q008_D
V4_Q008_E
V4_Q008_F
Nominal

Grocery Shopping Frequency
V4_Q009
Nominal

Aim: What influences consumers' perceptions of animal-based food products and advertisements?

RQ2.2 (QUAN): How does environment relate to consumers' purchasing behaviors?

Research Objective	**Variable(s)**	**Analyses**
RO2.2.1: Describe and compare where people live to their purchasing behaviors.	Products Purchased V4_Q008_A V4_Q008_B V4_Q008_C V4_Q008_D V4_Q008_E V4_Q008_F *Nominal* Area ZIP_RC *Nominal*	**Crosstabs** ***f*, %** **Chi-Square** Products Purchased V4_Q008_A V4_Q008_B V4_Q008_C V4_Q008_D V4_Q008_E V4_Q008_F *Nominal* Area ZIP_RC *Nominal*

RO2.2.2: Describe and compare the types of advertisements consumers use.

Products Purchased
V4_Q008_A
V4_Q008_B
V4_Q008_C
V4_Q008_D
V4_Q008_E
V4_Q008_F
Nominal

Advertisement Use
Online V4_Q001
Newspaper V4_Q002
In-Store V4_Q003
Nominal

Crosstabs
***f*, %**
Chi-Square

Products Purchased
V4_Q008_A
V4_Q008_B
V4_Q008_C
V4_Q008_D
V4_Q008_E
V4_Q008_F
Nominal

Advertisement Use
Online V4_Q001
Newspaper V4_Q002
In-Store V4_Q003
Nominal

Aim: What influences consumers' perceptions of animal-based food products and advertisements?		
RQ2.3 (QUAN): How do consumers' personal determinants (psychographics) relate to their purchasing behaviors?		
Research Objective	**Variable(s)**	**Analyses**
RO2.3.1: Describe and compare the influence of quality cues related to food purchases (convenience, quality, cost, nutrition, production process).	Convenience V4_Q010_G Cost V4-SV_C Health V4-SV_H Quality V4_Q007_D Production Process V4-SV_PP *Scale/Interval* Generation D001_RC_B *Nominal*	***f* and %** **MANOVA** DV: Convenience V4_Q010_G Cost V4-SV_C Health V4-SV_H Quality V4_Q007_D Production Process V4-SV_PP *Scale/Interval* IV: Generation D001_RC_B *Nominal*

Continued on next page

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Convenience V4_Q010_G Cost V4-SV_C Health V4-SV_H Quality V4_Q007_D Production Process V4-SV_PP *Scale/Interval* Sex D002 *Nominal*	***f* and %** **MANOVA** DV: Convenience V4_Q010_G Cost V4-SV_C Health V4-SV_H Quality V4_Q007_D Production Process V4-SV_PP *Scale/Interval* IV: Sex D002 *Nominal*

	ƒ and %
Convenience V4_Q010_G Cost V4-SV_C Health V4-SV_H Quality V4_Q007_D Production Process V4-SV_PP *Scale/Interval* Race D003_A D003_B D003_C D003_D D003_E D003_F *Nominal*	Convenience V4_Q010_G Cost V4-SV_C Health V4-SV_H Quality V4_Q007_D Production Process V4-SV_PP *Scale/Interval* Race D003_A D003_B D003_C D003_D D003_E D003_F *Nominal*

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Convenience
V4_Q010_G

Cost
V4-SV_C

Health
V4-SV_H

Quality
V4_Q007_D

Production Process
V4-SV_PP
Scale/Interval

Truncated Race Variable
D003_RC2
Nominal

***f* and %**
MANOVA

DV:
Convenience
V4_Q010_G

Cost
V4-SV_C

Health
V4-SV_H

Quality
V4_Q007_D

Production Process
V4-SV_PP
Scale/Interval

IV:
Truncated Race Variable
D003_RC2
Nominal

Convenience
V4_Q010_G

Cost
V4-SV_C

Health
V4-SV_H

Quality
V4_Q007_D

Production Process
V4-SV_PP
Scale/Interval

Income
D008
Nominal

Convenience
V4_Q010_G

Cost
V4-SV_C

Health
V4-SV_H

Quality
V4_Q007_D

Production Process
V4-SV_PP
Scale/Interval

Income
D008
Nominal

Convenience V4_Q010_G		**ƒ and %** **MANOVA**
Cost V4-SV_C		DV: Convenience V4_Q010_G
Health V4-SV_H		Cost V4-SV_C
Quality V4_Q007_D		Health V4-SV_H
Production Process V4-SV_PP *Scale/Interval*		Quality V4_Q007_D
		Production Process V4-SV_PP *Scale/Interval*
Truncated Income Variable D008_RC *Nominal*		IV: Truncated Income Variable D008_RC *Nominal*

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Aim: What influences consumers' perceptions of animal-based food products and advertisements?

RQ2.4 (QUAN): What are consumers' reactions to elements of grocery advertisements?

Research Objective	**Variable(s)**	**Analyses**
RO2.4.1: Describe the degree of appeal for raw and cooked products in advertisements	Appeal of Products V4_Q004_A V4_Q004_C V4_Q004_D V4_Q004_E V4_Q004_F V4_Q004_J V4_Q004_K V4_Q004_N *Scale/Interval* Generation D001_RC_B *Nominal*	**Crosstabs** *f*, % Appeal of Products V4_Q004_A V4_Q004_C V4_Q004_D V4_Q004_E V4_Q004_F V4_Q004_J V4_Q004_K V4_Q004_N Scale/Interval Generation D001_RC_B Nominal

Appeal of Products V4_Q004_A V4_Q004_C V4_Q004_D V4_Q004_E V4_Q004_F V4_Q004_J V4_Q004_K V4_Q004_N *Scale/Interval* Sex D002 *Nominal*	**Crosstabs** ***f, %*** Appeal of Products V4_Q004_A V4_Q004_C V4_Q004_D V4_Q004_E V4_Q004_F V4_Q004_J V4_Q004_K V4_Q004_N Scale/Interval Sex D002 Nominal
Appeal of Products V4_Q004_A V4_Q004_C V4_Q004_D V4_Q004_E V4_Q004_F V4_Q004_J V4_Q004_K V4_Q004_N *Scale/Interval* Race D003_A D003_B D003_C D003_D D003_E D003_F *Nominal*	**Crosstabs** ***f, %*** Appeal of Products V4_Q004_A V4_Q004_C V4_Q004_D V4_Q004_E V4_Q004_F V4_Q004_J V4_Q004_K V4_Q004_N Scale/Interval Race D003_A D003_B D003_C D003_D D003_E D003_F *Nominal*

Continued on next page

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Appeal of Products		**Crosstabs**
V4_Q004_A		**f, %**
V4_Q004_C		
V4_Q004_D	→	Appeal of Products
V4_Q004_E		V4_Q004_A
V4_Q004_F		V4_Q004_C
V4_Q004_J		V4_Q004_D
V4_Q004_K		V4_Q004_E
V4_Q004_N		V4_Q004_F

Appeal of Products
V4_Q004_A
V4_Q004_C
V4_Q004_D
V4_Q004_E
V4_Q004_F
V4_Q004_J
V4_Q004_K
V4_Q004_N
Scale/Interval

Truncated Race Variable
D003_RC2
Nominal

Crosstabs
f, %

Appeal of Products
V4_Q004_A
V4_Q004_C
V4_Q004_D
V4_Q004_E
V4_Q004_F
V4_Q004_J
V4_Q004_K
V4_Q004_N
Scale/Interval

Truncated Race Variable
D003_RC2
Nominal

Appeal of Products
V4_Q004_A
V4_Q004_C
V4_Q004_D
V4_Q004_E
V4_Q004_F
V4_Q004_J
V4_Q004_K
V4_Q004_N
Scale/Interval

Income
D008
Nominal

Crosstabs
f, %

Appeal of Products
V4_Q004_A
V4_Q004_C
V4_Q004_D
V4_Q004_E
V4_Q004_F
V4_Q004_J
V4_Q004_K
V4_Q004_N
Scale/Interval

Income
D008
Nominal

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Appeal of Products	**Crosstabs**
V4_Q004_A	**_f_, %**
V4_Q004_C	
V4_Q004_D	Appeal of Products
V4_Q004_E	V4_Q004_A
V4_Q004_F	V4_Q004_C
V4_Q004_J	V4_Q004_D
V4_Q004_K	V4_Q004_E
V4_Q004_N	V4_Q004_F
Scale/Interval	V4_Q004_J
	V4_Q004_K
Truncated Income Variable	V4_Q004_N
D008_RC	Scale/Interval
Nominal	
	Truncated Income Variable
	D008_RC
	Nominal

Appeal of Products	**Paired-Sample**
V4_Q004_N	**T-Test**
Scale/Interval	
	Appeal of Products
Appeal of Products	V4_Q004_N
V4_Q004_F	_Scale/Interval_
Scale/Interval	
	Appeal of Products
	V4_Q004_F
	Scale/Interval

Continued on next page

```
┌─────────────────────────┐        ┌─────────────────────────┐
│                         │        │    **Paired-Sample**    │
│                         │        │       **T-Test**        │
│                         │        │                         │
│   Appeal of Products    │        │   Appeal of Products    │
│      V4_Q004_C          │───────▶│      V4_Q004_C          │
│    *Scale/Interval*     │        │    *Scale/Interval*     │
│                         │        │                         │
│   Appeal of Products    │        │   Appeal of Products    │
│      V4_Q004_E          │        │      V4_Q004_E          │
│    *Scale/Interval*     │        │    *Scale/Interval*     │
│                         │        │                         │
└─────────────────────────┘        └─────────────────────────┘


┌─────────────────────────┐        ┌─────────────────────────┐
│                         │        │    **Paired-Sample**    │
│                         │        │       **T-Test**        │
│                         │        │                         │
│   Appeal of Products    │        │   Appeal of Products    │
│      V4_Q004_K          │───────▶│      V4_Q004_K          │
│    *Scale/Interval*     │        │    *Scale/Interval*     │
│                         │        │                         │
│   Appeal of Products    │        │   Appeal of Products    │
│      V4_Q004_A          │        │      V4_Q004_A          │
│    *Scale/Interval*     │        │    *Scale/Interval*     │
│                         │        │                         │
└─────────────────────────┘        └─────────────────────────┘
```

	Paired-Sample T-Test
Appeal of Products V4_Q004_F *Scale/Interval* Appeal of Products V4_Q004_D *Scale/Interval*	Appeal of Products V4_Q004_F *Scale/Interval* Appeal of Products V4_Q004_D *Scale/Interval*

	Paired-Sample T-Test
Appeal of Products V4_Q004_E *Scale/Interval* Appeal of Products V4_Q004_J *Scale/Interval*	Appeal of Products V4_Q004_E *Scale/Interval* Appeal of Products V4_Q004_J *Scale/Interval*

RO2.4.2: Describe and compare degree of positivity or negativity associated with common terms found in grocery advertisements.

Bad/Good of Terms
V4_Q006_A
V4_Q006_B
V4_Q006_C
V4_Q006_D
V4_Q006_E
V4_Q006_F
V4_Q006_G
V4_Q006_H
V4_Q006_I
V4_Q006_J
V4_Q006_K
V4_Q006_L
V4_Q006_M
V4_Q006_N
V4_Q006_O
V4_Q006_P
Scale/Interval

Generation
D001_RC_B
Nominal

Crosstabs
***f* and %**
MANOVA

DV:
Bad/Good of Terms
V4_Q006_A
V4_Q006_B
V4_Q006_C
V4_Q006_D
V4_Q006_E
V4_Q006_F
V4_Q006_G
V4_Q006_H
V4_Q006_I
V4_Q006_J
V4_Q006_K
V4_Q006_L
V4_Q006_M
V4_Q006_N
V4_Q006_O
V4_Q006_P
Scale/Interval
By

IV:
Generation
D001_RC_B
Nominal

Continued on next page

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Bad/Good of Terms	**Crosstabs**
V4_Q006_A	***f* and %**
V4_Q006_B	**MANOVA**

Bad/Good of Terms
V4_Q006_A
V4_Q006_B
V4_Q006_C
V4_Q006_D
V4_Q006_E
V4_Q006_F
V4_Q006_G
V4_Q006_H
V4_Q006_I
V4_Q006_J
V4_Q006_K
V4_Q006_L
V4_Q006_M
V4_Q006_N
V4_Q006_O
V4_Q006_P
Scale/Interval

Sex
D002
Nominal

Crosstabs
***f* and %**
MANOVA

DV:
Bad/Good of Terms
V4_Q006_A
V4_Q006_B
V4_Q006_C
V4_Q006_D
V4_Q006_E
V4_Q006_F
V4_Q006_G
V4_Q006_H
V4_Q006_I
V4_Q006_J
V4_Q006_K
V4_Q006_L
V4_Q006_M
V4_Q006_N
V4_Q006_O
V4_Q006_P
Scale/Interval
By

IV:
Sex
D002
Nominal

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Crosstabs
f and %

Bad/Good of Terms
V4_Q006_A
V4_Q006_B
V4_Q006_C
V4_Q006_D
V4_Q006_E
V4_Q006_F
V4_Q006_G
V4_Q006_H
V4_Q006_I
V4_Q006_J
V4_Q006_K
V4_Q006_L
V4_Q006_M
V4_Q006_N
V4_Q006_O
V4_Q006_P
Scale/Interval

Race
D003_A
D003_B
D003_C
D003_D
D003_E
D003_F
Nominal

Bad/Good of Terms
V4_Q006_A
V4_Q006_B
V4_Q006_C
V4_Q006_D
V4_Q006_E
V4_Q006_F
V4_Q006_G
V4_Q006_H
V4_Q006_I
V4_Q006_J
V4_Q006_K
V4_Q006_L
V4_Q006_M
V4_Q006_N
V4_Q006_O
V4_Q006_P
Scale/Interval
By

Race
D003_A
D003_B
D003_C
D003_D
D003_E
D003_F
Nominal

Continued on next page

Bad/Good of Terms V4_Q006_A V4_Q006_B V4_Q006_C V4_Q006_D V4_Q006_E V4_Q006_F V4_Q006_G V4_Q006_H V4_Q006_I V4_Q006_J V4_Q006_K V4_Q006_L V4_Q006_M V4_Q006_N V4_Q006_O V4_Q006_P *Scale/Interval* Truncated Race Variable D003_RC2 *Nominal*	**Crosstabs** *f* **and %** **MANOVA** DV: Bad/Good of Terms V4_Q006_A V4_Q006_B V4_Q006_C V4_Q006_D V4_Q006_E V4_Q006_F V4_Q006_G V4_Q006_H V4_Q006_I V4_Q006_J V4_Q006_K V4_Q006_L V4_Q006_M V4_Q006_N V4_Q006_O V4_Q006_P *Scale/Interval* By IV: Truncated Race Variable D003_RC2 *Nominal*

Continued on next page

Bad/Good of Terms	**Crosstabs**
V4_Q006_A	***f* and %**
V4_Q006_B	
V4_Q006_C	Bad/Good of Terms
V4_Q006_D	V4_Q006_A
V4_Q006_E	V4_Q006_B
V4_Q006_F	V4_Q006_C
V4_Q006_G	V4_Q006_D
V4_Q006_H	V4_Q006_E
V4_Q006_I	V4_Q006_F
V4_Q006_J	V4_Q006_G
V4_Q006_K	V4_Q006_H
V4_Q006_L	V4_Q006_I
V4_Q006_M	V4_Q006_J
V4_Q006_N	V4_Q006_K
V4_Q006_O	V4_Q006_L
V4_Q006_P	V4_Q006_M
Scale/Interval	V4_Q006_N
	V4_Q006_O
Income	V4_Q006_P
D008	*Scale/Interval*
Nominal	By
	Income
	D008
	Nominal

Continued on next page

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Bad/Good of Terms	Crosstabs
	ƒ and %
	MANOVA
	DV:
Bad/Good of Terms	Bad/Good of Terms
V4_Q006_A	V4_Q006_A
V4_Q006_B	V4_Q006_B
V4_Q006_C	V4_Q006_C
V4_Q006_D	V4_Q006_D
V4_Q006_E	V4_Q006_E
V4_Q006_F	V4_Q006_F
V4_Q006_G	V4_Q006_G
V4_Q006_H	V4_Q006_H
V4_Q006_I	V4_Q006_I
V4_Q006_J	V4_Q006_J
V4_Q006_K	V4_Q006_K
V4_Q006_L	V4_Q006_L
V4_Q006_M	V4_Q006_M
V4_Q006_N	V4_Q006_N
V4_Q006_O	V4_Q006_O
V4_Q006_P	V4_Q006_P
Scale/Interval	*Scale/Interval*
	By
Truncated Income Variable	IV:
D00e_RC	Truncated Income Variable
Nominal	D008_RC
	Nominal

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RO2.4.3: Describe and compare the degree of influence common terms found in grocery advertisements for animal-based food products have on the food purchasing decisions of consumers.

