

**INFLUENCES AFFECTING CONSUMPTION AND PURCHASING OF
ANIMAL-BASED FOOD PRODUCTS**

An Undergraduate Research Scholars Thesis

by

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Submitted to Honors and Undergraduate Research
Texas A&M University
in partial fulfillment of the requirements for the designation as an

UNDERGRADUATE RESEARCH SCHOLAR

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May 2014

Major: Agricultural Communications and Journalism
Animal Science
Agricultural Communications and Journalism

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ABSTRACT

Influences Affecting the Consumption and Purchasing of Animal-Based Food Products.
(May 2014)

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The purpose of this grounded theory study was to describe influences affecting the consumption and purchasing of animal-based food products for consumers and producers in California and Texas. The study had two components: understanding what consumer's consider when purchasing products for consumption and what producers feel are important to food sales. Data were collected in Texas and California because those states are the two most populous in the United States. During the July and August of 2013, field data were collected in San Diego, San Francisco, and Fresno. Meat and meat by-product consumers were interviewed to understand what drives individuals to purchase certain meat products. During the September, October, and November 2013, similar consumer interviews were conducted in Dallas, Austin, and Houston to interview consumers. These Texas cities were chosen to parallel those interview sites conducted in California. At the conclusion of consumer data collection, a set of personas were developed to describe how consumers are influenced to purchase meat and meat by-products. Interviews with producers and those directly involved in the meat industry were conducted throughout California

and Texas. Conducting interviews helped describe animal-based food producers' beliefs about consumers and what consumers desire in a final product, alongside their efforts to market their product to meet consumer demand. Producer interviews were used to develop personas parallel to the consumer profiles.

CHAPTER I

INTRODUCTION

Supermarkets provide products necessary for several aspect of life. Customers have the option to purchase products ranging from convenience foods to locally grown produce, pharmaceuticals to novelties, and toiletries to home décor. The multitude of options and diversity in products that supermarkets offer today has catered to a trend of instant gratification and convenience.

According to a study by Blackburn in 1990, “today’s-and tomorrow’s- customers want it all: price, quality, and timely delivery” (Blackburn, 1990 p.396). The process of evolving the food industry to accommodate this style of consumption has segmented the industry and distanced the producer from the consumer. This distance results in a miscommunication between the two parties. Communication is essential for a homeostatic relationship between the producer and consumer of any good; meat products are not exempt. Further, lack of communication between producers and consumers can result in information being received in an unintended manner. “For example[,] it has been shown that communication through providing simple dietary advice is not equally acceptable among wide diversity of consumers; therefore[,] hampering compliance with the communicated dietary advice” (Verbeke, 2008, p. 282). A notable area of disconnect can be illustrated by evaluating meat producers’ efforts to communicate with meat consumers. Meat sales account for 13.5% of total supermarket sales, which is the largest portion of perishable food sales (Institute, 2012).

Producers and consumers have struggled to communicate with their counterpart in many ways. There are many examples of disconnect, one being the understanding of food labels by

consumers and the comprehension of what producers are trying to tell consumers about their product.

Modified food labeling is an example of how better communication efforts have been attempted. According to *The Journey Towards Retail Meat Case Nutrition Labeling* published by the National Cattlemen's Beef Association "there are inherent and recognized challenges in labeling fresh commodity foods—such as produce or meat, poultry, and seafood products—due to the fact that nature-made foods have inconsistent sizes and shapes when compared to the consistency of processed foods" (NCBA, 2009 p. 1). Consumers are complex and constantly changing.

Nearly nine in ten Americans say the words 'conscious consumer' describe them well and are more likely to buy from companies that manufacture energy efficient products (90%), promote health and safety benefits (88%), support fair labor and trade practices (87%), and commit to environmentally-friendly practices (87%), if products are of equal quality and price" (Bemporad & Baranowski, 2007 p. n.a).