Influence of Terms
V4_Q005_A
V4_Q005_B
V4_Q005_C
V4_Q005_D
V4_Q005_E
V4_Q005_F
V4_Q005_G
V4_Q005_H
V4_Q005_I
V4_Q005_J
V4_Q005_K
V4_Q005_L
V4_Q005_M
V4_Q005_N
V4_Q005_O
V4_Q005_P
Scale/Interval

Generation
D001_RC_B
Nominal

Crosstabs
***f* and %**
MANOVA

DV:
Influence of Terms
V4_Q005_A
V4_Q005_B
V4_Q005_C
V4_Q005_D
V4_Q005_E
V4_Q005_F
V4_Q005_G
V4_Q005_H
V4_Q005_I
V4_Q005_J
V4_Q005_K
V4_Q005_L
V4_Q005_M
V4_Q005_N
V4_Q005_O
V4_Q005_P
Scale/Interval
By

IV:
Generation
D001_RC_B
Nominal

Continued on next page

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Influence of Terms	Crosstabs
	ƒ and %
	MANOVA
	DV:
Influence of Terms	Influence of Terms
V4_Q005_A	V4_Q005_A
V4_Q005_B	V4_Q005_B
V4_Q005_C	V4_Q005_C
V4_Q005_D	V4_Q005_D
V4_Q005_E	V4_Q005_E
V4_Q005_F	V4_Q005_F
V4_Q005_G	V4_Q005_G
V4_Q005_H	V4_Q005_H
V4_Q005_I	V4_Q005_I
V4_Q005_J	V4_Q005_J
V4_Q005_K	V4_Q005_K
V4_Q005_L	V4_Q005_L
V4_Q005_M	V4_Q005_M
V4_Q005_N	V4_Q005_N
V4_Q005_O	V4_Q005_O
V4_Q005_P	V4_Q005_P
Scale/Interval	*Scale/Interval*
	By
Sex	IV:
D002	Sex
Nominal	D002
	Nominal

Continued on next page

| | **Crosstabs** |
| | ***f* and %** |

Influence of Terms	Influence of Terms
V4_Q005_A	V4_Q005_A
V4_Q005_B	V4_Q005_B
V4_Q005_C	V4_Q005_C
V4_Q005_D	V4_Q005_D
V4_Q005_E	V4_Q005_E
V4_Q005_F	V4_Q005_F
V4_Q005_G	V4_Q005_G
V4_Q005_H	V4_Q005_H
V4_Q005_I	V4_Q005_I
V4_Q005_J	V4_Q005_J
V4_Q005_K	V4_Q005_K
V4_Q005_L	V4_Q005_L
V4_Q005_M	V4_Q005_M
V4_Q005_N	V4_Q005_N
V4_Q005_O	V4_Q005_O
V4_Q005_P	V4_Q005_P
Scale/Interval	*Scale/Interval*
	By
Race	Race
D003_A	D003_A
D003_B	D003_B
D003_C	D003_C
D003_D	D003_D
D003_E	D003_E
D003_F	D003_F
Nominal	*Nominal*

Continued on next page

Influence of Terms V4_Q005_A V4_Q005_B V4_Q005_C V4_Q005_D V4_Q005_E V4_Q005_F V4_Q005_G V4_Q005_H V4_Q005_I V4_Q005_J V4_Q005_K V4_Q005_L V4_Q005_M V4_Q005_N V4_Q005_O V4_Q005_P *Scale/Interval* Truncated Race Variable D003_RC2 *Nominal*	**Crosstabs** ***f* and %** **MANOVA** DV: Influence of Terms V4_Q005_A V4_Q005_B V4_Q005_C V4_Q005_D V4_Q005_E V4_Q005_F V4_Q005_G V4_Q005_H V4_Q005_I V4_Q005_J V4_Q005_K V4_Q005_L V4_Q005_M V4_Q005_N V4_Q005_O V4_Q005_P *Scale/Interval* By IV: Truncated Race Variable D003_RC2 *Nominal*

Continued on next page

Influence of Terms V4_Q005_A V4_Q005_B V4_Q005_C V4_Q005_D V4_Q005_E V4_Q005_F V4_Q005_G V4_Q005_H V4_Q005_I V4_Q005_J V4_Q005_K V4_Q005_L V4_Q005_M V4_Q005_N V4_Q005_O V4_Q005_P *Scale/Interval* Income D008 *Nominal*	**Crosstabs** *f* **and %** Influence of Terms V4_Q005_A V4_Q005_B V4_Q005_C V4_Q005_D V4_Q005_E V4_Q005_F V4_Q005_G V4_Q005_H V4_Q005_I V4_Q005_J V4_Q005_K V4_Q005_L V4_Q005_M V4_Q005_N V4_Q005_O V4_Q005_P *Scale/Interval* By Income D008 *Nominal*

| Influence of Terms
V4_Q005_A
V4_Q005_B
V4_Q005_C
V4_Q005_D
V4_Q005_E
V4_Q005_F
V4_Q005_G
V4_Q005_H
V4_Q005_I
V4_Q005_J
V4_Q005_K
V4_Q005_L
V4_Q005_M
V4_Q005_N
V4_Q005_O
V4_Q005_P
Scale/Interval

Truncated Income Variable
D00e_RC
Nominal | → | **Crosstabs**
ƒ and %
MANOVA

DV:
Influence of Terms
V4_Q005_A
V4_Q005_B
V4_Q005_C
V4_Q005_D
V4_Q005_E
V4_Q005_F
V4_Q005_G
V4_Q005_H
V4_Q005_I
V4_Q005_J
V4_Q005_K
V4_Q005_L
V4_Q005_M
V4_Q005_N
V4_Q005_O
V4_Q005_P
Scale/Interval
By

IV:
Truncated Income Variable
D008_RC
Nominal |

APPENDIX R

```
******Truncated Race Variable******

USE ALL.

COMPUTE D003_RC = $SYSMIS.
IF (D003_E EQ 1 AND D003_A EQ 2 AND D003_B EQ 2 AND D003_C EQ 2 AND D003_D EQ 2 AND D003_F EQ 2) D003_RC = 1.
IF (D003_E EQ 1 AND (D003_A EQ 1 OR D003_B EQ 1 OR D003_C EQ 1 OR D003_D EQ 1 OR D003_F EQ 1)) D003_RC = 2.
IF (D003_E EQ 2 AND (D003_A EQ 1 OR D003_B EQ 1 OR D003_C EQ 1 OR D003_D EQ 1 OR D003_F EQ 1)) D003_RC = 3.
EXECUTE.

VARIABLE LABELS D003_RC 'Truncated Race Variable'.
VALUE LABELS D003_RC 1 'White Only' 2 'White AND Other' 3 'Non-White'.
VARIABLE LEVEL D003_RC (NOMINAL).
FORMATS D003_RC (f1.0).
EXECUTE.

RECODE D003_RC (SYSMIS=SYSMIS) (1=1) (ELSE=2) INTO D003_RC2.
VARIABLE LABELS D003_RC2 'Truncated Race Variable - White and Other'.
VALUE LABELS D003_RC2 1 'White Only' 2 'Other'.
VARIABLE LEVEL D003_RC2 (NOMINAL).
FORMATS D003_RC2 (f1.0).
EXECUTE.

******Truncated Income Level Variable******

USE ALL.
RECODE D008 (SYSMIS=SYSMIS) (0=SYSMIS) (1=1) (2=2) (3=3) (4=4) (5=4) INTO D008_RC.
VARIABLE LABELS D008_RC 'Truncated Income Variable - Exclude unemployed and collapse >$100K'.
VARIABLE LEVEL D008_RC (ORDINAL).
VALUE LABELS D008_RC 1 '<$30,000' 2 '$30,000 to $49,999' 3 '$50,000 to $99,999' 4 '>= $100,000'.
FORMATS D008_RC (f1.0).
EXECUTE.

USE ALL.
COMPUTE filter_$=(Form = 4 AND D001_RC_B <= 4).
VARIABLE LABELS filter_$ 'Lindy Surveys and Generation (Form = 4 AND D001_RC_B <= 4 (FILTER))'.
VALUE LABELS filter_$ 0 'Not Selected' 1 'Selected'.
FORMATS filter_$ (f1.0).
FILTER BY filter_$.
EXECUTE.

*************************End Lindy Filter Templates*************************
```

```
****************** Lindy Thesis Syntax ******************

*******Lindy Filter Templates*******

*******Use only Lindy Surveys******

USE ALL.
COMPUTE filter_$=(Form = 4).
VARIABLE LABELS filter_$ 'Form = 4 (FILTER)'.
VALUE LABELS filter_$ 0 'Not Selected' 1 'Selected'.
FORMATS filter_$ (f1.0).
FILTER BY filter_$.
EXECUTE.

*******Use only Lindy Surveys AND Generation*******

USE ALL.
COMPUTE filter_$=(Form = 4 AND D001_RC_B <= 4).
VARIABLE LABELS filter_$ 'Lindy Surveys and Generation (Form = 4 AND D001_RC_B <= 4 (FILTER))'.
VALUE LABELS filter_$ 0 'Not Selected' 1 'Selected'.
FORMATS filter_$ (f1.0).
FILTER BY filter_$.
EXECUTE.
```

```
*********Begin Descriptive Analysis********
*******RQ 1*******
*****RO1.1*****
*****Crosstabs Generation by Products Purchased*****

CROSSTABS
 /TABLES=V4_Q008_A V4_Q008_B V4_Q008_C V4_Q008_D V4_Q008_E V4_Q008_F BY D001_RC_B
 /FORMAT=AVALUE TABLES
 /CELLS=COUNT COLUMN
 /COUNT ROUND CELL.

*****Crosstabs Sex by Products Purchased*****

CROSSTABS
 /TABLES=V4_Q008_A V4_Q008_B V4_Q008_C V4_Q008_D V4_Q008_E V4_Q008_F BY D002
 /FORMAT=AVALUE TABLES
 /CELLS=COUNT COLUMN
 /COUNT ROUND CELL.

*****Crosstabs Race (Category - Yes/No) by Products Purchased*****

CROSSTABS
 /TABLES=V4_Q008_A V4_Q008_B V4_Q008_C V4_Q008_D V4_Q008_E V4_Q008_F BY D003_A D003_B D003_C D003_D D003_E D003_F
 /FORMAT=AVALUE TABLES
 /CELLS=COUNT COLUMN
 /COUNT ROUND CELL.

CROSSTABS
 /TABLES=V4_Q008_A V4_Q008_B V4_Q008_C V4_Q008_D V4_Q008_E V4_Q008_F BY D003_RC2
 /FORMAT=AVALUE TABLES
 /CELLS=COUNT COLUMN
 /COUNT ROUND CELL.

*****Crosstabs Income Level by Products Purchased*****

CROSSTABS
 /TABLES=V4_Q008_A V4_Q008_B V4_Q008_C V4_Q008_D V4_Q008_E V4_Q008_F BY D008
 /FORMAT=AVALUE TABLES
 /CELLS=COUNT COLUMN
 /COUNT ROUND CELL.

CROSSTABS
 /TABLES=V4_Q008_A V4_Q008_B V4_Q008_C V4_Q008_D V4_Q008_E V4_Q008_F BY D008_RC
 /FORMAT=AVALUE TABLES
 /CELLS=COUNT COLUMN
 /COUNT ROUND CELL.

*****Crosstabs Psychographics by Products Purchased*****

CROSSTABS
 /TABLES=V4_Q008_A V4_Q008_B V4_Q008_C V4_Q008_D V4_Q008_E V4_Q008_F BY V4_Q010_A V4_Q010_B
  V4_Q010_C V4_Q010_D V4_Q010_E V4_Q010_F V4_Q010_G V4_Q010_H V4_Q010_I V4_Q010_J V4_Q010_K V4_Q010_L
 /FORMAT=AVALUE TABLES
 /CELLS=COUNT COLUMN
 /COUNT ROUND CELL.
```

```
*****Chi Square Generation by Products Purchased*****

CROSSTABS
 /TABLES=D001_RC_B BY V4_Q008_A V4_Q008_B V4_Q008_C V4_Q008_D V4_Q008_E V4_Q008_F
 /FORMAT=AVALUE TABLES
 /STATISTICS=CHISQ
 /CELLS=COUNT
 /COUNT ROUND CELL.

*****Chi Square Sex by Products Purchased*****

CROSSTABS
 /TABLES=D002 BY V4_Q008_A V4_Q008_B V4_Q008_C V4_Q008_D V4_Q008_E V4_Q008_F
 /FORMAT=AVALUE TABLES
 /STATISTICS=CHISQ
 /CELLS=COUNT
 /COUNT ROUND CELL.

*****Chi Square Race (Category - Yes/No) by Products Purchased*****

CROSSTABS
 /TABLES=D003_A D003_B D003_C D003_D D003_E D003_F BY V4_Q008_A V4_Q008_B V4_Q008_C V4_Q008_D V4_Q008_E V4_Q008_F
 /FORMAT=AVALUE TABLES
 /STATISTICS=CHISQ
 /CELLS=COUNT
 /COUNT ROUND CELL.

CROSSTABS
 /TABLES=D003_RC2 BY V4_Q008_A V4_Q008_B V4_Q008_C V4_Q008_D V4_Q008_E V4_Q008_F
 /FORMAT=AVALUE TABLES
 /STATISTICS=CHISQ
 /CELLS=COUNT
 /COUNT ROUND CELL.
```

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```
*****Chi Square Income Level by Products Purchased*****

CROSSTABS
 /TABLES=D008 BY V4_Q008_A V4_Q008_B V4_Q008_C V4_Q008_D V4_Q008_E V4_Q008_F
 /FORMAT=AVALUE TABLES
 /STATISTICS=CHISQ
 /CELLS=COUNT
 /COUNT ROUND CELL.

CROSSTABS
 /TABLES=D008_RC BY V4_Q008_A V4_Q008_B V4_Q008_C V4_Q008_D V4_Q008_E V4_Q008_F
 /FORMAT=AVALUE TABLES
 /STATISTICS=CHISQ
 /CELLS=COUNT
 /COUNT ROUND CELL.

****************************Begin Multivariate Analyses****************************
***MANOVA to compare products purchased by psychographics****
****Beef by psychographics****

GLM V4_Q010_A V4_Q010_B V4_Q010_C V4_Q010_D V4_Q010_E V4_Q010_F V4_Q010_G V4_Q010_H V4_Q010_I
   V4_Q010_J V4_Q010_K V4_Q010_L BY V4_Q008_A
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=DESCRIPTIVE ETASQ OPOWER HOMOGENEITY
 /CRITERIA=ALPHA(.05)
 /DESIGN= V4_Q008_A.

****Chicken by psychographics****

GLM V4_Q010_A V4_Q010_B V4_Q010_C V4_Q010_D V4_Q010_E V4_Q010_F V4_Q010_G V4_Q010_H V4_Q010_I
   V4_Q010_J V4_Q010_K V4_Q010_L BY V4_Q008_B
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=DESCRIPTIVE ETASQ OPOWER HOMOGENEITY
 /CRITERIA=ALPHA(.05)
 /DESIGN= V4_Q008_B.
```

```
****Fish by psychographics****

GLM V4_Q010_A V4_Q010_B V4_Q010_C V4_Q010_D V4_Q010_E V4_Q010_F V4_Q010_G V4_Q010_H V4_Q010_I
   V4_Q010_J V4_Q010_K V4_Q010_L BY V4_Q008_C
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=DESCRIPTIVE ETASQ OPOWER HOMOGENEITY
 /CRITERIA=ALPHA(.05)
 /DESIGN= V4_Q008_C.

****Lamb by psychographics****

GLM V4_Q010_A V4_Q010_B V4_Q010_C V4_Q010_D V4_Q010_E V4_Q010_F V4_Q010_G V4_Q010_H V4_Q010_I
   V4_Q010_J V4_Q010_K V4_Q010_L BY V4_Q008_D
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=DESCRIPTIVE ETASQ OPOWER HOMOGENEITY
 /CRITERIA=ALPHA(.05)
 /DESIGN= V4_Q008_D.

****Pork by psychographics****

GLM V4_Q010_A V4_Q010_B V4_Q010_C V4_Q010_D V4_Q010_E V4_Q010_F V4_Q010_G V4_Q010_H V4_Q010_I
   V4_Q010_J V4_Q010_K V4_Q010_L BY V4_Q008_E
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=DESCRIPTIVE ETASQ OPOWER HOMOGENEITY
 /CRITERIA=ALPHA(.05)
 /DESIGN= V4_Q008_E.

****Turkey by psychographics****

GLM V4_Q010_A V4_Q010_B V4_Q010_C V4_Q010_D V4_Q010_E V4_Q010_F V4_Q010_G V4_Q010_H V4_Q010_I
   V4_Q010_J V4_Q010_K V4_Q010_L BY V4_Q008_F
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=DESCRIPTIVE ETASQ OPOWER HOMOGENEITY
 /CRITERIA=ALPHA(.05)
 /DESIGN= V4_Q008_F.
```

```
********follow up ANOVAs for significant MANOVA********
****calculate Bonferroni Correction for multiple comparisons****

***Psychographic statements by purchase chicken****
*******This analysis is included to give us a simple table - Additional ANOVAs are calculated for each variable to provide power********

ONEWAY V4_Q010_A V4Q010_B V4_Q010_C V4Q010_D V4_Q010_E V4Q010_F V4_Q010_G V4Q010_H V4_Q010_I V4Q010_J V4_Q010_K V4Q010_L BY
   V4_Q008_B
 /MISSING ANALYSIS.

*****For POWER of Analysis ONLY*****

UNIANOVA V4_Q010_A BY V4_Q008_B
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
 /CRITERIA=ALPHA(.05)
 /DESIGN=V4_Q008_B.

UNIANOVA V4_Q010_B BY V4_Q008_B
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
 /CRITERIA=ALPHA(.05)
 /DESIGN=V4_Q008_B.

UNIANOVA V4_Q010_C BY V4_Q008_B
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
 /CRITERIA=ALPHA(.05)
 /DESIGN=V4_Q008_B.

UNIANOVA V4_Q010_D BY V4_Q008_B
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
 /CRITERIA=ALPHA(.05)
 /DESIGN=V4_Q008_B.
```

```
UNIANOVA V4_Q010_E BY V4_Q008_C
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
 /CRITERIA=ALPHA(.05)
 /DESIGN=V4_Q008_C.

UNIANOVA V4_Q010_F BY V4_Q008_B
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
 /CRITERIA=ALPHA(.05)
 /DESIGN=V4_Q008_B.

UNIANOVA V4_Q010_G BY V4_Q008_B
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
 /CRITERIA=ALPHA(.05)
 /DESIGN=V4_Q008_B.

UNIANOVA V4_Q010_H BY V4_Q008_B
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
 /CRITERIA=ALPHA(.05)
 /DESIGN=V4_Q008_C.

UNIANOVA V4_Q010_I BY V4_Q008_B
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
 /CRITERIA=ALPHA(.05)
 /DESIGN=V4_Q008_B.

UNIANOVA V4_Q010_J BY V4_Q008_B
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
 /CRITERIA=ALPHA(.05)
 /DESIGN=V4_Q008_B.
```

```
UNIANOVA V4_Q010_C BY V4_Q008_C
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
 /CRITERIA=ALPHA(.05)
 /DESIGN=V4_Q008_C.

UNIANOVA V4_Q010_D BY V4_Q008_C
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
 /CRITERIA=ALPHA(.05)
 /DESIGN=V4_Q008_C.

UNIANOVA V4_Q010_E BY V4_Q008_C
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
 /CRITERIA=ALPHA(.05)
 /DESIGN=V4_Q008_C.

UNIANOVA V4_Q010_F BY V4_Q008_C
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
 /CRITERIA=ALPHA(.05)
 /DESIGN=V4_Q008_C.

UNIANOVA V4_Q010_G BY V4_Q008_C
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
 /CRITERIA=ALPHA(.05)
 /DESIGN=V4_Q008_C.

UNIANOVA V4_Q010_H BY V4_Q008_C
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
 /CRITERIA=ALPHA(.05)
 /DESIGN=V4_Q008_C.
```

```
UNIANOVA V4_Q010_I BY V4_Q008_C
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
 /CRITERIA=ALPHA(.05)
 /DESIGN=V4_Q008_C.

UNIANOVA V4_Q010_J BY V4_Q008_C
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
 /CRITERIA=ALPHA(.05)
 /DESIGN=V4_Q008_C.

UNIANOVA V4_Q010_K BY V4_Q008_C
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
 /CRITERIA=ALPHA(.05)
 /DESIGN=V4_Q008_C.

UNIANOVA V4_Q010_L BY V4_Q008_C
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
 /CRITERIA=ALPHA(.05)
 /DESIGN=V4_Q008_C.
```

```
DATASET ACTIVATE DataSet1.
CROSSTABS
 /TABLES=V4_Q009 BY V4_Q008_A V4_Q008_B V4_Q008_C V4_Q008_D V4_Q008_E V4_Q008_F
 /FORMAT=AVALUE TABLES
 /CELLS=COUNT COLUMN
 /COUNT ROUND CELL.

DATASET ACTIVATE DataSet1.
CROSSTABS
 /TABLES=V4_Q008_A V4_Q008_B V4_Q008_C V4_Q008_D V4_Q008_E V4_Q008_F BY  V4_Q009
 /FORMAT=AVALUE TABLES
 /CELLS=COUNT COLUMN
 /COUNT ROUND CELL.
```

******RQ2*******
RO2.1

Crosstabs Area by Products Purchased

```
CROSSTABS
 /TABLES=V4_Q008_A V4_Q008_B V4_Q008_C V4_Q008_D V4_Q008_E V4_Q008_F BY ZIP_RC
 /FORMAT=AVALUE TABLES
 /CELLS=COUNT COLUMN
 /COUNT ROUND CELL.
```

Chi Square Area by Products Purchased

```
CROSSTABS
 /TABLES=ZIP_RC BY V4_Q008_A V4_Q008_B V4_Q008_C V4_Q008_D V4_Q008_E V4_Q008_F
 /FORMAT=AVALUE TABLES
 /STATISTICS=CHISQ
 /CELLS=COUNT
 /COUNT ROUND CELL.
```

```
***RO2.2***
***Crosstabs Advertisement Use (Online, Newspaper, In-Store) by Products Purchased***

CROSSTABS
 /TABLES=V4_Q008_A V4_Q008_B V4_Q008_C V4_Q008_D V4_Q008_E V4_Q008_F BY V4_Q001 V4_Q002 V4_Q003
 /FORMAT=AVALUE TABLES
 /CELLS=COUNT COLUMN
 /COUNT ROUND CELL.

***Chi Square Advertisement Use (Online, Newspaper, In-Store) by Products Purchased***

CROSSTABS
 /TABLES=V4_Q001 V4_Q002 V4_Q003 BY V4_Q008_A V4_Q008_B V4_Q008_C V4_Q008_D V4_Q008_E V4_Q008_F
 /FORMAT=AVALUE TABLES
 /STATISTICS=CHISQ
 /CELLS=COUNT
 /COUNT ROUND CELL.


*************RQ 3***************
******RO3.1******
****Crosstabs Generation by Importance of Convenience, Cost, Health, Quality, and Production Process*****

CROSSTABS
 /TABLES=V4_Q010_G V4_SV_C V4_SV_H V4_Q007_D V4_SV_PP BY D001_RC_B
 /FORMAT=AVALUE TABLES
 /CELLS=COUNT COLUMN
 /COUNT ROUND CELL.

****************************Begin Multivariate Analyses****************************

****Crosstabs Generation by Importance of Convenience, Cost, Health, Quality, and Production Process*****

CROSSTABS
 /TABLES=V4_Q010_G V4_SV_C V4_SV_H V4_Q007_D V4_SV_PP BY D001_RC_B
 /FORMAT=AVALUE TABLES
 /CELLS=COUNT COLUMN
 /COUNT ROUND CELL.

*****MANOVA to Importance of Convenience, Cost, Health, Quality, and Production Process by Generation*****

GLM V4_Q010_G V4_SV_C V4_SV_H V4_Q007_D V4_SV_PP  BY D001_RC_B
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=DESCRIPTIVE ETASQ OPOWER HOMOGENEITY
 /CRITERIA=ALPHA(.05)
 /DESIGN= D001_RC_B.

****Crosstabs Sex by Importance of Convenience, Cost, Health, Quality, and Production Process*****

CROSSTABS
 /TABLES=V4_Q010_G V4_SV_C V4_SV_H V4_Q007_D V4_SV_PP BY D002
 /FORMAT=AVALUE TABLES
 /CELLS=COUNT COLUMN
 /COUNT ROUND CELL.
```

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```
***MANOVA to Importance of Convenience, Cost, Health, Quality, and Production Process by Sex*****

GLM V4_Q010_G V4_SV_C V4_SV_H V4_Q007_D V4_SV_PP  BY D002
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=DESCRIPTIVE ETASQ OPOWER HOMOGENEITY
 /CRITERIA=ALPHA(.05)
 /DESIGN= D002.

****Crosstabs Race by Importance of Convenience, Cost, Health, Quality, and Production Process*****

CROSSTABS
 /TABLES=V4_Q010_G V4_SV_C V4_SV_H V4_Q007_D V4_SV_PP BY D003_A D003_B D003_C D003_D D003_E D003_F
 /FORMAT=AVALUE TABLES
 /CELLS=COUNT COLUMN
 /COUNT ROUND CELL.

CROSSTABS
 /TABLES=V4_Q010_G V4_SV_C V4_SV_H V4_Q007_D V4_SV_PP BY D003_RC2
 /FORMAT=AVALUE TABLES
 /CELLS=COUNT COLUMN
 /COUNT ROUND CELL.

***MANOVA to Importance of Convenience, Cost, Health, Quality, and Production Process by Race*****

GLM V4_Q010_G V4_SV_C V4_SV_H V4_Q007_D V4_SV_PP  BY D003_RC2
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=DESCRIPTIVE ETASQ OPOWER HOMOGENEITY
 /CRITERIA=ALPHA(.05)
 /DESIGN= D003_RC2.

****Crosstabs Income Level by Importance of Convenience, Cost, Health, Quality, and Production Process*****

CROSSTABS
 /TABLES=V4_Q010_G V4_SV_C V4_SV_H V4_Q007_D V4_SV_PP BY D008
 /FORMAT=AVALUE TABLE
 /CELLS=COUNT COLUMN
 /COUNT ROUND CELL.
```

```
CROSSTABS
 /TABLES=V4_Q010_G V4_SV_C V4_SV_H V4_Q007_D V4_SV_PP BY D008_RC
 /FORMAT=AVALUE TABLE
 /CELLS=COUNT COLUMN
 /COUNT ROUND CELL.
```

MANOVA to Importance of Convenience, Cost, Health, Quality, and Production Process by Income Level**

```
GLM V4_Q010_G V4_SV_C V4_SV_H V4_Q007_D V4_SV_PP  BY D008_RC
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=DESCRIPTIVE ETASQ OPOWER HOMOGENEITY
 /CRITERIA=ALPHA(.05)
 /DESIGN= D008_RC.
```

*****RO3.2*****
*****Crosstabs Generation by Importance of Brand Name and Store Name*****

```
CROSSTABS
 /TABLES=V4_Q007_A V4_Q007_F BY D001_RC_B
 /FORMAT=AVALUE TABLES
 /CELLS=COUNT COLUMN
 /COUNT ROUND CELL.
```

*****MANOVA to Importance of Brand Name and Store Name by Generation*****

```
GLM V4_Q007_A V4_Q007_F BY D001_RC_B
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=DESCRIPTIVE ETASQ OPOWER HOMOGENEITY
 /CRITERIA=ALPHA(.05)
 /DESIGN= D001_RC_B.
```

*****Crosstabs Sex by Importance of Brand Name and Store Name*****

```
CROSSTABS
 /TABLES=V4_Q007_A V4_Q007_F BY D002
 /FORMAT=AVALUE TABLES
 /CELLS=COUNT COLUMN
 /COUNT ROUND CELL.
```

```
*****MANOVA to Importance of Brand Name and Store Name by Sex*****

GLM V4_Q007_A V4_Q007_F BY D002
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=DESCRIPTIVE ETASQ OPOWER HOMOGENEITY
 /CRITERIA=ALPHA(.05)
 /DESIGN= D002.

****Crosstabs Race by Importance of Brand Name and Store Name*****

CROSSTABS
 /TABLES=V4_Q007_A V4_Q007_F BY D003_A D003_B D003_C D003_D D003_E D003_F
 /FORMAT=AVALUE TABLES
 /CELLS=COUNT COLUMN
 /COUNT ROUND CELL.

CROSSTABS
 /TABLES=V4_Q007_A V4_Q007_F BY D003_RC2
 /FORMAT=AVALUE TABLES
 /CELLS=COUNT COLUMN
 /COUNT ROUND CELL.

*****MANOVA to Importance of Brand Name and Store Name by Race*****

GLM V4_Q007_A V4_Q007_F BY D003_RC2
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=DESCRIPTIVE ETASQ OPOWER HOMOGENEITY
 /CRITERIA=ALPHA(.05)
 /DESIGN= D003_RC2.

****Crosstabs Income by Importance of Brand Name and Store Name*****

CROSSTABS
 /TABLES=V4_Q007_A V4_Q007_F BY D008
 /FORMAT=AVALUE TABLES
 /CELLS=COUNT COLUMN
 /COUNT ROUND CELL.
```

```
GLM V4_Q007_A V4_Q007_F BY D002
  /METHOD=SSTYPE(3)
  /INTERCEPT=INCLUDE
  /PRINT=DESCRIPTIVE ETASQ OPOWER HOMOGENEITY
  /CRITERIA=ALPHA(.05)
  /DESIGN= D002.
```

****Crosstabs Race by Importance of Brand Name and Store Name*****

```
CROSSTABS
  /TABLES=V4_Q007_A V4_Q007_F BY D003_A D003_B D003_C D003_D D003_E D003_F
  /FORMAT=AVALUE TABLES
  /CELLS=COUNT COLUMN
  /COUNT ROUND CELL.
```

```
CROSSTABS
  /TABLES=V4_Q007_A V4_Q007_F BY D003_RC2
  /FORMAT=AVALUE TABLES
  /CELLS=COUNT COLUMN
  /COUNT ROUND CELL.
```

*****MANOVA to Importance of Brand Name and Store Name by Race*****

```
GLM V4_Q007_A V4_Q007_F BY D003_RC2
  /METHOD=SSTYPE(3)
  /INTERCEPT=INCLUDE
  /PRINT=DESCRIPTIVE ETASQ OPOWER HOMOGENEITY
  /CRITERIA=ALPHA(.05)
  /DESIGN= D003_RC2.
```

****Crosstabs Income by Importance of Brand Name and Store Name*****

```
CROSSTABS
  /TABLES=V4_Q007_A V4_Q007_F BY D008
  /FORMAT=AVALUE TABLES
  /CELLS=COUNT COLUMN
  /COUNT ROUND CELL.
```

```
CROSSTABS
  /TABLES=V4_Q007_A V4_Q007_F BY D008_RC
  /FORMAT=AVALUE TABLES
  /CELLS=COUNT COLUMN
  /COUNT ROUND CELL.

*****MANOVA to Importance of Brand Name and Store Name by Income Level*****

GLM V4_Q007_A V4_Q007_F BY D008_RC
  /METHOD=SSTYPE(3)
  /INTERCEPT=INCLUDE
  /PRINT=DESCRIPTIVE ETASQ OPOWER HOMOGENEITY
  /CRITERIA=ALPHA(.05)
  /DESIGN= D008_RC.


******RQ4***********
*****RO4.1*****

CROSSTABS
  /TABLES=V4_Q004_A V4_Q004_C V4_Q004_D V4_Q004_E V4_Q004_F V4_Q004_J V4_Q004_K V4_Q004_N BY D001_RC_B
  /FORMAT=AVALUE TABLES
  /CELLS=COUNT COLUMN
  /COUNT ROUND CELL.

CROSSTABS
  /TABLES=V4_Q004_A V4_Q004_C V4_Q004_D V4_Q004_E V4_Q004_F V4_Q004_J V4_Q004_K V4_Q004_N BY D002
  /FORMAT=AVALUE TABLES
  /CELLS=COUNT COLUMN
  /COUNT ROUND CELL.

CROSSTABS
  /TABLES=V4_Q004_A V4_Q004_C V4_Q004_D V4_Q004_E V4_Q004_F V4_Q004_J V4_Q004_K V4_Q004_N BY D003_A D003_B D003_C D003_D D003_E D003_F
  /FORMAT=AVALUE TABLES
  /CELLS=COUNT COLUMN
  /COUNT ROUND CELL.



CROSSTABS
  /TABLES=V4_Q004_A V4_Q004_B V4_Q004_C V4_Q004_D V4_Q004_E V4_Q004_F V4_Q004_G V4_Q004_H V4_Q004_I
    V4_Q004_J V4_Q004_K V4_Q004_L V4_Q004_M V4_Q004_N V4_Q004_O V4_Q004_P BY D003_RC2
  /FORMAT=AVALUE TABLES
  /CELLS=COUNT COLUMN
  /COUNT ROUND CELL.

CROSSTABS
  /TABLES=V4_Q004_A V4_Q004_C V4_Q004_D V4_Q004_E V4_Q004_F V4_Q004_J V4_Q004_K V4_Q004_N BY D008
  /FORMAT=AVALUE TABLES
  /CELLS=COUNT COLUMN
  /COUNT ROUND CELL.

CROSSTABS
  /TABLES=V4_Q004_A V4_Q004_C V4_Q004_D V4_Q004_E V4_Q004_F V4_Q004_J V4_Q004_K V4_Q004_N BY D008_RC
  /FORMAT=AVALUE TABLES
  /CELLS=COUNT COLUMN
  /COUNT ROUND CELL.
```

```
****RQ2.4.****
*****RO4.1*****

****T-test ALL raw vs. ALL cooked****

DATASET ACTIVATE DataSet1.
T-TEST PAIRS=V4_004_SV_R WITH V4_004_SV_C (PAIRED)
 /CRITERIA=CI(.9500)
 /MISSING=ANALYSIS.

***T-test raw beef vs. cooked beef***

T-TEST PAIRS=V4_Q004_N WITH V4_Q004_F (PAIRED)
 /CRITERIA=CI(.9500)
 /MISSING=ANALYSIS.

***T-test raw chicken vs. cooked chicken***

T-TEST PAIRS=V4_Q004_C WITH V4_Q004_E (PAIRED)
 /CRITERIA=CI(.9500)
 /MISSING=ANALYSIS.

***T-test raw pork vs. cooked pork***

T-TEST PAIRS=V4_Q004_K WITH V4_Q004_A (PAIRED)
 /CRITERIA=CI(.9500)
 /MISSING=ANALYSIS.

***T-test cooked beef vs. prepared beef***

T-TEST PAIRS=V4_Q004_F WITH V4_Q004_D (PAIRED)
 /CRITERIA=CI(.9500)
 /MISSING=ANALYSIS.

***T-test cooked chicken vs. prepared chicken***

T-TEST PAIRS=V4_Q004_E WITH V4_Q004_J (PAIRED)
 /CRITERIA=CI(.9500)
 /MISSING=ANALYSIS.
```

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```
*****Bad/Good by Generation******

CROSSTABS
 /TABLES=V4_Q006_A V4_Q006_B V4_Q006_C V4_Q006_D V4_Q006_E V4_Q006_F V4_Q006_G V4_Q006_H V4_Q006_I
   V4_Q006_J V4_Q006_K V4_Q006_L V4_Q006_M V4_Q006_N V4_Q006_O V4_Q006_P BY D001_RC_B
 /FORMAT=AVALUE TABLES
 /CELLS=COUNT COLUMN
 /COUNT ROUND CELL.

****Bad/Good by Sex****

CROSSTABS
 /TABLES=V4_Q006_A V4_Q006_B V4_Q006_C V4_Q006_D V4_Q006_E V4_Q006_F V4_Q006_G V4_Q006_H V4_Q006_I
   V4_Q006_J V4_Q006_K V4_Q006_L V4_Q006_M V4_Q006_N V4_Q006_O V4_Q006_P BY D002
 /FORMAT=AVALUE TABLES
 /CELLS=COUNT COLUMN
 /COUNT ROUND CELL.

****Bad/Good by Race*****

CROSSTABS
 /TABLES=V4_Q006_A V4_Q006_B V4_Q006_C V4_Q006_D V4_Q006_E V4_Q006_F V4_Q006_G V4_Q006_H V4_Q006_I
   V4_Q006_J V4_Q006_K V4_Q006_L V4_Q006_M V4_Q006_N V4_Q006_O V4_Q006_P BY D003_A D003_B D003_C D003_D D003_E D003_F
 /FORMAT=AVALUE TABLES
 /CELLS=COUNT COLUMN
 /COUNT ROUND CELL.

CROSSTABS
 /TABLES=V4_Q006_A V4_Q006_B V4_Q006_C V4_Q006_D V4_Q006_E V4_Q006_F V4_Q006_G V4_Q006_H V4_Q006_I
   V4_Q006_J V4_Q006_K V4_Q006_L V4_Q006_M V4_Q006_N V4_Q006_O V4_Q006_P BY D003_RC2
 /FORMAT=AVALUE TABLES
 /CELLS=COUNT COLUMN
 /COUNT ROUND CELL.
```

```
****Bad/Good by Income Level****

CROSSTABS
  /TABLES=V4_Q006_A V4_Q006_B V4_Q006_C V4_Q006_D V4_Q006_E V4_Q006_F V4_Q006_G V4_Q006_H V4_Q006_I
    V4_Q006_J V4_Q006_K V4_Q006_L V4_Q006_M V4_Q006_N V4_Q006_O V4_Q006_P BY D008
  /FORMAT=AVALUE TABLES
  /CELLS=COUNT COLUMN
  /COUNT ROUND CELL.

CROSSTABS
  /TABLES=V4_Q006_A V4_Q006_B V4_Q006_C V4_Q006_D V4_Q006_E V4_Q006_F V4_Q006_G V4_Q006_H V4_Q006_I
    V4_Q006_J V4_Q006_K V4_Q006_L V4_Q006_M V4_Q006_N V4_Q006_O V4_Q006_P BY D008_RC
  /FORMAT=AVALUE TABLES
  /CELLS=COUNT COLUMN
  /COUNT ROUND CELL.


***MANOVA to relation to bad/good by generation*****

GLM V4_Q006_A V4_Q006_B V4_Q006_C V4_Q006_D V4_Q006_E V4_Q006_F V4_Q006_G V4_Q006_H V4_Q006_I
    V4_Q006_J V4_Q006_K V4_Q006_L V4_Q006_M V4_Q006_N V4_Q006_O V4_Q006_P BY D001_RC_B
  /METHOD=SSTYPE(3)
  /INTERCEPT=INCLUDE
  /PRINT=DESCRIPTIVE ETASQ OPOWER HOMOGENEITY
  /CRITERIA=ALPHA(.05)
  /DESIGN= D001_RC_B.