Bemporad and Baranowski (2007) found that nationally, 70% of adults were concerned with the use of pesticides, hormones or chemicals in food. In contrast, an international 2008 study found that "only 7 percent reported that they worry about agricultural production methods, and 1 percent cited biotechnology as a top-of-mind concern" (Simmons, 2010 p. 7). "Also, relatively little research is available about the type of information consumer see on product labels" (Pieniak, Verbeke, Vermeir, Brunso, & Olsen, 2007 p. 119) . Food labeling can often times be subdued to "information overload" (Pieniak et al., 2007 p. 119). And consumers use different

information sources depending on the type of information they are seeking (Bock et al., 1989) In a 2007 study using focus groups to examine fish labeling, participants did not select fish products according to any notable factors. “In consumer’s minds[,] fish is simply fish when it comes down to search for information or use of information cues” (Pieniak et al., 2007). It is also important to note in this particular study, there was no comparison to other food commodities; therefore, “the influence of food properties can hardly be evaluated” (Pieniak et al., 2007, pg 132)

Issues exist in the level of understanding the producer has of the consumer’s decision making process. If producers do not continue to adapt their products to meet the changing demands of consumers and do not market their products to portray their efforts, it can be concluded a significant portion of their revenue will be lost. Furthermore, losses in consumption may never be regained due to the likelihood of minimal opportunity to regain a customer (NCBA, 2009).

Americans have access to a meat industry that reaches across socio-economic boundaries. However, there are differences in how meat is intended to be marketed to consumers and how consumers receive the marketing (Verbeke, 2008). The differences in reception demonstrates the need to understand perceptions of meat products by consumers. According to a study by Verbeke (2008), food choices can be influenced by a number of factors, including behavior, information provided, how food has been processed, target audience, and communication efforts. Verbeke (2008) particularly noted “messages promoting positive outcomes, such as health and nutritional benefits” (Verbeke, 2008 p. 123). These factors are compared to several other motives for food purchase, including but not limited to taste, price, and convenience (Verbeke, 2008).

Consumers and producers clearly have a multifaceted disconnect (e.g., nutrition, production, harvesting, and consumption) in terms of an oppositional perception issue. By understanding this disconnect, producers may better understand how to market to consumers and continue to uphold an industry essential to protecting the American food bank. Understanding the communication gap is important to identifying the determinants that may affect a consumer's likelihood to purchase a meat product.

The purpose of this grounded theory study was to describe influences affecting the consumption and purchasing of animal-based food products for consumers and producers in California and Texas. Initially, we intended to conduct a mixed method study to explore the following questions and objectives.

RQ 1: What do consumers believe to be the most influential advertisement factors when purchasing animal-based food products?

RO 1.1: Describe consumers' perceptions of advertisement

RO 1.2: Describe consumers' perceptions of factors thought to influence food purchases

RO 1.3: Describe consumers' perceptions of factors thought to influence animal-based food purchases

RQ 2: What factors of advertising do producers believe to be most influential in the purchasing of animal-based food products?

RO 2.1: Describe producers' perceptions of advertisement

RO 2.2: Describe producers' perceptions of factors thought to influence food purchases

RO 2.3: Describe producers' perceptions of factors thought to influence animal-based food purchases

RQ 3: Do producers and consumers perceive advertisements for animal-based food products differently?

RO 3.1: Develop theme-based advertisements to test producer and consumer responses to the advertisements

RO 3.2: Compare producers' and consumers' responses to advertisements for animal-based food products, based on theme-based advertisements.

After beginning our research, the data led us to expand the qualitative elements of the study and reserve possible quantitative elements for a future study. As noted by Creswell (2009), we expected our research questions to evolve during our study because they were under continual review and reformulation, which is common in qualitative studies. Therefore, the study evolved into a solely qualitative study guided by a central question: What is the theory that explains the decision-making processes for consumers and producers in California and Texas? To further guide our exploration of consumers' and producers' decision-making processes, we used the following sub-questions:

- What influences consumers' food purchase decisions?
- What influences consumers' animal-based food purchase decisions?

At this stage in the research, the influences affecting the consumption and purchasing of animal-based food products will be generally defined as the factors that consumers consider when purchasing animal-based food products.