***MANOVA to relation to bad/good by sex*****

GLM V4_Q006_A V4_Q006_B V4_Q006_C V4_Q006_D V4_Q006_E V4_Q006_F V4_Q006_G V4_Q006_H V4_Q006_I
    V4_Q006_J V4_Q006_K V4_Q006_L V4_Q006_M V4_Q006_N V4_Q006_O V4_Q006_P BY D002
  /METHOD=SSTYPE(3)
  /INTERCEPT=INCLUDE
  /PRINT=DESCRIPTIVE ETASQ OPOWER HOMOGENEITY
  /CRITERIA=ALPHA(.05)
  /DESIGN= D002.
```

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```
***MANOVA to relation to bad/good by race*****

GLM V4_Q006_A V4_Q006_B V4_Q006_C V4_Q006_D V4_Q006_E V4_Q006_F V4_Q006_G V4_Q006_H V4_Q006_I
    V4_Q006_J V4_Q006_K V4_Q006_L V4_Q006_M V4_Q006_N V4_Q006_O V4_Q006_P BY D003_RC2
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=DESCRIPTIVE ETASQ OPOWER HOMOGENEITY
 /CRITERIA=ALPHA(.05)
 /DESIGN= D003_RC2.

***MANOVA to relation to bad/good by income level*****

GLM V4_Q006_A V4_Q006_B V4_Q006_C V4_Q006_D V4_Q006_E V4_Q006_F V4_Q006_G V4_Q006_H V4_Q006_I
    V4_Q006_J V4_Q006_K V4_Q006_L V4_Q006_M V4_Q006_N V4_Q006_O V4_Q006_P BY D008_RC
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=DESCRIPTIVE ETASQ OPOWER HOMOGENEITY
 /CRITERIA=ALPHA(.05)
 /DESIGN= D008_RC.

****RO4.3*****
***Crosstabs Influence by generation****

CROSSTABS
 /TABLES=V4_Q005_A V4_Q005_B V4_Q005_C V4_Q005_D V4_Q005_E V4_Q005_F V4_Q005_G V4_Q005_H V4_Q005_I
    V4_Q005_J V4_Q005_K V4_Q005_L V4_Q005_M V4_Q005_N V4_Q005_O V4_Q005_P BY D001_RC_B
 /FORMAT=AVALUE TABLES
 /CELLS=COUNT COLUMN
 /COUNT ROUND CELL.

****Crosstabs Influence by Sex******

CROSSTABS
 /TABLES=V4_Q005_A V4_Q005_B V4_Q005_C V4_Q005_D V4_Q005_E V4_Q005_F V4_Q005_G V4_Q005_H V4_Q005_I
    V4_Q005_J V4_Q005_K V4_Q005_L V4_Q005_M V4_Q005_N V4_Q005_O V4_Q005_P BY D002
 /FORMAT=AVALUE TABLES
 /CELLS=COUNT COLUMN
 /COUNT ROUND CELL.
```

```
***Crosstabs Influence by Race****

CROSSTABS
 /TABLES=V4_Q005_A V4_Q005_B V4_Q005_C V4_Q005_D V4_Q005_E V4_Q005_F V4_Q005_G V4_Q005_H V4_Q005_I
   V4_Q005_J V4_Q005_K V4_Q005_L V4_Q005_M V4_Q005_N V4_Q005_O V4_Q005_P BY  D003_A D003_B D003_C D003_D D003_E D003_F
 /FORMAT=AVALUE TABLES
 /CELLS=COUNT COLUMN
 /COUNT ROUND CELL.

CROSSTABS
 /TABLES=V4_Q005_A V4_Q005_B V4_Q005_C V4_Q005_D V4_Q005_E V4_Q005_F V4_Q005_G V4_Q005_H V4_Q005_I
   V4_Q005_J V4_Q005_K V4_Q005_L V4_Q005_M V4_Q005_N V4_Q005_O V4_Q005_P BY D003_RC2
 /FORMAT=AVALUE TABLES
 /CELLS=COUNT COLUMN
 /COUNT ROUND CELL.

****Crosstabs Influence by Income Level*****

CROSSTABS
 /TABLES=V4_Q005_A V4_Q005_B V4_Q005_C V4_Q005_D V4_Q005_E V4_Q005_F V4_Q005_G V4_Q005_H V4_Q005_I
   V4_Q005_J V4_Q005_K V4_Q005_L V4_Q005_M V4_Q005_N V4_Q005_O V4_Q005_P BY D008
 /FORMAT=AVALUE TABLES
 /CELLS=COUNT COLUMN
 /COUNT ROUND CELL.

CROSSTABS
 /TABLES=V4_Q005_A V4_Q005_B V4_Q005_C V4_Q005_D V4_Q005_E V4_Q005_F V4_Q005_G V4_Q005_H V4_Q005_I
   V4_Q005_J V4_Q005_K V4_Q005_L V4_Q005_M V4_Q005_N V4_Q005_O V4_Q005_P BY D008_RC
 /FORMAT=AVALUE TABLES
 /CELLS=COUNT COLUMN
 /COUNT ROUND CELL.
```

```
***MANOVA influence by income generation*****

GLM V4_Q005_A V4_Q005_B V4_Q005_C V4_Q005_D V4_Q005_E V4_Q005_F V4_Q005_G V4_Q005_H V4_Q005_I
   V4_Q005_J V4_Q005_K V4_Q005_L V4_Q005_M V4_Q005_N V4_Q005_O V4_Q005_P BY D001_RC_B
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=DESCRIPTIVE ETASQ OPOWER HOMOGENEITY
 /CRITERIA=ALPHA(.05)
 /DESIGN= D001_RC_B.

***MANOVA influence by income sex*****

GLM V4_Q005_A V4_Q005_B V4_Q005_C V4_Q005_D V4_Q005_E V4_Q005_F V4_Q005_G V4_Q005_H V4_Q005_I
   V4_Q005_J V4_Q005_K V4_Q005_L V4_Q005_M V4_Q005_N V4_Q005_O V4_Q005_P BY D002
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=DESCRIPTIVE ETASQ OPOWER HOMOGENEITY
 /CRITERIA=ALPHA(.05)
 /DESIGN= D002.

***MANOVA influence by income race*****

GLM V4_Q005_A V4_Q005_B V4_Q005_C V4_Q005_D V4_Q005_E V4_Q005_F V4_Q005_G V4_Q005_H V4_Q005_I
   V4_Q005_J V4_Q005_K V4_Q005_L V4_Q005_M V4_Q005_N V4_Q005_O V4_Q005_P BY D003_RC2
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=DESCRIPTIVE ETASQ OPOWER HOMOGENEITY
 /CRITERIA=ALPHA(.05)
 /DESIGN= D003_RC2.

***MANOVA influence by income income level*****

GLM V4_Q005_A V4_Q005_B V4_Q005_C V4_Q005_D V4_Q005_E V4_Q005_F V4_Q005_G V4_Q005_H V4_Q005_I
   V4_Q005_J V4_Q005_K V4_Q005_L V4_Q005_M V4_Q005_N V4_Q005_O V4_Q005_P BY D008_RC
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=DESCRIPTIVE ETASQ OPOWER HOMOGENEITY
 /CRITERIA=ALPHA(.05)
 /DESIGN= D008_RC.
```

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```
******follow up ANOVAs for significant MANOVA********
****calculate Bonferroni Correction for multiple comparisons ****

*******This analysis is included to give us a simple table - Additional ANOVAs are calculated for each variable to provide power********

****Influence and generation******

ONEWAY V4_Q005_A V4_Q005_B V4_Q005_C V4_Q005_D V4_Q005_E V4_Q005__F V4_Q005_G V4_Q005_H V4_Q005_I V4_Q005_J V4_Q005_K V4_Q005_L V4_Q005_M V4_Q005_N V4_Q005_O V4_Q005_P BY
    D001_RC_B
  /MISSING ANALYSIS.

*****For POWER of Analysis ONLY*****

UNIANOVA V4_Q005_A BY D001_RC_B
  /METHOD=SSTYPE(3)
  /INTERCEPT=INCLUDE
  /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
  /CRITERIA=ALPHA(.05)
  /DESIGN=D001_RC_B.

UNIANOVA V4_Q005_B BY D001_RC_B
  /METHOD=SSTYPE(3)
  /INTERCEPT=INCLUDE
  /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
  /CRITERIA=ALPHA(.05)
  /DESIGN=D001_RC_B.

UNIANOVA V4_Q005_C BY D001_RC_B
  /METHOD=SSTYPE(3)
  /INTERCEPT=INCLUDE
  /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
  /CRITERIA=ALPHA(.05)
  /DESIGN=D001_RC_B.


UNIANOVA V4_Q005_D BY D001_RC_B
  /METHOD=SSTYPE(3)
  /INTERCEPT=INCLUDE
  /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
  /CRITERIA=ALPHA(.05)
  /DESIGN=D001_RC_B.
```

```
UNIANOVA V4_Q005_E BY D001_RC_B
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
 /CRITERIA=ALPHA(.05)
 /DESIGN=D001_RC_B.

UNIANOVA V4_Q005_F BY D001_RC_B
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
 /CRITERIA=ALPHA(.05)
 /DESIGN=D001_RC_B.

UNIANOVA V4_Q005_G BY D001_RC_B
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
 /CRITERIA=ALPHA(.05)
 /DESIGN=D001_RC_B.


UNIANOVA V4_Q005_H BY D001_RC_B
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
 /CRITERIA=ALPHA(.05)
 /DESIGN=D001_RC_B.

UNIANOVA V4_Q005_I BY D001_RC_B
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
 /CRITERIA=ALPHA(.05)
 /DESIGN=D001_RC_B.
```

```
UNIANOVA V4_Q005_J BY D001_RC_B
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
 /CRITERIA=ALPHA(.05)
 /DESIGN=D001_RC_B.

UNIANOVA V4_Q005_K BY D001_RC_B
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
 /CRITERIA=ALPHA(.05)
 /DESIGN=D001_RC_B.

UNIANOVA V4_Q005_L BY D001_RC_B
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
 /CRITERIA=ALPHA(.05)
 /DESIGN=D001_RC_B.

UNIANOVA V4_Q005_M BY D001_RC_B
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
 /CRITERIA=ALPHA(.05)
 /DESIGN=D001_RC_B.

UNIANOVA V4_Q005_N BY D001_RC_B
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
 /CRITERIA=ALPHA(.05)
 /DESIGN=D001_RC_B.
```

```
UNIANOVA V4_Q005_O BY D001_RC_B
  /METHOD=SSTYPE(3)
  /INTERCEPT=INCLUDE
  /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
  /CRITERIA=ALPHA(.05)
  /DESIGN=D001_RC_B.

UNIANOVA V4_Q005_P BY D001_RC_B
  /METHOD=SSTYPE(3)
  /INTERCEPT=INCLUDE
  /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
  /CRITERIA=ALPHA(.05)
  /DESIGN=D001_RC_B.

***Influence and income level******

ONEWAY V4_Q005_A V4_Q005_B V4_Q005_C V4_Q005_D V4_Q005_E V4_Q005__F V4_Q005_G V4_Q005_H V4_Q005_I V4_Q005_J V4_Q005_K V4_Q005_L V4_Q005_M V4_Q005_N V4_Q005_O V4_Q005_P BY
    D008_RC
  /MISSING ANALYSIS.

*****For POWER of Analysis ONLY*****

UNIANOVA V4_Q005_A BY D008_RC
  /METHOD=SSTYPE(3)
  /INTERCEPT=INCLUDE
  /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
  /CRITERIA=ALPHA(.05)
  /DESIGN=D008_RC.

UNIANOVA V4_Q005_B BY D008_RC
  /METHOD=SSTYPE(3)
  /INTERCEPT=INCLUDE
  /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
  /CRITERIA=ALPHA(.05)
  /DESIGN=D008_RC.

UNIANOVA V4_Q005_C BY D008_RC
  /METHOD=SSTYPE(3)
  /INTERCEPT=INCLUDE
  /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
  /CRITERIA=ALPHA(.05)
  /DESIGN=D008_RC.
```

```
UNIANOVA V4_Q005_D BY D008_RC
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
 /CRITERIA=ALPHA(.05)
 /DESIGN=D008_RC.

UNIANOVA V4_Q005_E BY D008_RC
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
 /CRITERIA=ALPHA(.05)
 /DESIGN=D008_RC.

UNIANOVA V4_Q005_F BY D008_RC
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
 /CRITERIA=ALPHA(.05)
 /DESIGN=D008_RC.

UNIANOVA V4_Q005_G BY D008_RC
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
 /CRITERIA=ALPHA(.05)
 /DESIGN=D008_RC.


UNIANOVA V4_Q005_H BY D008_RC
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
 /CRITERIA=ALPHA(.05)
 /DESIGN=D008_RC.

UNIANOVA V4_Q005_I BY D008_RC
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
 /CRITERIA=ALPHA(.05)
 /DESIGN=D008_RC.
```

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```
UNIANOVA V4_Q005_J BY D008_RC
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
 /CRITERIA=ALPHA(.05)
 /DESIGN=D008_RC.

UNIANOVA V4_Q005_K BY D008_RC
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
 /CRITERIA=ALPHA(.05)
 /DESIGN=D008_RC.

UNIANOVA V4_Q005_L BY D008_RC
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
 /CRITERIA=ALPHA(.05)
 /DESIGN=D008_RC.

UNIANOVA V4_Q005_M BY D008_RC
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
 /CRITERIA=ALPHA(.05)
 /DESIGN=D008_RC.

UNIANOVA V4_Q005_N BY D008_RC
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
 /CRITERIA=ALPHA(.05)
 /DESIGN=D008_RC.

UNIANOVA V4_Q005_O BY D008_RCB
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
 /CRITERIA=ALPHA(.05)
 /DESIGN=D008_RC.
```

```
UNIANOVA V4_Q005_P BY D008_RC
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /PRINT=OPOWER ETASQ HOMOGENEITY DESCRIPTIVE
/CRITERIA=ALPHA(.05)
 /DESIGN=D008_RC.

********END OF ANALYSIS*******
```

APPENDIX S

Table 2
Purchase of Beef across psychographic descriptors

	1		2		3		4		5		6	
	f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
I am active	4	80.0	5	100.0	27	90.0	44	83.0	53	80.3	40	75.5
I am concerned about how my food is produced	4	100.0	8	100.0	24	82.8	41	77.4	50	90.9	46	73.0
I am a "foodie"	21	87.5	20	80.0	39	81.3	35	77.8	39	86.7	21	75.0
I am health conscious	2	100.0	4	100.0	27	87.1	43	84.3	56	78.9	42	76.4
I am knowledgeable about food	2	100.0	7	87.5	28	80.0	49	81.7	54	85.7	35	74.5
I buy whatever food is on sale	36	64.3	43	89.6	47	81.0	24	85.7	18	100.0	6	100.0
I buy easy-to-make foods	24	70.6	21	84.0	44	75.9	45	88.2	27	87.1	13	86.7
I eat out often	27	81.8	39	76.5	30	83.3	38	86.4	29	82.9	12	80.0
I like foods from my childhood	92	78.0	45	84.9	12	80.0	13	92.9	9	81.8	3	100.0
I like to grow my own food	16	76.2	22	71.0	43	87.8	42	76.4	26	83.9	24	92.3
I prefer locally grown foods	68	85.0	32	86.5	26	72.2	21	87.5	17	81.0	11	64.7
I prefer organic	17	94.4	16	88.9	31	83.8	36	85.7	35	76.1	40	74.1

Note. Individuals who purchase beef (yes, no); response scale: 1 = Not at all like me, 6 = Exactly like me

Table 3
Purchase of chicken across psychographic descriptors

	1		2		3		4		5		6	
	f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
I am active	5	100.0	5	100.0	30	100.0	47	88.7	61	92.4	48	90.6
I am concerned about how my food is produced	4	100.0	8	100.0	28	96.6	51	96.2	50	90.9	56	88.9
I am a "foodie"	21	87.5	21	84.0	45	93.8	41	91.1	44	97.8	27	96.4
I am health conscious	2	100.0	3	75.0	30	96.8	46	90.2	68	95.8	49	89.1
I am knowledgeable about food	2	100.0	8	100.0	32	91.4	58	96.7	59	93.7	40	85.1
I buy whatever food is on sale	46	82.1	46	95.8	56	96.6	26	92.6	18	100.0	6	100.0
I buy easy-to-make foods	30	88.2	23	92.0	56	96.6	48	94.1	27	87.1	14	93.3
I eat out often	32	97.0	46	90.2	32	88.9	43	97.7	31	88.6	14	93.3
I like foods from my childhood	105	89.0	51	96.2	15	100.0	13	92.9	11	100.0	3	100.0
I like to grow my own food	19	90.5	25	80.6	47	95.9	50	90.9	30	96.8	26	100.0
I prefer locally grown foods	72	90.0	35	94.6	34	94.4	24	100.0	19	90.5	15	88.2
I prefer organic	16	88.9	18	100.0	35	94.6	40	95.2	41	89.1	49	90.7

Note. Individuals who purchase chicken (yes, no); response scale: 1 = Not at all like me, 6 = Exactly like me

Table 4
Purchase of fish across psychographic descriptors

	1		2		3		4		5		6	
	f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
I am active	3	60.0	4	80.0	19	63.3	34	64.2	47	71.2	40	75.5
I am concerned about how my food is produced	2	50.0	50	62.5	17	58.6	34	64.2	39	70.9	50	79.4
I am a "foodie"	13	54.2	16	64.0	31	64.6	30	66.7	34	75.6	25	89.3
I am health conscious	1	50.0	2	50.0	14	45.0	32	62.7	51	71.8	48	87.3
I am knowledgeable about food	1	50.0	5	62.5	22	62.9	39	65.0	45	71.4	37	78.7
I buy whatever food is on sale	40	71.4	34	70.8	39	67.2	16	57.1	15	83.3	4	66.7
I buy easy-to-make foods	28	82.4	21	84.0	43	74.1	28	54.9	22	71.0	6	40.0
I eat out often	20	60.6	35	68.6	27	75.0	34	77.3	22	62.9	10	66.7
I like foods from my childhood	89	75.4	34	64.2	11	73.3	7	50.0	6	54.5	1	33.3
I like to grow my own food	16	76.2	23	74.2	33	67.3	36	65.5	22	71.0	17	65.4
I prefer locally grown foods	52	65.0	24	64.9	24	66.7	18	75.0	17	81.0	14	82.4
I prefer organic	14	77.8	12	66.7	23	62.2	27	64.3	33	71.7	40	74.1

Note. Individuals who purchase fish (yes, no); response scale: 1 = Not at all like me, 6 = Exactly like me

Table 5
Purchase of lamb across psychographic descriptors

	1		2		3		4		5		6	
	f	%	f	%	f	%	f	%	f	%	f	%
I am active	1	20.0	1	20.0	2	6.7	5	9.4	10	15.2	11	20.8
I am concerned about how my food is produced	0	0.0	2	25.0	4	13.8	4	7.5	7	12.7	13	20.6
I am a "foodie"	4	100.0	6	75.0	25	86.2	49	92.5	48	87.3	50	79.4
I am health conscious	0	0.0	1	25.0	5	16.1	3	5.9	9	12.7	12	21.8
I am knowledgeable about food	0	0.0	1	12.5	5	14.3	4	6.7	7	11.1	13	27.7
I buy whatever food is on sale	11	19.6	8	16.7	6	10.3	2	7.1	1	5.6	1	16.7
I buy easy-to-make foods	10	29.4	5	20.0	7	12.1	6	11.8	1	3.2	1	6.7
I eat out often	3	9.1	7	13.7	7	19.4	7	15.9	4	11.4	2	13.3
I like foods from my childhood	19	16.1	8	15.1	2	13.3	0	0.0	0	0.0	1	33.3
I like to grow my own food	2	9.5	6	19.4	10	20.4	8	14.5	2	6.5	2	7.7
I prefer locally grown foods	10	12.5	6	16.2	4	11.1	4	16.7	2	9.5	4	23.5
I prefer organic	2	11.1	3	16.7	5	13.5	6	14.3	6	13.0	8	14.8

Note. Individuals who purchase lamb (yes, no); response scale: 1 = Not at all like me, 6 = Exactly like me

Table 6

Purchase of pork across psychographic descriptors

	1		2		3		4		5		6	
	f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
I am active	2	40.0	3	60.0	22	73.3	31	58.8	44	66.7	33	62.3
I am concerned about how my food is produced	3	75.0	6	75.0	18	62.1	40	75.5	30	54.4	37	58.7
I am a "foodie"	11	45.8	15	60.0	30	62.5	62	71.1	27	60.0	21	75.0
I am health conscious	1	50.0	2	50.0	210	67.7	31	60.8	43	60.6	37	67.3
I am knowledgeable about food	1	50.0	60	75.0	21	60.0	37	31.7	40	63.5	31	66.0
I buy whatever food is on sale	28	50.0	35	72.9	40	69.0	16	57.1	12	66.7	4	66
I buy easy-to-make foods	22	64.7	19	76.0	38	65.5	36	70.6	15	48.4	6	40.0
I eat out often	22	66.7	36	70.6	22	61.1	29	65.9	17	48.6	10	66.7
I like foods from my childhood	71	60.2	34	64.2	12	80.0	8	57.1	8	72.7	3	100.0
I like to grow my own food	13	61.9	17	54.8	32	65.3	35	63.6	18	58.1	19	73.1
I prefer locally grown foods	43	53.8	27	73.0	25	69.4	19	79.2	15	71.4	7	41.2
I prefer organic	11	61.1	9	50.0	26	70.3	26	61.9	30	65.2	34	63.0

Note. Individuals who purchase pork (yes, no); response scale: 1 = Not at all like me, 6 = Exactly like me

Table 7
Purchase of Turkey across psychographic descriptors

	1		2		3		4		5		6	
	f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
I am active	2	40.0	3	60.0	22	73.3	31	58.8	44	66.7	33	62.3
I am concerned about how my food is produced	3	75.0	6	75.0	18	62.1	40	75.5	30	54.4	37	58.7
I am a "foodie"	11	45.8	15	60.0	30	62.5	62	71.1	27	60.0	21	75.0
I am health conscious	1	50.0	2	50.0	210	67.7	31	60.8	43	60.6	37	67.3
I am knowledgeable about food	1	50.0	60	75.0	21	60.0	37	31.7	40	63.5	31	66.0
I buy whatever food is on sale	28	50.0	35	72.9	40	69.0	16	57.1	12	66.7	4	66
I buy easy-to-make foods	22	64.7	19	76.0	38	65.5	36	70.6	15	48.4	6	40.0
I eat out often	22	66.7	36	70.6	22	61.1	29	65.9	17	48.6	10	66.7
I like foods from my childhood	71	60.2	34	64.2	12	80.0	8	57.1	8	72.7	3	100.0
I like to grow my own food	13	61.9	17	54.8	32	65.3	35	63.6	18	58.1	19	73.1
I prefer locally grown foods	43	53.8	27	73.0	25	69.4	19	79.2	15	71.4	7	41.2
I prefer organic	11	61.1	9	50.0	26	70.3	26	61.9	30	65.2	34	63.0

Note. Individuals who purchase turkey (yes, no); response scale: 1 = Not at all like me, 6 = Exactly like me

APPENDIX T

Table 8

Importance of convenience, cost, health, quality and production process across generations

		Min	Max	M	SD
Convenience		1.0	6.0	3.3	1.5
	Traditionalists	1.0	6.0	3.6	1.6
	Baby Boomers	1.0	6.0	3.3	1.6
	Gen X	1.0	6.0	3.3	1.3
	Millennials	1.0	6.0	3.1	1.3
Cost		3.0	18.0	11.9	3.1
	Traditionalists	7.0	16.0	12.2	2.0
	Baby Boomers	4.0	18.0	11.7	3.2
	Gen X	5.0	18.0	11.9	3.1
	Millennials	3.0	18.0	12.2	3.6
Health		2.0	12.0	9.1	2.0
	Traditionalists	5.0	12.0	9.2	1.8
	Baby Boomers	2.0	12.0	9.2	2.1
	Gen X	3.0	12.0	9.7	1.7
	Millennials	4.0	12.0	8.5	1.9
Production Process		2.0	12.0	9.0	2.5
	Traditionalists	6.0	12.0	9.2	2.1
	Baby Boomers	2.0	12.0	9.1	2.6
	Gen X	3.0	12.0	8.9	2.5
	Millennials	5.0	12.0	9.2	2.2
Quality		3.0	6.0	5.4	0.8
	Traditionalists	4.0	6.0	5.6	0.6
	Baby Boomers	3.0	6.0	5.5	0.8
	Gen X	3.0	6.0	5.9	0.8
	Millennials	3.0	6.0	5.3	0.9

Table 9

Importance of convenience, cost, health, quality and production process by sex

		Min	Max	M	SD
Convenience		1.0	6.0	3.3	1.5
	Male	1.0	6.0	3.3	1.5
	Female	1.0	6.0	3.4	1.5
Cost		3.0	18.0	11.9	3.1
	Male	4.0	18.0	12.1	2.8
	Female	3.0	18.0	11.7	3.3
Health		2.0	12.0	9.2	2.0
	Male	6.0	12.0	9.4	1.8
	Female	2.0	12.0	9.1	2.0
Production Process		2.0	12.0	9.0	2.5
	Male	4.0	12.0	8.8	2.2
	Female	2.0	12.0	9.3	2.5
Quality		3.0	6.0	5.4	0.8
	Male	3.0	6.0	5.4	0.8
	Female	3.0	6.0	5.5	0.7

Table 10

Importance of convenience, cost, health, quality and production process across races

		Min	Max	M	SD
Convenience		1.0	6.0	3.3	1.5
	American Indian/ Alaskan	3.0	5.0	4.4	0.9
	Asian	1.0	4.0	2.8	1.3
	Black/ African American	1.0	6.0	3.4	1.4
	White	1.0	6.0	3.4	1.5
	Other	1.0	6.0	3.3	1.4
Cost		3.0	18.0	11.9	3.1
	American Indian/ Alaskan	12.0	18.0	13.8	2.5
	Asian	8.0	14.0	10.0	3.5
	Black/ African American	3.0	18.0	14.0	3.8
	White	3.0	18.0	11.6	3.1
	Other	5.0	18.0	12.7	3.1
Health		2.0	12.0	9.2	2.0
	American Indian/ Alaskan	4.0	12.0	8.6	3.4
	Asian	7.0	12.0	9.4	1.6
	Black/ African American	7.0	12.0	9.8	1.4
	White	3.0	12.0	9.2	1.9
	Other	2.0	12.0	8.7	2.5
Production Process		2.0	12.0	9.1	2.5
	American Indian/ Alaskan	5.0	12.0	9.2	2.8
	Asian	6.0	12.0	8.7	1.8
	Black/ African American	6.0	12.0	9.9	1.9
	White	2.0	12.0	9.0	2.5
	Other	3.0	12.0	8.8	2.5
Quality		3.0	6.0	5.4	0.8
	American Indian/ Alaskan	5.0	5.6	6.0	0.5
	Asian	4.0	6.0	5.4	0.7
	Black/ African American	4.0	6.0	5.7	0.6
	White	3.0	6.0	5.5	0.8
	Other	3.0	6.0	5.3	0.9

Table 11

Importance of convenience, cost, health, quality and production process across truncated races

		Min	Max	M	SD
Convenience		1.0	6.0	3.3	1.5
	White	1.0	6.0	3.3	1.5
	Other	1.0	6.0	3.4	1.4
Cost		3.0	18.0	11.9	3.1
	White	4.0	18.0	11.6	2.9
	Other	3.0	18.0	12.9	3.3
Health		2.0	12.0	9.2	2.0
	White	3.0	12.0	9.2	1.9
	Other	2.0	12.0	9.2	2.1
Production Process		2.0	12.0	9.0	2.5
	White	2.0	12.0	9.0	2.5
	Other	3.0	12.0	9.1	2.2
Quality		3.0	6.0	5.4	0.8
	White	3.0	6.0	5.4	0.8
	Other	3.0	6.0	5.4	0.8

Table 12

Importance of convenience, cost, health, quality and production process across income levels

	Min	Max	M	SD
Convenience	1.0	6.0	3.3	1.5
<$30,000	1.0	6.0	3.4	1.6
$30,000 - $49,999	1.0	6.0	3.4	1.5
$50,000 - $99,999	1.0	6.0	3.4	1.6
$100,000-$249,999	1.0	6.0	3.2	1.4
>$250,000	1.0	6.0	3.2	1.3
Cost	3.0	18.0	11.9	3.1
<$30,000	8.0	18.0	14.0	2.7
$30,000 - $49,999	4.0	18.0	11.6	3.1
$50,000 - $99,999	4.0	18.0	11.6	3.1
$100,000-$249,999	5.0	16.0	11.4	2.8
>$250,000	5.0	15.0	8.9	3.0
Health	2.0	12.0	9.2	2.0
<$30,000	4.0	12.0	8.8	2.2
$30,000 - $49,999	2.0	12.0	8.9	2.4
$50,000 - $99,999	5.0	12.0	9.4	1.9
$100,000-$249,999	6.0	12.0	9.3	1.8
>$250,000	6.0	12.0	9.8	2.2
Production Process	2.0	12.0	9.2	2.0
<$30,000	2.0	12.0	8.5	2.6
$30,000 - $49,999	5.0	12.0	8.6	2.3
$50,000 - $99,999	3.0	12.0	9.1	2.6
$100,000-$249,999	2.0	12.0	9.3	2.3
>$250,000	2.0	12.0	9.0	2.5
Quality	6.0	12.0	10.2	2.1
<$30,000	3.0	6.0	5.4	0.7
$30,000 - $49,999	3.0	6.0	5.4	0.8
$50,000 - $99,999	3.0	6.0	5.3	0.9
$100,000-$249,999	4.0	6.0	5.5	0.6
>$250,000	3.0	6.0	5.4	0.9

Table 13

Importance of convenience, cost, health, quality and production process across truncated income levels

	Min	Max	M	SD
Convenience	1.0	6.0	3.3	1.5
<$30,000	1.0	6.0	3.4	1.6
$30,000 - $49,999	1.0	6.0	3.4	1.6
$50,000 - $99,999	1.0	6.0	3.4	1.5
>$100,000	1.0	6.0	3.1	1.4
Cost	3.0	18.0	11.9	3.1
<$30,000	8.0	18.0	14.0	2.7
$30,000 - $49,999	8.0	18.0	12.2	2.2
$50,000 - $99,999	4.0	18.0	11.6	3.1
>$100,000	5.0	16.0	10.9	3.0
Health	2.0	12.0	9.2	2.0
<$30,000	4.0	12.0	8.8	2.2
$30,000 - $49,999	2.0	12.0	8.9	2.4
$50,000 - $99,999	5.0	12.0	9.4	1.9
>$100,000	3.0	12.0	9.4	1.9
Production Process	2.0	12.0	9.0	2.5
<$30,000	2.0	12.0	8.5	2.6
$30,000 - $49,999	5.0	12.0	8.6	2.3
$50,000 - $99,999	3.0	12.0	9.1	2.6
>$100,000	3.0	12.0	9.1	2.6
Quality	3.0	6.0	5.4	0.8
<$30,000	3.0	6.0	5.6	0.7
$30,000 - $49,999	3.0	6.0	5.4	0.8
$50,000 - $99,999	3.0	12.0	9.1	0.9
>$100,000	3.0	6.0	5.5	0.7

APPENDIX U

Table 14

Importance of brand name and store name across generations

	Min	Max	M	SD
Brand Name	1.0	6.0	3.8	1.4
Traditionalists	1.0	6.0	4.3	1.3
Baby Boomers	1.0	6.0	3.7	1.4
Gen X	1.0	6.0	3.8	1.4
Millennials	1.0	6.0	5.0	1.4
Store Name	1.0	6.0	3.3	1.5
Traditionalists	1.0	6.0	3.6	1.4
Baby Boomers	1.0	6.0	3.4	1.6
Gen X	1.0	6.0	3.2	1.4
Millennials	1.0	6.0	3.1	1.6

Importance of Brand Name (1 = Not at all important to 6 = Very important) and Store Name (1 = Not at all important to 6 = Very important) by generation (Traditionalists, Baby Boomers, Gen X, Millennials)

Table 15

Importance of brand name and store name by sex

	Min	Max	M	SD
Brand Name	1.0	6.0	3.8	1.4
Male	1.0	6.0	3.8	1.3
Female	1.0	6.0	3.8	1.4
Store Name	1.0	6.0	3.3	1.5
Male	1.0	6.0	3.3	1.5
Female	1.0	6.0	3.3	1.5

Importance of Brand Name (1 = Not at all important to 6 = Very important) and Store Name (1 = Not at all important to 6 = Very important) by sex (Male, Female)

Table 16
Importance of brand name and store name across races

	Min	Max	Mean	SD
Brand Name	1.0	6.0	3.8	1.4
American Indian/ Alaskan	4.0	5.0	4.5	0.6
Asian	1.0	6.0	4.0	1.3
Black/ African American	1.0	6.0	3.8	2.0
White	1.0	6.0	3.8	1.3
Other	1.0	6.0	4.0	1.6
Store Name	1.0	6.0	3.3	1.5
American Indian/ Alaskan	1.0	4.0	2.3	1.5
Asian	1.0	5.0	3.1	1.4
Black/ African American	1.0	6.0	3.8	1.8
White	1.0	6.0	3.2	1.5
Other	1.0	6.0	3.8	1.5

Importance of Brand Name (1 = Not at all important to 6 = Very important) and Store
Name (1 = Not at all important to 6 = Very important) by race (American Indian/
Alaskan, Asian, Black/ African American, White, Other)

Table 17
Importance of brand name and store name across truncated races

	Min	Max	M	SD
Brand Name	1.0	6.0	3.8	1.4
White	1.0	6.0	4.0	1.4
Other	1.0	6.0	3.9	1.6
Store Name	1.0	6.0	3.3	1.5
White	1.0	6.0	3.3	1.5
Other	1.0	6.0	3.6	1.6

Importance of Brand Name (1 = Not at all important to 6 = Very important) and Store
Name (1 = Not at all important to 6 = Very important) by truncated race (White, Other)

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Table 18

Importance of brand name and store name across income levels

	Min	Max	M	SD
Brand Name	1.0	6.0	3.8	1.4
<$30,000	1.0	6.0	4.2	1.8
$30,000 - $49,999	1.0	6.0	4.0	1.3
$50,000 - $99,999	1.0	6.0	3.5	1.4
$100,000-$249,999	1.0	6.0	3.8	1.2
>$250,000	2.0	6.0	3.9	1.2
Store Name	1.0	6.0	3.3	1.5
<$30,000	1.0	6.0	3.9	1.8
$30,000 - $49,999	1.0	6.0	3.3	1.2
$50,000 - $99,999	1.0	6.0	2.8	1.6
$100,000-$249,999	1.0	6.0	3.5	1.5
>$250,000	1.0	5.0	3.7	1.4

Importance of Brand Name (1 = Not at all important to 6 = Very important) and Store Name (1 = Not at all important to 6 = Very important) by income level (<$30,000, 430,000 - $49,999, $50,000 - $99,999, $100,000 - $249,999, >$250,000)

Table 19

Importance of brand name and store name across truncated income levels

	Min	Max	M	SD
Brand Name	1.0	6.0	3.8	1.4
<$30,000	1.0	6.0	4.2	1.8
$30,000 - $49,999	1.0	6.0	4.0	1.3
$50,000 - $99,999	1.0	6.0	3.5	1.4
>$100,000	1.0	6.0	3.8	1.2
Store Name	1.0	6.0	3.3	1.5
<$30,000	1.0	6.0	3.9	1.8
$30,000 - $49,999	1.0	6.0	3.3	1.2
$50,000 - $99,999	1.0	6.0	2.8	1.6
>$100,000	1.0	6.0	3.5	1.5

Importance of Brand Name (1 = Not at all important to 6 = Very important) and Store Name (1 = Not at all important to 6 = Very important) by truncated income level (<$30,000, 430,000 - $49,999, $50,000 - $99,999, >$100,000)

APPENDIX V

Table 20
Appeal of advertisements across generations

	Min	Max	M	SD
Beef				
Raw	1.0	6.0	3.7	1.3
Traditionalists	1.0	6.0	4.0	1.3
Baby Boomers	1.0	6.0	4.3	1.2
Gen X	1.0	6.0	3.6	1.2
Millennials	1.0	6.0	3.5	1.4
Cooked	1.0	6.0	3.4	1.2
Traditionalists	1.0	6.0	3.3	1.5
Baby Boomers	1.0	6.0	3.4	1.4
Gen X	1.0	6.0	3.6	1.3
Millennials	1.0	6.0	3.2	1.4
Prepared	1.0	6.0	4.0	1.4
Traditionalists	1.0	6.0	3.6	1.2
Baby Boomers	1.0	6.0	3.9	1.3
Gen X	1.0	6.0	4.2	1.4
Millennials	1.0	6.0	4.3	1.4
Chicken				
Raw	1.0	6.0	3.4	1.4
Traditionalists	1.0	6.0	3.5	1.4
Baby Boomers	1.0	6.0	3.3	1.4
Gen X	1.0	6.0	3.6	1.4
Millennials	1.0	6.0	3.2	1.4
Cooked	3.0	6.0	4.5	1.2
Traditionalists	1.0	6.0	4.6	1.0
Baby Boomers	1.0	6.0	4.3	1.3
Gen X	1.0	6.0	4.7	0.9
Millennials	1.0	6.0	4.5	1.2
Prepared	1.0	6.0	4.0	1.4
Traditionalists	1.0	6.0	3.7	1.3
Baby Boomers	1.0	6.0	4.2	1.3
Gen X	1.0	6.0	4.2	1.3
Millennials	1.0	6.0	4.1	1.6
Pork				
Raw	1.0	6.0	2.3	1.2
Traditionalists	1.0	6.0	2.4	1.4

Table 20 Continued

	Min	Max	M	SD
Baby Boomers	1.0	6.0	3.6	1.4
Gen X	1.0	6.0	2.3	1.4
Millennials	1.0	6.0	1.8	1.1
Cooked	1.0	3.0	4.1	1.3
Traditionalists	1.0	6.0	3.8	1.3
Baby Boomers	1.0	6.0	4.1	1.3
Gen X	1.0	6.0	4.4	1.3
Millennials	1.0	6.0	4.2	1.4

Appeal of advertisements (1 = Not at all appealing to 6 = Very appealing) by generation (Traditionalists, Baby Boomers, Gen X, Millennials)

Table 21

Appeal of advertisements by sex

	Min	Max	M	SD
Beef				
Raw	1.0	6.0	4.6	1.3
Male	1.0	6.0	3.9	1.3
Female	1.0	6.0	3.5	1.3
Cooked	1.0	6.0	3.4	1.4
Male	1.0	6.0	3.6	1.3
Female	1.0	6.0	3.3	1.4
Prepared	1.0	6.0	4.0	1.4
Male	1.0	6.0	4.0	1.3
Female	1.0	6.0	4.0	1.4
Chicken				
Raw	1.0	6.0	3.4	1.4
Male	1.0	6.0	3.7	1.3
Female	1.0	6.0	3.2	1.4
Cooked	1.0	6.0	4.5	1.2
Male	1.0	6.0	4.5	1.0
Female	1.0	6.0	4.5	1.2
Prepared	1.0	6.0	4.0	1.3
Male	1.0	6.0	3.9	1.4
Female	1.0	6.0	4.0	1.4
Pork				
Raw	1.0	6.0	4.2	1.3
Male	1.0	6.0	2.6	1.5
Female	1.0	6.0	2.1	1.3
Cooked	1.0	6.0	4.1	1.3
Male	1.0	6.0	4.2	1.2
Female	1.0	6.0	4.1	1.4

Appeal of advertisements (1 = Not at all appealing to 6 = Very appealing) by sex (Male, Female)

Table 22

Appeal of advertisements across races

	Min	Max	M	SD
Beef				
Raw	1.0	6.0	3.7	1.3
American Indian/ Alaskan	2.0	6.0	5.0	1.2
Asian	2.0	5.0	3.5	0.8
Black/ African American	1.0	6.0	3.9	1.7
White	1.0	6.0	3.6	1.3
Other	1.0	6.0	3.9	1.2
Cooked	1.0	6.0	3.3	1.4
American Indian/ Alaskan	1.0	6.0	3.8	2.6
Asian	1.0	4.0	3.1	1.0
Black/ African American	1.0	6.0	3.7	1.6
White	1.0	6.0	4.0	1.3
Other	1.0	6.0	3.7	1.3
Prepared	1.0	6.0	4.0	1.4
American Indian/ Alaskan	2.0	6.0	4.2	2.0
Asian	2.0	5.0	4.0	1.0
Black/ African American	3.0	6.0	4.1	1.5
White	1.0	6.0	4.0	1.3
Other	1.0	6.0	4.3	1.6
Chicken	1.0	6.0	3.2	1.4
Raw	1.0	6.0	3.4	1.4
American Indian/ Alaskan	2.0	6.0	4.0	1.6
Asian	2.0	5.0	3.3	1.4
Black/ African American	1.0	6.0	4.1	1.7
White	1.0	6.0	3.2	1.3
Other	1.0	6.0	4.1	1.3
Cooked	1.0	6.0	4.5	1.2
American Indian/ Alaskan	2.0	6.0	3.8	1.5
Asian	2.0	5.0	4.1	1.0
Black/ African American	1.0	6.0	5.0	0.9
White	1.0	6.0	4.5	1.1
Other	1.0	6.0	4.8	1.3
Prepared	1.0	6.0	4.0	1.4
American Indian/ Alaskan	1.0	4.0	3.6	0.9
Asian	2.0	6.0	2.2	1.1
Black/ African American	1.0	6.0	4.4	1.5
White	1.0	6.0	3.9	1.4
Other	1.0	6.0	4.7	1.3