CHAPTER II

LITERATURE REVIEW

The purpose of this grounded theory study was to describe influences affecting the consumption and purchasing of animal-based food products for consumers and producers in California and Texas. Bandura's social cognitive theory (1986) served as a framework to understanding the cognitive process of information exchange causing purpose prior to or at the point of purchase for animal-based food products.

In a 1970 study, Nelson identified multiple patterns regarding purchasing of search and experience goods. The determinants of purchase are directly related to Bandura's personal, behavioral, and environmental determinants. Nelson described search goods as having two restrictions: "(1) the consumer must inspect the option and (2) that inspection must occur prior to purchasing the brand" (Nelson, 1970 p. 312). Experience goods were defined as, "goods that will pay the consumer to evaluate by purchase rather than by search. If the purchase price is low enough, any even moderately expensive search procedure would be ruled out" (Nelson, 1970 p.317).

In Bandura's 2001 article, *Social cognitive theory of mass communication*, he discussed three determinants to social cognitive theory: personal, environmental, and behavioral. Bandura (2001) explained how these three concepts are interrelated in that they are impacted reciprocally, meaning that each determinant is reflective of two other determinants. Bandura (2001) discussed

that cognitive theory have several capabilities: symbolizing, self-regulatory, self-reflective, and vicarious.

One of the concepts Bandura (2001) addressed in the social cognitive theory of mass communication is personal determinants. In an article, *Human agency in social cognitive theory* (Bandura, 1989), Bandura presented the exercise of self-efficacy. Self-efficacy functions as determinants of human motivation, affect, and action. By this definition, personal determinants are an individual's belief in his or her abilities. Bandura (1989) went on to argue that self-efficacy affected the cognitive process in that it can be self-aiding or self-hindering. Self-efficacy beliefs determine an individual's level of motivation.

The discussion of whether people define the culture or if the culture defines people can help to illustrate the concepts incorporated in social cognitive theory. The discussion is a good illustration of how people build their own person or become products of the environment and behaviors around them. The article used to explain personal determinants discusses human agency through the same causal model in the social cognitive theory of mass communication (Bandura, 2001). Bandura (2001) further discussed in depth self-reflective systems and the self-regulatory process; he used self-belief of efficacy as the basis for both. In social cognitive theory: An agentic perspective (Bandura, 2001), Bandura (2001) concluded that people are a product of the people in their environment. "People do not live their lives in isolation. Many of the things they seek are achievable only through socially interdependent effort" (Bandura, 2001 p. 270).

In Bandura's (2001) Social cognitive theory of mass communication study, environmental determinants were described as a scholastic explanation for stimuli in an environment.

Therefore, Participants in a study are directly associated with factors surrounding them, closely associated with their reactions to them. A clear illustration of environmental determinants was discussed in *Health promotion from the perspective of social cognitive theory* (Bandura, 1998) as it relates to the paradigm shift in preventative health trends.

Bandura's (1998) The health promotion study showed that when the environment transitioned from one of fear and scare tactics to an incentivized and rewarded one, people responded greater to preventative health promotions. The environmental determinants for those studied would be the tone in which their health provider chose to conduct healthcare. Tone is a part of the environment as it is influenced by lighting, individuals in the shared space, and structures. Conversely, an individual's environment and personal determinants play an integral role in behavioral determinants.

Bandura (2001) stated, "most external forces affect behavior through cognitive process rather than directly" (p. 267). Bandura (2001) alluded to an individual's reaction to an event he or she has experienced. Rather than an event having a cause and effect relationship on an individual, environmental forces combined with personal determinants have a circular effect on an individual. For example, if an individual was to put his or her hand on a hot stove after making a meal, he or she would have burnt their hand; thereby demonstrating a cause and effect relationship. Circularly, if an individual was to put his or her hand on a hot stove after making a meal, and burn his or her hand, he or she may decide he or she does not enjoy cooking.

Accidentally touching the stove is a trivial example of an environmental force; however, it is easy to see how the environment and self-efficacy play a role into an individual's behavior.

Similarly to self-efficacy, Bandura wrote another article titled *Analysis of self-efficacy theory of behavioral change* (Bandura & Adams, 1977). Bandura and Adams (1977) concluded that self-efficacy was a predictor of amount of behavioral improvement (in this situation). They discussed four parts to self-efficacy: performance accomplishments, vicarious experiences of observing, verbal persuasion, and state of psychological arousal. Bandura and Adams (1977) argued that of these performance accomplishments performance accomplishments is the most influential because it is based on personal mastery. This is a good example of how behavioral determinants are defined by personal determinants, in addition to environmental determinants as discussed above.

The three parts of social cognitive theory within the overarching theme of self-efficacy connect to consumers purchasing animal-based food products quite well. The environment and personal determinants both affect the behavior of purchase described in this study.

Product pricing served as a characteristic of the shopping environment. Nelson (1970) offered the example, "For tuna fish, there is no effective search alternative open. At the low price of experience, there is insufficient demand for specialized establishments selling tastes of various brands of tuna fish" (Nelson, 1970 p. 312). However, in all goods, Nelson (1970) acknowledged, "limitations of consumer information about quality have profound effects upon the market structure of consumer goods" (Nelson, 1970 p.311).

In retrospect, “neither search nor experience needs to be conducted at random. Prior to sampling, a consumer can obtain information from relatives and friends, consumer magazines, or even from advertising. The consumer has to decide whether he [or she] will use this prior information as a guide to his sampling for any particular good” (Nelson, 1970 p.312).

In addition to pricing, store image and layout can have a profound impact on consumers (Vrechopoulos, O’Keefe, Doukidis, & Siomkos, 2004). “Store image is an important factor affecting consumer behavior” (Erdem, Oumlil, & Tunculp, 1999 p.), and store layout design is a critical determinant towards the creation of that store image (Baker, Grewal, & Parasuraman, 1994) stated: Selling floor layouts are extremely important because they strongly influence in-store traffic patterns, shopping atmosphere, shopping behavior, and operational efficiency. (Vrechopoulos et al., 2004 p. 13-14)

The act of acquiring information and deciding what information to use is within the scope of Bandura’s behavioral determinants. In a study conducted by Nelson (1970), an assumption was stated that “consumers either sample at random from among all brands or from among those brands in the price range the consumer deems appropriate for himself [or herself]” (p. 320). Furthermore, consumers are guided in their sampling strategy by “the recommendation of friends or consumer magazines” (Nelson, 1970 p. 321). Nelson (1970) listed as an experienced good, noting “there will be more monopoly for experience goods than search goods” (p. 327). Furthermore, recommendations of others will be used more for purchases of experience goods

than search goods (Nelson, 1970). However, understanding the system of categorizing products in the mind of the consumer is not the only level for comprehension.

Tregear and Ness (2005) clarified the substantial need for relationship building in their article regarding marketing of food products. Policy Commission on the Future of Food and Farming (2002) recommended that upstream agri-food operators engage in more direct supply chain relationships with consumers, delivering products that are locally produced (Tregear & Ness, 2005). The study investigated consumer interest in local food by examining the extent to which different factors affect purchasing. “Attitudinal factors are often found to be better discriminators of behavior than demographic, although there are exceptions” (Tregear & Ness, 2005 p. 20). These attitudinal factors served as representation of Bandura’s (1986) personal determinants for this study. When evaluating the factors that influence purchases, it is essential to understand attitudes regarding food purchases in general, not just demographic data.

Although the results give some credence to the proposition that interest in local food is related to concerns about the food provision process and the farming community, the results also show that these issues have complex aspects, and that weaker relationships may exist between concerns for some of these aspects and interest in local food. (Tregear & Ness, 2005 p. 29)

“Results on food choice priorities reveal a strong association between high local food interest and prioritization of extrinsic food features such as the environment, welfare and origin” (Tregear & Ness, 2005 p. 29). Understanding how consumers view locality is essential to

meeting the needs of multiple buying patterns. Country of origin labeling, sometimes referred to as COOL, is one way that the United States Department of Agriculture (USDA) has attempted to provide more information for consumers but has also served as a marketing tool to connect with consumers interested in local food.