Table 23

Appeal of advertisements across truncated races

	Min	Max	M	SD
Beef				
Raw	1.0	6.0	3.7	1.3
White	1.0	6.0	3.6	1.3
Other	1.0	6.0	3.9	1.3
Cooked	1.0	6.0	3.4	1.4
White	1.0	6.0	3.4	1.4
Other	1.0	6.0	4.0	1.2
Prepared	1.0	6.0	3.4	1.4
White	1.0	6.0	3.4	1.4
Other	1.0	6.0	4.0	1.2
Chicken				
Raw	1.0	6.0	3.4	1.4
White	1.0	6.0	3.4	1.3
Other	1.0	6.0	4.1	1.5
Cooked	1.0	6.0	4.5	1.2
White	1.0	6.0	4.5	1.1
Other	1.0	6.0	3.6	1.5
Prepared	1.0	6.0	4.0	1.4
White	1.0	6.0	3.9	1.4
Other	1.0	6.0	4.3	1.4
Pork				
Raw	1.0	6.0	2.3	1.4
White	1.0	6.0	3.6	1.3
Other	1.0	6.0	2.4	1.5
Cooked	1.0	6.0	4.1	1.3
White	1.0	6.0	4.1	1.2
Other	1.0	6.0	4.1	1.4

Appeal of advertisements (1 = Not at all appealing to 6 = Very appealing) by truncated race variable (White, Other)

Table 24

Appeal of advertisements across income levels

	Min	Max	M	SD
Beef				
Raw	1.0	6.0	3.7	1.3
<$30,000	1.0	6.0	3.9	1.5
$30,000 - $49,999	1.0	6.0	4.0	1.4
$50,000 - $99,999	1.0	6.0	3.7	1.3
$100,000-$249,999	1.0	6.0	3.5	1.3
>$250,000	1.0	6.0	3.4	1.0
Cooked	1.0	6.0	3.4	1.4
<$30,000	1.0	6.0	3.8	1.5
$30,000 - $49,999	1.0	6.0	3.2	1.5
$50,000 - $99,999	1.0	6.0	4.6	1.2
$100,000-$249,999	1.0	6.0	3.4	1.3
>$250,000	1.0	6.0	3.1	1.1
Prepared	1.0	6.0	4.0	1.4
<$30,000	1.0	6.0	4.5	1.5
$30,000 - $49,999	1.0	6.0	3.6	1.4
$50,000 - $99,999	1.0	6.0	4.1	1.5
$100,000-$249,999	1.0	6.0	4.0	1.3
>$250,000	1.0	6.0	3.6	1.5
Chicken				
Raw	1.0	6.0	3.4	1.4
<$30,000	1.0	6.0	4.2	1.5
$30,000 - $49,999	1.0	6.0	3.2	1.3
$50,000 - $99,999	1.0	6.0	3.5	1.6
$100,000-$249,999	1.0	6.0	3.2	1.3
>$250,000	1.0	6.0	2.6	1.3
Cooked	1.0	6.0	4.5	1.2
<$30,000	1.0	6.0	4.8	1.3
$30,000 - $49,999	1.0	6.0	4.1	1.2
$50,000 - $99,999	1.0	6.0	4.6	1.2
$100,000-$249,999	1.0	6.0	4.6	1.0
>$250,000	1.0	6.0	4.6	0.9
Prepared	1.0	6.0	4.0	1.4
<$30,000	1.0	6.0	4.5	1.5
$30,000 - $49,999	1.0	6.0	3.6	1.4
$50,000 - $99,999	1.0	6.0	4.1	1.5
$100,000-$249,999	1.0	6.0	4.0	1.3
>$250,000	1.0	6.0	3.6	1.5

Table 24 Continued

	Min	Max	M	SD
Pork				
Raw	1.0	6.0	2.3	1.4
<$30,000	1.0	6.0	3.3	1.8
$30,000 - $49,999	1.0	6.0	2.2	1.3
$50,000 - $99,999	1.0	6.0	2.2	1.5
$100,000-$249,999	1.0	6.0	2.1	1.2
>$250,000	1.0	6.0	1.9	1.2
Cooked	1.0	6.0	4.1	1.3
<$30,000	1.0	6.0	4.5	1.3
$30,000 - $49,999	1.0	6.0	3.8	1.2
$50,000 - $99,999	1.0	6.0	4.3	1.4
$100,000-$249,999	1.0	6.0	4.1	1.2
>$250,000	1.0	6.0	3.9	0.9

Appeal of advertisements (1 = Not at all appealing to 6 = Very appealing) by income level (<$30,000, $30,000 - $49,999, $50,000 - $99,999, $100,000 - $249,999, >$250,000)

Table 25

Appeal of advertisements across truncated income levels

	Min	Max	M	SD
Beef				
Raw	1.0	6.0	3.7	1.3
<$30,000	1.0	6.0	3.9	1.5
$30,000 - $49,999	1.0	6.0	5.1	1.0
$50,000 - $99,999	1.0	6.0	3.7	1.3
>$100,000	1.0	6.0	3.4	1.3
Cooked	1.0	6.0	3.4	1.4
<$30,000	1.0	6.0	3.8	1.5
$30,000 - $49,999	1.0	6.0	3.2	1.5
$50,000 - $99,999	1.0	6.0	3.6	1.5
>$100,000	1.0	6.0	3.3	1.2
Prepared	1.0	6.0	4.0	1.4
<$30,000	1.0	6.0	4.0	1.4
$30,000 - $49,999	1.0	6.0	4.1	1.4
$50,000 - $99,999	1.0	6.0	3.7	1.4
>$100,000	1.0	6.0	4.2	1.4
Chicken				
Raw	1.0	6.0	3.4	1.4
<$30,000	1.0	6.0	3.8	1.5
$30,000 - $49,999	1.0	6.0	3.2	1.5
$50,000 - $99,999	1.0	6.0	4.6	1.2
>$100,000	1.0	6.0	3.4	1.3
Cooked	1.0	6.0	3.4	1.4
<$30,000	1.0	6.0	4.2	1.5
$30,000 - $49,999	1.0	6.0	3.2	1.3
$50,000 - $99,999	1.0	6.0	3.5	1.6
>$100,000	1.0	6.0	3.1	1.3
Prepared	1.0	6.0	4.0	1.4
<$30,000	1.0	6.0	4.5	1.5
$30,000 - $49,999	1.0	6.0	3.6	1.3
$50,000 - $99,999	1.0	6.0	4.1	1.5
>$100,000	1.0	6.0	3.9	1.3
Pork				
Raw	1.0	6.0	2.3	1.4
<$30,000	1.0	6.0	3.3	1.8
$30,000 - $49,999	1.0	6.0	2.2	1.3
$50,000 - $99,999	1.0	6.0	2.2	1.5
$>$100,000	1.0	6.0	2.0	1.2

APPENDIX W

Table 26

Term relation to bad or good across generations

	Min	Max	M	SD
All Natural	1.0	6.0	4.7	1.3
Traditionalists	2.0	6.0	4.6	1.2
Baby Boomers	1.0	6.0	4.5	1.4
Gen X	1.0	6.0	4.8	1.3
Millennials	1.0	6.0	5.0	1.0
Farm Raised	1.0	6.0	4.6	1.2
Traditionalists	2.0	6.0	4.4	1.2
Baby Boomers	1.0	6.0	4.5	1.3
Gen X	1.0	6.0	4.8	0.9
Millennials	1.0	6.0	4.6	1.4
Fresh	1.0	6.0	5.0	1.1
Traditionalists	2.0	6.0	4.9	1.3
Baby Boomers	1.0	6.0	4.8	1.1
Gen X	1.0	6.0	5.1	1.1
Millennials	1.0	6.0	5.3	1.0
Gluten Free	1.0	6.0	3.7	1.4
Traditionalists	1.0	6.0	3.9	1.4
Baby Boomers	1.0	6.0	3.5	1.5
Gen X	1.0	6.0	3.8	1.3
Millennials	1.0	6.0	4.0	1.3
Grade A	1.0	6.0	4.5	1.2
Traditionalists	2.0	6.0	4.7	1.1
Baby Boomers	1.0	6.0	4.5	1.2
Gen X	1.0	6.0	4.5	1.0
Millennials	1.0	6.0	4.4	1.3
Healthy	1.0	6.0	4.7	1.2
Traditionalists	2.0	6.0	4.7	1.2
Baby Boomers	1.0	6.0	4.5	1.2
Gen X	1.0	6.0	4.8	1.1
Millennials	1.0	6.0	5.1	1.1
Lean	1.0	6.0	4.6	1.1
Traditionalists	2.0	6.0	4.7	1.1
Baby Boomers	1.0	6.0	4.6	1.1
Gen X	1.0	6.0	4.7	1.2
Millennials	1.0	6.0	4.7	1.1
Local	1.0	6.0	4.1	1.2
Traditionalists	2.0	6.0	4.7	1.1
Baby Boomers	1.0	6.0	4.8	1.1

Table 26 Continued

	Min	Max	M	SD
Gen X	1.0	6.0	4.5	1.4
Millennials	1.0	1.0	4.8	1.2
Moist	1.0	6.0	4.1	1.3
Traditionalists	2.0	6.0	4.1	1.2
Baby Boomers	1.0	6.0	4.0	1.4
Gen X	1.0	6.0	4.3	1.3
Millennials	1.0	6.0	4.0	1.4
No Added	1.0	6.0	5.0	1.2
Hormones				
Traditionalists	3.0	6.0	5.1	1.0
Baby Boomers	1.0	6.0	5.0	1.3
Gen X	1.0	6.0	4.9	1.2
Millennials	1.0	6.0	5.0	1.2
No Antibiotics	1.0	6.0	5.0	1.2
Traditionalists	3.0	6.0	5.1	1.1
Baby Boomers	1.0	6.0	5.0	1.3
Gen X	1.0	6.0	5.0	1.3
Millennials	1.0	6.0		
No Salt or Water	1.0	6.0	4.6	1.3
Added				
Traditionalists	3.0	6.0	5.0	1.0
Baby Boomers	1.0	6.0	4.6	1.3
Gen X	1.0	6.0	4.7	1.2
Millennials	1.0	6.0	4.4	1.2
Organic	1.0	6.0	4.6	1.4
Traditionalists	1.0	6.0	4.3	1.4
Baby Boomers	1.0	6.0	4.6	1.4
Gen X	1.0	6.0	4.5	1.5
Millennials	1.0	6.0	4.9	1.2
Tender	1.0	6.0	4.3	1.2
Traditionalists	3.0	6.0	5.3	1.0
Baby Boomers	1.0	6.0	4.3	1.2
Gen X	1.0	6.0	4.3	1.3
Millennials	1.0	6.0	4.4	1.1
USDA Inspected	1.0	6.0	4.9	1.2
Traditionalists	3.0	6.0	5.3	1.0
Baby Boomers	1.0	6.0	4.8	1.3
Gen X	1.0	6.0	5.1	1.1
Millennials	1.0	6.0	4.7	1.2
Vegetarian Fed	1.0	6.0	4.1	1.4
Traditionalists	1.0	6.0	4.1	1.5
Baby Boomers	1.0	6.0	4.2	1.4

Table 26 Continued

	Min	Max	M	SD
Gen X	1.0	6.0	4.0	1.4
Millennials	1.0	6.0	4.1	1.5

Term relation to bad or good (1 = Very bad to 6 = Very good) by generation (Traditionalists, Baby Boomers, Gen X, Millennials)

Table 27

Term relation to bad or good by sex

	Min	Max	M	SD
All Natural	1.0	6.0	4.7	1.3
Male	1.0	6.0	4.5	1.3
Female	1.0	6.0	4.8	1.3
Farm Raised	1.0	6.0	4.6	1.2
Male	1.0	6.0	4.5	1.2
Female	1.0	6.0	4.6	1.2
Fresh	1.0	6.0	5.0	1.1
Male	3.0	6.0	4.9	1.0
Female	1.0	6.0	5.1	1.2
Gluten Free	1.0	6.0	3.7	1.4
Male	1.0	6.0	3.5	1.4
Female	1.0	6.0	2.9	1.4
Grade A	1.0	6.0	4.5	1.2
Male	2.0	6.0	4.3	1.1
Female	1.0	6.0	4.6	1.2
Healthy	1.0	6.0	4.7	1.2
Male	2.0	6.0	4.5	1.1
Female	1.0	6.0	4.8	1.2
Lean	1.0	6.0	4.6	1.1
Male	3.0	6.0	4.7	1.0
Female	1.0	6.0	4.6	1.2
Local	1.0	6.0	4.7	1.2
Male	1.0	6.0	4.6	1.0
Female	1.0	6.0		
Moist	1.0	6.0	4.1	1.3
Male	1.0	6.0	3.9	1.4
Female	1.0	6.0	4.2	1.2
No Added Hormones	1.0	6.0	5.0	1.2
Male	1.0	6.0	4.8	1.2
Female	1.0	6.0	5.2	1.2
No Antibiotics	1.0	6.0	5.0	1.2
Male	1.0	6.0	4.8	1.2
Female	1.0	6.0	5.1	1.2
No Salt or Water Added	1.0	6.0	4.6	1.3
Male	1.0	6.0	4.4	1.3
Female	1.0	6.0	4.8	1.2
Organic	1.0	6.0	4.6	1.4
Male	1.0	6.0	4.2	1.4

Table 27 Continued

	Min	Max	M	SD
Female	1.0	6.0	4.8	1.3
Tender	1.0	6.0	4.3	1.2
Male	1.0	6.0	4.3	1.2
Female	1.0	6.0	4.4	1.2
USDA Inspected	1.0	6.0	4.9	1.2
Male	1.0	6.0	4.9	1.1
Female	1.0	6.0	4.9	1.2
Vegetarian Fed	1.0	6.0	4.1	1.4
Male	1.0	6.0	3.7	1.6
Female	1.0	6.0	4.3	1.2

Term relation to bad or good (1 = Very bad to 6 = Very good) by sex (Male, Female)

Table 28

Term relation to bad or good across races

	Min	Max	M	SD
All Natural	1.0	6.0	4.7	1.3
American Indian/ Alaskan	3.0	6.0	5.2	1.3
Asian	3.0	6.0	4.3	1.1
Black/ African American	2.0	6.0	4.8	1.3
White	1.0	6.0	4.7	1.3
Other	1.0	6.0	4.8	1.4
Farm Raised	1.0	6.0	4.6	1.2
American Indian/ Alaskan	3.0	6.0	4.8	1.3
Asian	3.0	6.0	4.5	1.2
Black/ African American	1.0	6.0	4.7	1.4
White	1.0	6.0	4.5	1.2
Other	3.0	6.0	4.9	1.0
Fresh	1.0	6.0	5.0	1.1
American Indian/ Alaskan	3.0	6.0	4.8	1.3
Asian	3.0	6.0	4.5	1.3
Black/ African American	4.0	6.0	5.6	0.8
White	1.0	6.0	5.0	1.1
Other	3.0	6.0	5.3	0.9
Gluten Free	1.0	6.0	3.7	1.4
American Indian/ Alaskan	3.0	6.0	4.4	1.1
Asian	1.0	5.0	3.4	1.4
Black/ African American	3.0	6.0	4.8	1.1
White	1.0	6.0	4.5	1.1
Other	1.0	6.0	3.7	1.5
Grade A	1.0	6.0	4.5	1.2
American Indian/ Alaskan	4.0	6.0	4.8	0.8
Asian	3.0	6.0	3.7	0.9
Black/ African American	3.0	6.0	4.8	1.1
White	1.0	6.0	4.5	1.1
Other	2.0	6.0	4.3	1.4
Healthy	1.0	6.0	4.7	1.2
American Indian/ Alaskan	4.0	6.0	5.0	1.0
Asian	3.0	5.0	3.9	3.8
Black/ African American	3.0	6.0	5.0	1.0
White	1.0	6.0	4.7	1.1
Other	2.0	6.0	4.9	1.3
Lean	1.0	6.0	4.6	1.1
American Indian/ Alaskan	4.0	6.0	5.2	0.8
Asian	3.0	5.0	3.8	0.6
Black/ African American	3.0	6.0	5.3	1.0

Table 28 Continued

	Min	Max	M	SD
White	1.0	6.0	4.7	1.1
Other	2.0	6.0	4.6	1.1
Local	1.0	6.0	4.7	1.2
American Indian/ Alaskan	4.0	6.0	4.8	1.1
Asian	2.0	6.0	4.2	1.1
Black/ African American	3.0	6.0	5.1	1.0
White	1.0	6.0	4.8	1.2
Other	1.0	6.0	4.1	1.4
Moist	1.0	6.0	4.1	1.3
American Indian/ Alaskan	3.0	5.0	4.0	0.7
Asian	2.0	5.0	3.6	0.9
Black/ African American	2.0	6.0	4.0	1.0
White	1.0	6.0	5.0	1.2
Other	1.0	6.0	4.0	1.5
No Added Hormones	1.0	6.0	5.0	1.2
American Indian/ Alaskan	4.0	6.0	5.2	0.8
Asian	3.0	6.0	4.6	1.2
Black/ African American	3.0	6.0	4.8	1.0
White	1.0	6.0	4.8	1.2
Other	1.0	6.0	4.8	1.5
No Antibiotics	1.0	6.0	5.0	1.2
American Indian/ Alaskan	4.0	6.0	5.2	0.8
Asian	3.0	6.0	4.7	1.1
Black/ African American	5.0	6.0	5.9	0.8
White	1.0	6.0	5.0	1.2
Other	1.0	6.0	4.7	1.4
No Salt or Water Added	1.0	6.0	5.0	1.2
American Indian/ Alaskan	4.0	6.0	5.2	0.8
Asian	3.0	6.0	4.3	1.3
Black/ African American	4.0	6.0	5.4	0.7
White	1.0	6.0	4.6	1.2
Other	1.0	6.0	4.8	1.5
Organic	1.0	6.0	4.6.	1.3
American Indian/ Alaskan	3.0	6.0	4.0	0.7
Asian	2.0	6.0	4.5	1.3
Black/ African American	1.0	6.0	4.7	1.5
White	1.0	6.0	4.6	1.2

Table 28 Continued

	Min	Max	M	SD
Other	1.0	6.0	4.6	1.7
Tender	1.0	6.0	4.3	1.2
American Indian/ Alaskan	4.0	6.0	5.2	0.8
Asian	3.0	5.0	3.9	0.8
Black/ African American	3.0	6.0	4.9	0.9
White	1.0	6.0	4.3	1.2
Other	1.0	6.0	4.5	1.3
USDA Inspected	1.0	6.0	4.9	1.2
American Indian/ Alaskan	2.0	6.0	4.8	1.8
Asian	3.0	6.0	4.6	1.3
Black/ African American	3.0	6.0	5.5	0.9
White	1.0	6.0	4.9	1.2
Other	1.0	6.0	5.0	1.3
Vegetarian Fed	1.0	6.0	4.1	1.4
American Indian/ Alaskan	4.0	6.0	4.6	0.9
Asian	1.0	6.0	3.5	1.6
Black/ African American	3.0	6.0	4.9	1.3
White	1.0	6.0	4.0	1.4
Other	1.0	6.0	4.3	1.4

Term relation to bad or good (1 = Very bad to 6 = Very good) by race (American Indian/ Alaska, Asian, Black/ African American, White, Other)

Table 29

Term relation to bad or good across truncated races

	Min	Max	M	SD
All Natural	1.0	6.0	4.7	1.3
White	3.0	6.0	4.9	1.3
Other	1.0	6.0	4.7	1.3
Farm Raised	1.0	6.0	4.6	1.2
White	3.0	6.0	4.8	1.1
Other	1.0	6.0	4.5	1.2
Fresh	1.0	6.0	5.0	1.1
White	3.0	6.0	5.3	1.0
Other	1.0	6.0	4.9	1.1
Gluten Free	1.0	6.0	3.7	1.4
White	3.0	6.0	3.7	1.7
Other	1.0	6.0	3.6	1.4
Grade A	1.0	6.0	4.5	1.2
White	3.0	6.0	4.2	1.6
Other	1.0	6.0	3.6	1.4
Healthy	1.0	6.0	4.7	1.1
White	3.0	6.0	5.0	1.2
Other	1.0	6.0	4.5	1.2
Lean	1.0	6.0	4.6	1.1
White	2.0	6.0	4.2	1.6
Other	1.0	6.0	4.9	1.1
Local	1.0	6.0	4.7	1.2
White	3.0	6.0	4.1	1.6
Other	1.0	6.0	4.8	1.1
Moist	1.0	6.0	4.1	1.3
White	1.0	6.0	3.7	1.9
Other	1.0	6.0	4.1	1.3
No Added Hormones	1.0	6.0	5.0	1.2
White	1.0	6.0	4.8	1.6
Other	1.0	6.0	5.0	1.2
No Antibiotics	1.0	6.0	5.0	1.2
White	1.0	6.0	4.4	1.6
Other	1.0	6.0	5.0	1.2
No Salt or Water Added	1.0	6.0	4.6	1.3
White	1.0	6.0	4.4	1.8
Other	1.0	6.0	4.6	1.2
Organic	1.0	6.0	4.6	1.4
White	1.0	6.0	4.2	1.6
Other	1.0	6.0	4.6	1.3
Tender	1.0	6.0	4.4	1.2
White	2.0	6.0	4.6	1.2

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Table 29 Continued

	Min	Max	M	SD
Other	1.0	6.0	4.9	1.2
USDA Inspected	1.0	6.0	4.1	1.2
White	3.0	6.0	5.0	1.1
Other	1.0	6.0	4.9	1.2
Vegetarian Fed	1.0	6.0	4.1	1.4
White	1.0	6.0	3.9	1.5
Other	1.0	6.0	4.0	1.4

Term relation to bad or good (1 = Very bad to 6 = Very good) by truncated race variable (White, Other)

Table 30
Term relation to bad or good across truncated income levels

	Min	Max	M	SD
All Natural	1.0	6.0	3.9	1.7
<$30,000	1.0	6.0	2.4	1.8
$30,000 - $49,999	1.0	6.0	3.6	1.7
$50,000 - $99,999	1.0	6.0	3.9	1.7
>$100,000	1.0	6.0	4.1	1.6
Farm Raised	1.0	6.0	3.9	1.7
<$30,000	1.0	6.0	3.8	1.7
$30,000 - $49,999	1.0	6.0	3.6	1.6
$50,000 - $99,999	1.0	6.0	3.8	1.7
>$100,000	1.0	6.0	3.9	1.7
Fresh	1.0	6.0	4.6	1.5
<$30,000	1.0	6.0	4.5	1.7
$30,000 - $49,999	1.0	6.0	4.9	1.1
$50,000 - $99,999	1.0	6.0	4.5	1.6
>$100,000	1.0	6.0	4.5	1.5
Gluten Free	1.0	6.0	2.4	1.7
<$30,000	1.0	6.0	2.3	1.6
$30,000 - $49,999	1.0	6.0	2.4	1.8
$50,000 - $99,999	1.0	6.0	2.0	1.4
>$100,000	1.0	6.0	2.3	1.6
Grade A	1.0	6.0	3.7	1.6
<$30,000	1.0	6.0	4.2	1.6
$30,000 - $49,999	1.0	6.0	3.8	1.5
$50,000 - $99,999	1.0	6.0	3.7	1.7
>$100,000	1.0	6.0	3.6	1.6
Healthy	1.0	6.0	4.0	1.6
<$30,000	1.0	6.0	3.9	1.7
$30,000 - $49,999	1.0	6.0	4.0	1.5
$50,000 - $99,999	1.0	6.0	4.0	1.6
>$100,000	1.0	6.0	3.8	1.6
Lean	1.0	1.0	4.0	1.5
<$30,000	1.0	6.0	4.1	1.6
$30,000 - $49,999	1.0	6.0	4.0	1.5
$50,000 - $99,999	1.0	6.0	4.2	1.5
>$100,000	1.0	6.0	3.9	1.5
Local	1.0	6.0	4.3	1.5
<$30,000	1.0	6.0	4.4	1.7
$30,000 - $49,999	1.0	6.0	4.6	1.2
$50,000 - $99,999	1.0	6.0	4.1	1.7
>$100,000	1.0	6.0	4.4	1.5

Table 30 Continued

	Min	Max	M	SD
Moist	1.0	6.0	3.5	1.6
<$30,000	1.0	6.0	3.6	1.7
$30,000 - $49,999	1.0	6.0	2.9	1.5
$50,000 - $99,999	1.0	6.0	3.6	1.7
>$100,000	1.0	6.0	3.0	1.6
No Added Hormones	1.0	6.0	4.6	1.5
<$30,000	1.0	6.0	4.5	1.7
$30,000 - $49,999	1.0	6.0	4.5	1.4
$50,000 - $99,999	1.0	6.0	4.6	1.7
>$100,000	1.0	6.0	4.7	1.5
No Antibiotics	1.0	6.0	4.6	1.6
<$30,000	1.0	6.0	4.7	1.5
$30,000 - $49,999	1.0	6.0	4.7	1.4
$50,000 - $99,999	1.0	6.0	4.6	1.7
>$100,000	1.0	6.0	4.8	1.6
No Salt or Water Added	1.0	6.0	4.2	1.6
<$30,000	1.0	6.0	4.0	1.8
$30,000 - $49,999	1.0	6.0	4.4	1.5
$50,000 - $99,999	1.0	6.0	4.4	1.6
>$100,000	1.0	6.0	4.0	1.6
Organic	1.0	6.0	4.1	1.7
<$30,000	1.0	6.0	4.6	1.4
$30,000 - $49,999	1.0	6.0	3.5	1.7
$50,000 - $99,999	1.0	6.0	4.1	1.8
>$100,000	1.0	6.0	4.3	1.6
Tender	1.0	6.0	3.9	1.6
<$30,000	1.0	6.0	4.0	1.8
$30,000 - $49,999	1.0	6.0	4.1	1.4
$50,000 - $99,999	1.0	6.0	3.7	1.7
>$100,000	1.0	6.0	3.8	1.5
USDA Inspected	1.0	6.0	4.5	1.6
<$30,000	1.0	6.0	4.6	1.6
$30,000 - $49,999	1.0	6.0	4.6	1.4
$50,000 - $99,999	1.0	6.0	4.4	1.7
>$100,000	1.0	6.0	4.2	1.5
Vegetarian Fed	1.0	6.0	3.4	1.8
<$30,000	1.0	6.0	2.8	1.7
$30,000 - $49,999	1.0	6.0	3.2	1.9

Table 30 Continued

	Min	Max	M	SD
$50,000 - $99,999	1.0	6.0	3.3	1.8
>$100,000	1.0	6.0	3.3	1.8

Term relation to bad or good (1 = Very bad to 6 = Very good) by truncated income level variable (<$30,000, $30,000 - $49,999, $50,000- $99,999 >$100,000)

Table 31

Term relation to bad or good across income levels

	Min	Max	M	SD
All Natural	1.0	6.0	4.7	1.3
<$30,000	1.0	6.0	5.3	0.9
$30,000 - $49,999	1.0	6.0	4.5	1.4
$50,000 - $99,999	1.0	6.0	4.7	1.2
$100,000-$249,999	1.0	6.0	4.7	1.3
>$250,000	1.0	6.0	4.3	1.7
Farm Raised	1.0	6.0	4.6	1.2
<$30,000	1.0	6.0	5.1	1.0
$30,000 - $49,999	1.0	6.0	4.6	1.1
$50,000 - $99,999	1.0	6.0	4.6	1.1
$100,000-$249,999	1.0	6.0	4.5	1.3
>$250,000	1.0	6.0	3.8	1.5
Fresh	1.0	6.0	5.0	1.1
<$30,000	1.0	6.0	5.4	1.0
$30,000 - $49,999	1.0	6.0	4.9	1.2
$50,000 - $99,999	1.0	6.0	4.6	1.1
$100,000-$249,999	1.0	6.0	5.1	0.9
>$250,000	1.0	6.0	4.4	1.7
Gluten Free	1.0	6.0	3.7	1.4
<$30,000	1.0	6.0	4.2	1.8
$30,000 - $49,999	1.0	6.0	4.1	1.4
$50,000 - $99,999	1.0	6.0	3.6	1.4
$100,000-$249,999	1.0	6.0	3.5	1.2
>$250,000	1.0	6.0	3.4	1.1
Grade A	1.0	6.0	4.5	1.2
<$30,000	1.0	6.0	5.0	1.2
$30,000 - $49,999	1.0	6.0	4.6	1.1
$50,000 - $99,999	1.0	6.0	4.4	1.2
$100,000-$249,999	1.0	6.0	4.5	1.1
>$250,000	1.0	6.0	3.4	1.1
Healthy	1.0	6.0	4.7	1.2
<$30,000	1.0	6.0	5.3	1.0
$30,000 - $49,999	1.0	6.0	4.6	1.2
$50,000 - $99,999	1.0	6.0	4.6	1.1
$100,000-$249,999	1.0	6.0	4.9	1.1
>$250,000	1.0	6.0	3.6	1.3
Lean	1.0	6.0	4.6	1.1
<$30,000	1.0	6.0	5.0	1.1
$30,000 - $49,999	1.0	6.0	4.5	1.0
$50,000 - $99,999	1.0	6.0	4.6	1.1

Table 31 Continued

	Min	Max	M	SD
$100,000-$249,999	1.0	6.0	4.6	1.0
>$250,000	1.0	6.0	4.0	1.4
Local	1.0	6.0	4.7	1.2
<$30,000	1.0	6.0	4.9	1.3
$30,000 - $49,999	1.0	6.0	4.8	1.1
$50,000 - $99,999	1.0	6.0	4.6	1.2
$100,000-$249,999	1.0	6.0	4.6	1.0
>$250,000	1.0	6.0	4.6	1.2
Moist	1.0	6.0	4.1	1.3
<$30,000	1.0	6.0	4.5	1.3
$30,000 - $49,999	1.0	6.0	4.3	1.1
$50,000 - $99,999	1.0	6.0	4.0	1.2
$100,000-$249,999	1.0	6.0	4.2	1.4
>$250,000	1.0	6.0	4.7	1.5
No Added Hormones	1.0	6.0	5.0	1.2
<$30,000	1.0	6.0	4.9	1.5
$30,000 - $49,999	1.0	6.0	5.3	1.0
$50,000 - $99,999	1.0	6.0	4.9	1.3
$100,000-$249,999	1.0	6.0	5.2	1.1
>$250,000	1.0	6.0	4.7	1.5
No Antibiotics	1.0	6.0	5.0	1.2
<$30,000	1.0	6.0	4.9	1.6
$30,000 - $49,999	1.0	6.0	5.2	1.0
$50,000 - $99,999	1.0	6.0	4.9	1.3
$100,000-$249,999	1.0	6.0	5.2	1.1
>$250,000	1.0	6.0	4.6	1.5
No Salt or Water Added	1.0	6.0	4.6	1.3
<$30,000	1.0	6.0	4.7	1.4
$30,000 - $49,999	1.0	6.0	4.8	1.1
$50,000 - $99,999	1.0	6.0	4.5	1.4
$100,000-$249,999	1.0	6.0	4.6	1.1
>$250,000	1.0	6.0	4.1	1.3
Organic	1.0	6.0	4.6	1.4
<$30,000	1.0	6.0	4.5	1.7
$30,000 - $49,999	1.0	6.0	4.2	1.4
$50,000 - $99,999	1.0	6.0	4.5	1.4
$100,000-$249,999	1.0	6.0	4.8	1.3
>$250,000	1.0	6.0	4.7	1.3
Tender	1.0	6.0	4.3	1.2
<$30,000	1.0	6.0	5.2	0.9
$30,000 - $49,999	1.0	6.0	4.4	1.1
$50,000 - $99,999	1.0	6.0	4.2	1.1

Table 31 Continued

	Min	Max	M	SD
$100,000-$249,999	1.0	6.0	4.4	1.3
>$250,000	1.0	6.0	3.2	1.1
USDA Inspected	1.0	6.0	4.9	1.2
<$30,000	1.0	6.0	5.5	1.0
$30,000 - $49,999	1.0	6.0	5.2	1.1
$50,000 - $99,999	1.0	6.0	4.8	1.1
$100,000-$249,999	1.0	6.0	4.8	1.2
>$250,000	1.0	6.0	3.8	1.5
Vegetarian Fed	1.0	6.0	4.1	1.4
<$30,000	1.0	6.0	4.5	1.3
$30,000 - $49,999	1.0	6.0	4.1	1.4
$50,000 - $99,999	1.0	6.0	3.9	1.3
$100,000-$249,999	1.0	6.0	4.2	1.4
>$250,000	1.0	6.0	3.6	1.3

Term relation to bad or good (1 = Very bad to 6 = Very good) by income level
(<$30,000, $30,000 - $49,999, $50,000- $99,999 $100,000 - $249,999, >$250, 000)

APPENDIX X

Table 32

Term influence across generations

	Min	Max	M	SD
All Natural	1.0	6.0	3.9	1.7
Traditionalists	1.0	6.0	4.0	1.7
Baby Boomers	1.0	6.0	3.7	1.6
Gen X	1.0	6.0	4.0	1.8
Millennials	1.0	6.0	4.2	1.6
Farm Raised	1.0	6.0	3.9	1.7
Traditionalists	1.0	6.0	4.0	1.8
Baby Boomers	1.0	6.0	3.7	1.7
Gen X	1.0	6.0	4.0	1.7
Millennials	1.0	6.0	4.3	1.4
Fresh	1.0	6.0	4.6	1.5
Traditionalists	1.0	6.0	4.9	1.3
Baby Boomers	1.0	6.0	4.4	1.6
Gen X	1.0	6.0	4.7	1.5
Millennials	1.0	6.0	4.7	1.4
Gluten Free	1.0	6.0	2.4	1.7
Traditionalists	1.0	6.0	2.9	1.9
Baby Boomers	1.0	6.0	2.3	1.7
Gen X	1.0	6.0	4.7	1.5
Millennials	1.0	6.0	2.4	1.8
Grade A	1.0	6.0	3.7	1.6
Traditionalists	1.0	6.0	3.9	1.5
Baby Boomers	1.0	6.0	3.8	1.6
Gen X	1.0	6.0	2.4	1.5
Millennials	1.0	6.0	3.4	1.6
Healthy	1.0	6.0	4.0	1.6
Traditionalists	1.0	6.0	4.3	1.4
Baby Boomers	1.0	6.0	3.8	1.8
Gen X	1.0	6.0	4.2	1.3
Millennials	1.0	6.0	4.0	1.6
Lean	1.0	6.0	4.1	1.5
Traditionalists	1.0	6.0	4.5	1.4
Baby Boomers	1.0	6.0	3.9	1.5
Gen X	1.0	6.0	4.1	1.4
Millennials	1.0	6.0	4.0	1.5

Table 32 Continued

	Min	Max	M	SD
Local	1.0	6.0	4.3	1.5
Traditionalists	1.0	6.0	4.4	1.6
Baby Boomers	1.0	6.0	4.4	1.3
Gen X	1.0	6.0	4.1	1.6
Millennials	1.0	6.0	3.5	1.7
Moist	1.0	6.0	3.5	1.6
Traditionalists	1.0	6.0	3.8	1.7
Baby Boomers	1.0	6.0	3.3	1.6
Gen X	1.0	6.0	3.6	1.6
Millennials	1.0	6.0	3.5	1.7
No Added Hormones	1.0	6.0	4.6	1.5
Traditionalists	1.0	6.0	4.4	1.3
Baby Boomers	1.0	6.0	4.7	1.4
Gen X	1.0	6.0	5.0	1.4
Millennials	1.0	6.0	4.2	1.7
No Antibiotics	1.0	6.0	4.6	1.6
Traditionalists	1.0	6.0	4.7	1.8
Baby Boomers	1.0	6.0	4.6	1.6
Gen X	1.0	6.0	5.0	1.4
Millennials	1.0	6.0	4.2	1.7
No Salt or Water Added	1.0	6.0	4.2	1.6
Traditionalists	2.0	6.0	4.8	1.3
Baby Boomers	1.0	6.0	4.2	1.6
Gen X	1.0	6.0	4.3	1.5
Millennials	1.0	6.0	3.8	1.7
Organic	1.0	6.0	4.1	1.7
Traditionalists	1.0	6.0	4.6	1.3
Baby Boomers	1.0	6.0	4.1	1.7
Gen X	1.0	6.0	4.1	1.8
Millennials	1.0	6.0	4.1	1.6
Tender	1.0	6.0	3.9	1.6
Traditionalists	1.0	6.0	3.9	1.7
Baby Boomers	1.0	6.0	3.8	1.6
Gen X	1.0	6.0	3.9	1.5
Millennials	1.0	6.0	3.8	1.6
USDA Inspected	1.0	6.0	4.5	1.6
Traditionalists	2.0	6.0	5.0	1.4
Baby Boomers	1.0	6.0	4.4	1.7
Gen X	1.0	6.0	4.6	1.5
Millennials	1.0	6.0	4.3	1.6

Table 32 Continued

	Min	Max	M	SD
Vegetarian Fed	1.0	6.0	3.4	1.8
Traditionalists	1.0	6.0	3.6	1.8
Baby Boomers	1.0	6.0	3.3	1.8
Gen X	1.0	6.0	3.2	1.4
Millennials	1.0	6.0	3.6	1.7