In terms of beef labeling policies, “US COOL of beef entered a new era with the adoption of the Farm Security and Rural Investment Act of 2002, which USDA’s Agricultural Marketing Service (USDA-AMS) to issue country-of-origin labeling” (Verbeke & Ward, 2005 p. 454).

As of September 1, 2000, beef and beef products have to include a label indicating the country and place of slaughter and cutting/deboning, as well as a traceability reference code ensuring a direct link between the piece of beef and the animal’s origin. (Verbeke & Ward, 2005 p. 455).

“Consumers request additional information with respect to meat quality and safety. An important distinction is between quality labels, and information cues on product labels that refer to origin or traceability as a result of the new beef labeling regulations” (Verbeke & Ward, 2005 p. 455). “Those cues that directly address real or perceived quality and quality control consistently receive the higher probabilities, with the expiration date probability of importance and attention being 97% and 88%, respectively” (Verbeke & Ward, 2005 p. 459-460). “This cue together with meat type and a quality guarantee or seal, are readily interpretable and apparently function as highly relevant quality indicators to consumers” (Verbeke & Ward, 2005 p. 460).

Verbeke and Ward (2005) emphasized the mechanical parts of meat marketing, pieces that are mandated by the USDA, and measured the importance of each (Verbeke & Ward, 2005).

Consumer interest in beef labeling cannot be taken for granted. Interest is low for cues directly related to traceability and product identification while much higher for others like readily interpretable indications of quality such as certified quality marks or seals or guarantee, as well as for mandatory standard information like expiration date. (Verbeke & Ward, 2005 p. 465)

These characteristics differ from the search and experience themes discussed in Nelson's 1970 study where food was discussed as solely an experienced good. Due to the disagreement among studies, this study will follow the logic presented in the *The SAGE Qualitative Research Handbook* "for qualitative fieldwork, we draw a purposive sample, building in variety and acknowledging opportunities for intensive study" (Denzin & Lincoln, 2005, p. 451). Because this study aimed to create profiles through a constructivist approach, different perspectives were purposively sought out by geographic area. By implicative reasoning, this study will assess the attitudinal factors (Treagar & Ness, 2005) that may help producers address the needs of the meat market in California and Texas.

CHAPTER III

METHODS

This study was investigated in the qualitative paradigm. Bryman (2012) used the term qualitative research to describe research that involves an in-depth understanding of human behavior. “This type of research-qualitative research- does not involve experiments at all[;] its aim is to study humans in their natural setting in order to understand various aspects of their behavior” (Lichtman, 2012, p. 5). Therefore, this project was inductive in design, a study in which theory is the outcome of research (Bryman, 2012).

This study had two parallel components. Semi-structured interviews were conducted with both consumers and producers of animal-based food products. Interviews were conducted with food consumers to determine what factors influence them to purchase different food products, more specifically meat products. Similarly, interviews with producers were conducted to determine producers’ perceptions of what influences the consumer’s purchase of food products.

Component one of this study described interviews with animal-based food consumers to describe what factors influence their decision to purchase food products; more specifically animal-based food products such as various kinds of meat. Due to the nature of non-random sampling, the findings of this study must be restricted to the individuals included in this study.

The sample was selected from two states, California and Texas, because those states have the largest populations. According to the 2010 U.S. Census, California and Texas make up roughly 20 percent of the entire U.S. population. Arguably, these two states have a large influence on the

outcome of emerging policy pertaining to food products and, therefore, were chosen to participate in this study. The sample consisted of roughly 300 participants from both California and Texas. In California, data were collected from 53 participants in San Diego, 44 in Fresno, and 45 in San Francisco, for a total of 142 California consumer interviews. Likewise, in Texas roughly 50 participants were selected from Houston, Austin, and Dallas for a total of 146 Texas consumer interviews. Generalizability in a qualitative study is similar to external validity in quantitative research designs (Bryman, 2012). In city, specific locations included malls, parks, tourist attractions, or other places. Individual participants were selected by convenience and willingness to speak with interviewers was purposively selected to intercept a representative demographic. Therefore, the findings of this study must be restricted to only those individuals who were interviewed.

Interviews, being semi-structured, varied among participants. In this particular study, semi-structured interviews were guided by an interview protocol that was distributed and discussed among interviewers. Interviewers had the liberty to ask follow up questions to verify and understand participant responses and to flow with individual conversations. Discussion points were derived from five main questions. An example provided to our interview team follows. As already noted, exact wording was inconsistent.

1. Where do you shop for groceries?
 - a. Why that store?
 - b. What kind of store is that?
 - c. Tell me what makes that store unique.

2. How often do you buy groceries?
 - a. Do you plan ahead or use a list?
 - b. Do you buy the same products every time? Give me some examples of things you normally buy.
 - c. How do you decide what to purchase?
3. What meat products do you buy regularly?
 - a. What factors influence you to purchase these products?
4. Can you remember an advertisement that influenced you to purchase a food product?
 - a. How recent was this?
 - b. What is the source of this advertisement?
5. Do you have anything to add about your grocery shopping experience?

Interviewers were instructed to make note of observable demographics. Deviations in following the protocol commonly occurred when participants did not eat meat. When this occurred, we focused on their choices in other nutrition options and/or selection of their particular grocery store. Another common deviation from the questions listed above, was when participants could not recall an advertisement that influenced them to purchase a food product. In this case, we asked if they could think of any advertisement that was memorable. Changing interview structure depending on participant answers allowed us to marginalize the information that participants were able to provide.

Credibility suggests that findings should be evaluated by participants, also referred to as member checking (Bryman, 2012). Ideally, we would have provided a transcript of each interview to the

corresponding participant for their approval, but because interviews were conducted anonymously, this was not possible. The most feasible way to provide credibility was to follow up as we interviewed. For example, we asked questions such as, “what did you mean by...,” or “help me understand...,” which allowed participants to further clarify their statements.

Interviews were conducted by a team consisting of 15 undergraduate and graduate researchers from varying fields of study. Interviewers were trained on the research questions and objectives of this project before conducting interviews. Interviews were conducted in pairs to ensure confirmability. Bryman (2012) defined confirmability as means to confirm results by others-- attempting to describe an objective reality. Two people interviewed each participant to ensure his or her statements were interpreted correctly. There were some cases when having two interviewers was not possible.

Interviewers were also instructed to keep a personal journal throughout the duration of the interviews to document their circumstances and influences on days of data collection. Being able to keep track of days that interviewers were upset, frustrated, or had feelings that could have influenced interviews was our way to account for dependability.

Dependability is the requirement for interviewers to describe changes that occur in their setting and how it may affect the way the researcher approaches data collection (Bryman, 2012).

Interviewers were instructed that thick description and detailed notes were vital to this study.

Bryman described this type of note taking as means of transferability. Transferability allows the

researchers to make assumptions about other populations that share details with those respondents in this study.

Component two of this study described interviews with animal-based food producers to describe their perceptions of the factors they believed are most influential in the purchase of animal-based food products. Producers were purposively selected from personal and professional connections and snowball sampling, because it was difficult to find animal-based food producers that are willing to speak with researchers, regardless of the intent of the research. We chose a variety of meat producers including beef, pork, and chicken. Producers were identified through two means: initially, we identified producers we had existing relationships with and who met the criteria of our study. We then asked for referrals. According to the United States Department of Agriculture, California, Iowa, and Texas are the three highest producing agriculture states in terms of production agriculture receipts. The producers that participated had operations throughout both states, so there was not a concentrated area or city that most producers lived or worked. We contacted roughly 25 producers in California and Texas. Credibility was established through the selection of producers, that animal husbandry was their main means of livelihood. All producer interviews were conducted by the authors, who have a thorough knowledge of animal production methods. Conducting interviews in this way was better than using a team because there are many industry terms that could have been used that may have been misinterpreted without a working knowledge of production agriculture. Similarly to component one of this project, interviewers were given a guide of questions to ask producers, and made changes, adding and/or passing over relative content. An example of the interview guide is depicted below.

1. How many head of livestock? What is the size of your operation?
2. What kind of operation do you run?
 - a. (stocker, cow-calf, feedlot)
3. What “product” are you selling?
4. Why this product/ this breed/ this kind of operation?