Table 33
Term influence by sex

	Min	Max	M	SD
All Natural	1.0	6.0	3.9	1.7
Male	1.0	6.0	3.7	1.7
Female	1.0	6.0	4.1	1.6
Farm Raised	1.0	6.0	3.9	1.7
Male	1.0	6.0	3.8	1.7
Female	1.0	6.0	4.0	1.7
Fresh	1.0	6.0	4.6	1.5
Male	1.0	6.0	4.6	1.5
Female	1.0	6.0	4.7	1.5
Gluten Free	1.0	6.0	2.4	1.7
Male	1.0	6.0	2.3	1.6
Female	1.0	6.0	2.4	1.7
Grade A	1.0	6.0	3.7	1.6
Male	1.0	6.0	3.6	1.6
Female	1.0	6.0	3.8	1.6
Healthy	1.0	6.0	4.0	1.6
Male	1.0	6.0	4.0	1.5
Female	1.0	6.0	4.0	1.6
Lean	1.0	6.0	4.1	1.5
Male	1.0	6.0	3.9	1.5
Female	1.0	6.0	4.2	1.4
Local	1.0	6.0	4.3	1.6
Male	1.0	6.0	3.9	1.6
Female	1.0	6.0	4.5	1.4
Moist	1.0	6.0	3.5	1.5
Male	1.0	6.0	3.2	1.6
Female	1.0	6.0	3.6	1.7
No Added Hormones	1.0	6.0	4.6	1.6
Male	1.0	6.0	4.4	1.6
Female	1.0	6.0	4.8	1.5
No Antibiotics	1.0	6.0	4.6	1.6
Male	1.0	6.0	4.4	1.7
Female	1.0	6.0	4.8	1.5
No Salt or Water Added	1.0	6.0	4.2	1.6
Male	1.0	6.0	4.0	1.7
Female	1.0	6.0	4.3	1.5
Organic	1.0	6.0	4.1	1.7
Male	1.0	6.0	3.9	1.7
Female	1.0	6.0	4.2	1.7

Table 33 Continued

	Min	Max	M	SD
Tender	1.0	6.0	4.0	1.6
Male	1.0	6.0	3.8	1.6
Female	1.0	6.0	4.0	1.6
USDA Inspected	1.0	6.0	4.5	1.6
Male	1.0	6.0	4.4	1.7
Female	1.0	6.0	4.6	1.5
Vegetarian Fed	1.0	6.0	3.4	1.8
Male	1.0	6.0	2.9	1.8
Female	1.0	6.0	3.6	1.8

Table 34

Term influence across races

	Min	Max	M	SD
All Natural	1.0	6.0	4.0	1.7
American Indian/ Alaskan	3.0	6.0	4.0	1.2
Asian	2.0	6.0	4.0	1.1
Black/ African American	2.0	5.0	4.3	1.5
White	4.0	5.0	4.5	0.7
Other	1.0	6.0	4.0	1.3
Farm Raised	1.0	6.0	3.9	1.7
American Indian/ Alaskan	3.0	6.0	4.2	1.1
Asian	2.0	6.0	3.6	1.4
Black/ African American	4.0	6.0	4.8	1.0
White	3.0	5.0	4.0	1.4
Other	1.0	6.0	4.8	1.3
Fresh	1.0	6.0	4.6	1.5
American Indian/ Alaskan	3.0	6.0	4.6	1.3
Asian	1.0	6.0	4.2	1.7
Black/ African American	1.0	6.0	3.0	1.9
White	4.0	5.0	4.5	0.7
Other	1.0	6.0	4.4	1.3
Gluten Free	1.0	6.0	2.4	1.7
American Indian/ Alaskan	1.0	6.0	3.0	2.1
Asian	1.0	6.0	5.0	2.4
Black/ African American	1.0	6.0	2.0	1.9
White	1.0	6.0	4.0	2.1
Other	1.0	6.0	2.3	2.3
Grade A	1.0	6.0	3.7	1.6
American Indian/ Alaskan	4.0	6.0	4.4	0.9
Asian	1.0	5.0	3.5	1.4
Black/ African American	4.0	6.0	5.3	1.0
White				
Other				
Healthy	1.0	6.0	4.0	1.6
American Indian/ Alaskan	1.0	6.0	4.2	2.0
Asian	1.0	5.0	3.1	1.4
Black/ African American	3.0	5.0	4.0	1.2
White				
Other				
Lean	1.0	6.0	4.1	1.5
American Indian/ Alaskan	3.0	6.0	4.2	1.1
Asian	1.0	6.0	3.6	1.4
Black/ African American	2.0	6.0	4.5	1.9
White				
Other				

Table 34 Continued

	Min	Max	M	SD
Local	1.0	6.0	4.3	1.5
American Indian/ Alaskan	2.0	6.0	4.6	1.7
Asian	2.0	6.0	4.1	1.0
Black/ African American	5.0	6.0	5.3	0.5
White				
Other				
Moist	1.0	6.0	4.6	1.5
American Indian/ Alaskan	1.0	6.0	3.6	1.8
Asian	1.0	5.0	3.1	1.4
Black/ African American	3.0	6.0	3.8	1.5
White				
Other	1.0	6.0		
No Added Hormones	1.0	6.0	4.6	1.5
American Indian/ Alaskan	4.0	6.0	4.8	1.1
Asian	3.0	6.0	4.8	1.1
Black/ African American	5.0	6.0	5.5	0.6
White	1.0	6.0		
Other	1.0	6.0		
No Antibiotics	1.0	6.0	4.6	1.6
American Indian/ Alaskan	1.0	6.0	3.8	1.8
Asian	2.0	6.0	4.5	1.2
Black/ African American	5.0	6.0	5.5	0.6
White	1.0	6.0		
Other	1.0	6.0		
No Salt or Water Added	1.0	6.0	4.2	1.6
American Indian/ Alaskan	2.0	6.0	4.2	1.5
Asian	2.0	6.0	4.5	1.2
Black/ African American	1.0	6.0	4.3	2.4
White	1.0	6.0		
Other	1.0	6.0		

Table 34 Continued

	Min	Max	M	SD
USDA Inspected	1.0	6.0	4.5	1.6
American Indian/ Alaskan	1.0	6.0	5.2	1.1
Asian	1.0	6.0	4.5	1.7
Black/ African American	3.0	6.0	4.8	1.3
White	1.0	6.0	4.5	1.4
Other	1.0	6.0	4.4	1.5
Vegetarian Fed	1.0	6.0	3.8	1.8
American Indian/ Alaskan	1.0	6.0	3.4	1.8
Asian	1.0	6.0	5.0	3.3
Black/ African American	2.0	6.0	3.3	1.9
White	1.0	6.0	3.8	2.2
Other	1.0	6.0	4.0	1.8

Table 35

Term influence across truncated races

	Min	Max	M	SD
All Natural	1.0	6.0	3.9	1.7
White	1.0	6.0	3.7	1.7
Other	1.0	6.0	4.4	1.5
Farm Raised	1.0	6.0	3.9	1.7
White	1.0	6.0	3.8	1.7
Other	1.0	6.0	4.3	1.6
Fresh	1.0	6.0	4.6	1.5
White	1.0	6.0	4.5	1.5
Other	1.0	6.0	4.8	1.4
Gluten Free	1.0	6.0	2.4	1.7
White	1.0	6.0	2.1	1.5
Other	1.0	6.0	3.2	1.8
Grade A	1.0	6.0	3.7	1.6
White	1.0	6.0	3.6	1.6
Other	1.0	6.0	4.2	1.5
Healthy	1.0	6.0	4.0	1.6
White	1.0	6.0	3.9	1.5
Other	1.0	6.0	4.4	1.6
Lean	1.0	6.0	4.1	1.5
White	1.0	6.0	3.9	1.5
Other	1.0	6.0	4.3	1.3
Local	1.0	6.0	4.3	1.5
White	1.0	6.0	4.3	1.5
Other	1.0	6.0	4.2	1.5
Moist	1.0	6.0	4.6	1.6
White	1.0	6.0	3.3	1.6
Other	1.0	6.0	4.1	1.5
No Added Hormones	1.0	6.0	4.2	1.6
White	1.0	6.0	4.5	1.6
Other	1.0	6.0	4.9	1.5
No Antibiotics	1.0	6.0	4.1	1.7
White	1.0	6.0	4.5	1.6
Other	1.0	6.0	4.9	1.5
No Salt or Water Added	1.0	6.0	3.9	1.6
White	1.0	6.0	4.1	1.6
Other	1.0	6.0	4.6	1.5
Organic	1.0	6.0	4.1	1.7
	Min	Max	M	SD
White	1.0	6.0	4.0	1.7

Table 35 Continued

	Min	Max	M	SD
Other	1.0	6.0	4.3	1.6
Tender	1.0	6.0	4.0	1.6
White	1.0	6.0	3.8	1.5
Other	1.0	6.0	4.5	1.5
USDA Inspected	1.0	6.0	4.5	1.6
White	1.0	6.0	4.3	1.6
Other	1.0	6.0	5.0	1.5
Vegetarian Fed	1.0	6.0	3.4	1.8
White	1.0	6.0	3.2	1.8
Other	1.0	6.0	4.0	1.7

Table 36

Term influence across income levels

	Min	Max	M	SD
All Natural	1.0	6.0	3.9	1.7
<$30,000	1.0	6.0	4.5	1.5
$30,000 - $49,999	1.0	6.0	3.6	1.7
$50,000 - $99,999	1.0	6.0	3.9	1.7
$100,000-$249,999	1.0	6.0	4.1	1.5
>$250,000	1.0	6.0	3.9	1.7
Farm Raised	1.0	6.0	3.9	1.7
<$30,000	1.0	6.0	4.6	1.4
$30,000 - $49,999	1.0	6.0	3.6	1.6
$50,000 - $99,999	1.0	6.0	3.8	1.7
$100,000-$249,999	1.0	6.0	3.9	1.7
>$250,000	1.0	6.0	1.9	1.3
Fresh	1.0	6.0	4.6	1.5
<$30,000	1.0	6.0	4.9	1.4
$30,000 - $49,999	1.0	6.0	4.9	1.1
$50,000 - $99,999	1.0	6.0	4.5	1.6
$100,000-$249,999	1.0	6.0	4.6	1.4
>$250,000	1.0	6.0	4.0	1.9
Gluten Free	1.0	6.0	2.4	1.7
<$30,000	1.0	6.0	3.6	1.9
$30,000 - $49,999	1.0	6.0	2.4	1.8
$50,000 - $99,999	1.0	6.0	2.0	1.4
$100,000-$249,999	1.0	6.0	2.4	1.6
>$250,000	1.0	6.0	1.9	1.3
Grade A	1.0	6.0	3.7	1.6
<$30,000	1.0	6.0	3.9	1.6
$30,000 - $49,999	1.0	6.0	3.8	1.5
$50,000 - $99,999	1.0	6.0	3.7	1.7
$100,000-$249,999	1.0	6.0	2.4	1.6
>$250,000	1.0	6.0	2.6	1.4
Healthy	1.0	6.0	4.0	1.6
<$30,000	1.0	6.0	4.5	1.3
$30,000 - $49,999	1.0	6.0	4.0	1.5
$50,000 - $99,999	1.0	6.0	4.0	1.6
$100,000-$249,999	1.0	6.0	4.0	1.6
>$250,000	1.0	6.0	3.0	1.5

Table 36 Continued

	Min	Max	M	SD
Lean	1.0	6.0	4.1	1.5
<$30,000	1.0	6.0	4.3	1.4
$30,000 - $49,999	1.0	6.0	3.9	1.5
$50,000 - $99,999	1.0	6.0	4.2	1.5
$100,000-$249,999	1.0	6.0	4.0	1.4
>$250,000	1.0	6.0	3.5	1.6
Local	1.0	6.0	4.3	1.5
<$30,000	1.0	6.0	4.1	1.5
$30,000 - $49,999	1.0	6.0	4.6	1.2
$50,000 - $99,999	1.0	6.0	4.1	1.7
$100,000-$249,999	1.0	6.0	4.3	1.6
>$250,000	1.0	6.0	4.7	1.2
Moist	1.0	6.0	3.5	1.6
<$30,000	1.0	6.0	3.8	1.6
$30,000 - $49,999	1.0	6.0	3.9	1.5
$50,000 - $99,999	1.0	6.0	3.6	1.7
$100,000-$249,999	1.0	6.0	3.1	1.7
>$250,000	1.0	6.0	2.7	1.4
No Added Hormones	1.0	6.0	4.6	1.6
<$30,000	1.0	6.0	4.8	1.3
$30,000 - $49,999	1.0	6.0	4.5	1.4
$50,000 - $99,999	1.0	6.0	4.6	1.7
$100,000-$249,999	1.0	6.0	4.7	1.5
>$250,000	1.0	6.0	4.6	1.5
No Antibiotics	1.0	6.0	4.6	1.6
<$30,000	1.0	6.0	4.4	1.8
$30,000 - $49,999	1.0	6.0	4.7	1.4
$50,000 - $99,999	1.0	6.0	4.6	1.7
$100,000-$249,999	1.0	6.0	4.8	1.6
>$250,000	1.0	6.0	4.7	1.5
No Salt or Water Added	1.0	6.0	4.2	1.6
<$30,000	1.0	6.0	4.2	1.6
$30,000 - $49,999	1.0	6.0	4.4	1.5
$50,000 - $99,999	1.0	6.0	4.4	1.6
$100,000-$249,999	1.0	6.0	4.0	1.6
>$250,000	1.0	6.0	3.4	1.6
Organic	1.0	6.0	4.1	1.7
<$30,000	1.0	6.0	3.7	1.7
$30,000 - $49,999	1.0	6.0	3.5	1.7
$50,000 - $99,999	1.0	6.0	4.1	1.8
$100,000-$249,999	1.0	6.0	4.3	1.7
>$250,000	1.0	6.0	4.8	1.2

Table 36 Continued

	Min	Max	M	SD
Tender	1.0	6.0	3.9	1.6
<$30,000	1.0	6.0	4.5	1.4
$30,000 - $49,999	1.0	6.0	4.1	1.4
$50,000 - $99,999	1.0	6.0	3.7	1.7
$100,000-$249,999	1.0	6.0	3.9	1.4
>$250,000	1.0	6.0	3.2	1.5
USDA Inspected	1.0	6.0	4.5	1.6
<$30,000	1.0	6.0	4.9	1.5
$30,000 - $49,999	1.0	6.0	4.6	1.6
$50,000 - $99,999	1.0	6.0	4.4	1.7
$100,000-$249,999	1.0	6.0	4.4	1.3
>$250,000	1.0	6.0	3.2	1.7
Vegetarian Fed	1.0	6.0	3.4	1.8
<$30,000	1.0	6.0	4.3	1.6
$30,000 - $49,999	1.0	6.0	3.2	1.9
$50,000 - $99,999	1.0	6.0	3.3	1.8
$100,000-$249,999	1.0	6.0	3.3	1.8
>$250,000	1.0	6.0	3.1	1.7

Table 37

Term relation to bad or good across truncated income levels

	Min	Max	M	SD
All Natural	1.0	6.0	4.7	1.3
<$30,000	1.0	6.0	5.3	0.9
$30,000 - $49,999	1.0	6.0	4.5	1.4
$50,000 - $99,999	1.0	6.0	4.7	1.2
>$100,000	1.0	6.0	4.6	1.4
Farm Raised	1.0	6.0	4.6	1.1
<$30,000	1.0	6.0	5.1	1.0
$30,000 - $49,999	1.0	6.0	4.6	1.1
$50,000 - $99,999	1.0	6.0	4.5	1.0
>$100,000	1.0	6.0	4.4	1.4
Fresh	1.0	6.0	5.0	1.1
<$30,000	1.0	6.0	5.4	1.0
$30,000 - $49,999	1.0	6.0	4.9	1.2
$50,000 - $99,999	1.0	6.0	4.6	1.1
>$100,000	1.0	6.0	5.0	1.1
Gluten Free	1.0	6.0	3.7	1.4
<$30,000	1.0	6.0	4.2	1.8
$30,000 - $49,999	1.0	6.0	4.1	1.4
$50,000 - $99,999	1.0	6.0	3.6	1.4
>$100,000	1.0	6.0	3.5	1.2
Grade A	1.0	6.0	4.5	1.2
<$30,000	1.0	6.0	5.0	1.2
$30,000 - $49,999	1.0	6.0	4.6	1.1
$50,000 - $99,999	1.0	6.0	4.4	1.2
>$100,000	1.0	6.0	4.3	1.2
Healthy	1.0	6.0	4.7	1.2
<$30,000	1.0	6.0	5.3	1.0
$30,000 - $49,999	1.0	6.0	4.6	1.2
$50,000 - $99,999	1.0	6.0	4.6	1.1
>$100,000	1.0	6.0	4.6	1.2
Lean	1.0	6.0	4.6	1.1
<$30,000	1.0	6.0	5.0	1.1
$30,000 - $49,999	1.0	6.0	4.5	1.0
$50,000 - $99,999	1.0	6.0	4.6	1.1
>$100,000	1.0	6.0	4.5	1.1
Local	1.0	6.0	4.7	1.2
<$30,000	1.0	6.0	4.9	1.3
$30,000 - $49,999	1.0	6.0	4.8	1.1
$50,000 - $99,999	1.0	6.0	4.6	1.2
>$100,000	1.0	6.0	4.6	1.2

Table 37 Continued

	Min	Max	M	SD
Moist	1.0	6.0	4.1	1.3
<$30,000	1.0	6.0	4.5	1.3
$30,000 - $49,999	1.0	6.0	4.3	1.2
$50,000 - $99,999	1.0	6.0	4.0	1.2
>$100,000	1.0	6.0	4.0	1.4
No Added Hormones	1.0	6.0	5.0	1.2
<$30,000	1.0	6.0	4.9	1.6
$30,000 - $49,999	1.0	6.0	5.3	0.9
$50,000 - $99,999	1.0	6.0	4.9	1.3
>$100,000	1.0	6.0	5.1	1.2
No Antibiotics	1.0	6.0	5.0	1.2
<$30,000	1.0	6.0	4.9	1.6
$30,000 - $49,999	1.0	6.0	4.9	1.3
$50,000 - $99,999	1.0	6.0	5.1	1.0
>$100,000	1.0	6.0	5.1	1.2
No Salt or Water Added	1.0	6.0	4.6	1.3
<$30,000	1.0	6.0	4.7	.3
$30,000 - $49,999	1.0	6.0	4.8	1.1
$50,000 - $99,999	1.0	6.0	4.5	1.4
>$100,000	1.0	6.0	4.6	1.2
Organic	1.0	6.0	4.6	1.4
<$30,000	1.0	6.0	4.2	1.4
$30,000 - $49,999	1.0	6.0	4.3	1.3
$50,000 - $99,999	1.0	6.0	4.5	1.4
>$100,000	1.0	6.0	4.8	1.3
Tender	1.0	6.0	4.4	1.2
<$30,000	1.0	6.0	4.5	1.7
$30,000 - $49,999	1.0	6.0	4.4	1.1
$50,000 - $99,999	1.0	6.0	4.2	1.1
>$100,000	1.0	6.0	4.2	1.2
USDA Inspected	1.0	6.0	4.1	1.4
<$30,000	1.0	6.0	5.5	1.0
$30,000 - $49,999	1.0	6.0	5.2	1.1
$50,000 - $99,999	1.0	6.0	4.8	1.1
>$100,000	1.0	6.0	4.6	1.3
Vegetarian Fed	1.0	6.0	4.1	1.4
<$30,000	1.0	6.0	4.6	1.3
$30,000 - $49,999	1.0	6.0	4.1	1.4
$50,000 - $99,999	1.0	6.0	3.9	1.5
>$100,000	1.0	6.0	4.0	1.4

APPENDIX Y

**DIGITAL MEDIA RESEARCH
AND DEVELOPMENT LAB**
TEXAS A&M UNIVERSITY

Field Notes: Julian Date_Location_FN###   Template

Observations and Questions	Field Notes (Direct Quotes and Paraphrases)

Name of File.Docx
Date Entered-Lindy Froebel