Follow up Questions/ Topics

5. What kind of people do you sell to?
 - a. (other business, harvest facility, individuals)
6. How do you market to your customer?
7. What do you believe is important for consumers to know about your product?

Are you involved in any breed or cattle association?

8. How involved are you?
9. Do you know if/what the association does to connect with the customer?

Both researchers analyzed and interpreted every interview for confirmability reasons. To address credibility, we were able to follow up by phone with selected producer participants to confirm transcripts of previously conducted interviews; this allowed us to make necessary adjustments in meaning. All interview notes and records were kept, and the rest of the research team audited procedures to establish dependability.

CHAPTER IV

RESULTS

Semi-structured interviews from consumers yielded the following characteristics presented by personas supported by direct quotes from interviews. Direct quotes of participants are indented, blocked and/or italicized.

Jennifer Dean

Jennifer is a stay-at-home mother of three children. Her husband, Brad, works as an accountant in San Diego, California. Their oldest two children are boys ages 10 and 13. The boys are involved in soccer, Boy Scouts of America and their local church. The youngest child is a six-year-old girl who is with Jennifer everywhere she goes. Jennifer's daily routine revolves around her family. She begins her day by starting laundry, waking the children, cooking breakfast, and getting the kids to school. For breakfast, Jennifer likes to prepare eggs and individually wrapped pan sausage. When Jennifer returns home from dropping the boys off at school she likes to exercise by walking around her suburban neighborhood. When she gets back from her activities she prepares a typical lunch of peanut butter and jelly sandwiches or another quick food for her and her daughter. Following lunch Jennifer spends about an hour either cleaning in her home or working in her lawn. While she does this, her daughter likes to color at the kitchen table or watch television. When Jennifer picks up her boys from school, she brings them home for a snack of frozen fish sticks or chicken fingers. Then, she takes them to soccer practice or to a Boy Scouts of America meeting. Brad arrives home at about 5:30 and is home when Jennifer and the kids return. She rushes to prepare a nutritionally balanced meal for her family. This usually includes ground beef or chicken breasts.

When I shop, I look for foods that are packaged in serving sizes so that I can cook the amount I need. I cook a lot of the same foods over and over. I like chicken breasts in the re-sealable bag because I don't ever cook an entire bag at one time, and ground beef is good because it comes in small portions.

Jennifer finds portion-sized-bags or re-sealable bags important because she is shopping for a family of five. Her husband and six-year-old daughter eat very different amounts so being able to put uncooked or unneeded foods back in the freezer is more important to her than the actual meat product.

Most moms shop like I do. When I'm driving my kids all over town and trying to keep them involved I need things that are easy to run in to a store and pick up. I shop about twice a week most of the time. I like to buy all my meat once a week though.

Jennifer works hard to her family moving in the right directions and making it to all of their events. She lives her life based on a calendar that she keeps all her plans in. Without Jennifer, the family would struggle to exist in the way it does now.

I would like to give my kids the most nutritious foods, you know, like organic vegetables and natural fish and whole grains, but it's just not possible sometimes. Those things are expensive and not necessarily family friendly.

She feels guilty for what she feeds her kids but she needs food that will last longer and is less expensive. For Jennifer, keeping food stored and ready to prepare is her highest priority when it comes to grocery shopping.

Amber Josephson

Amber works as an event planner in the Los Angeles area, mainly coordinating corporate events and meetings. She is the mother to a four-year-old girl and married to a police officer, Aaron.

Amber works out about 15 hours per week at a local gym and is very concerned with her health.

She eats only organic, non-farm-raised fish, grass-fed beef, and only locally-grown produce.

Amber's husband eats what he wants while at work but follows his wife's strict shopping guidelines while at home. Amber makes time to shop at the farmers market for produce and eggs.

I can't ever find organic beef at the farmers market because they don't have a cooler so I just buy the locally grown beef called Foothills.

Amber expressed that she wants to buy everything at the farmers' market but simply cannot because of limitations the producers have. Not everything she needs or wants is at the farmers market.

I started eating this way when we decided we wanted to have children. I became concerned from watching some documentaries and then found some really interesting information of Facebook and in blogs that made me research a little farther.

Amber uses Netflix and social media to inform her opinions about her food. She believes wholeheartedly that these are accurate sources of information. She has a passion for how she shops and is defensive that others do not do the same things as her.

I don't think other families eat like us. They may say they want to, but you can't cut corners if you want to provide your child with the highest quality

of food. There are no shortcuts to eating healthy. Shopping like I do requires planning.

Amber is excited to talk about how and what she does. Grocery shopping for her is something she takes pride in because she believes that she has figured out the right way to do it. She has *outsmarted* corporate food companies.

I really like being able to show her where our food comes from. The raw milk dairies have tours and a “Camp with the Cow” program. It’s a great way to feel connected to what I’m putting in my body. We don’t drink raw milk because of the dangers but we do drink organic milk.

Amber is picky about what trends she follows. She does not drink raw milk or eat processed meat because she thinks it is bad for her. For Amber, agri-tourism is a form of honesty: a way of farmers telling the truth about what they do.

You just can’t half-ass this organic thing. One time we bought some meat labeled from Mexico, it’s sketchy. It looked different and smelled when we cooked it. Whole Foods is the only cheap and organic option.

Aaron has a strong tone regarding country of origin labeling and is free speaking about his desire to shop for organic foods, much like Amber. Amber and Aaron are both fitness-and health-centered with a sincere desire to provide healthy foods to their young daughter.

Janice Allen

Janice is in her early 60s and has grandchildren that enjoy coming to stay with her on the weekends. Janice is a retired teacher and considers herself “up with the times.” She has watched a lot of “stuff” on television related to food and has decided that the best thing she can have for

her grandkids to eat when they visit is organic foods. She buys all organic cereal and pastas because that is what the grandchildren like.

I buy really healthy foods by my standards. It's important to eat home cooked meals. Those frozen foods and pre-packaged foods are full of other stuff that we don't need in our bodies. For beef I buy the fresh meat out of the case. I like being able to pick it out and know what it looks like before I pay for it.

Janice is comfortable about the foods she buys. She likes to have complete control over what she is buying. She believes that frozen or processed foods have too much added ingredients to be healthy for her.

When I pick out fresh meat I look for less fat around the outside, that's the bad fat. My husband always told me that; he is raised around cattle. Whole Foods is my number one place I'd like to shop, but I just can't afford it.

She focuses a lot on balancing health and price. She wants to eat the healthier foods but believed healthier meant pricier. Healthy to Janice is eating less-processed foods. She equates less processed with the term organic.

Robert Wood

Robert is a large framed man with a large voice. He is a successful lawyer in the Sacramento area with two kids in college no longer living at home. He and his wife, Cheryl, love to grill outside.

Everything from steaks, burgers, and sausage to fish, shrimp, and scallops. I don't really know about anything we buy, except the meat. My wife and I split up in the grocery store, she takes care of everything else.

Robert is confident in his ability to buy and cook all meats. When he talked about meat it is similar to the attitude you would expect someone to have when talking about their favorite sport. He made jokes and became very relaxed.

I shop for each type of meat differently. In beef, brighter red looks better but in seafood less blood looks cleaner, but chicken is just chicken. I like to buy brand names just because I know quality is guaranteed. They didn't become popular for bad tasting meat. I don't usually change brands unless I've had it at someone else's house.

He is very clear that price is not a focal point when he shops. He is very detailed in what he is looking for in each type of meat.

We have guests over for dinner almost every weekend. I grill the best steaks out of anyone we know so we usually serve steaks with vegetables and a salad.

Robert's confidence in the way he cooks meat on the grill is apparent. Cheryl is not supportive of Robert's habits and sometimes questions them:

Sometimes I worry that he eats too much red meat. I see all over the TV where they say red meat is bad for you so I try to get him to eat more seafood or chicken.

Cheryl interjected with her disdain for his eating habits, but agreed that she likes a good steak as much as he did and always eats one when he cooks.

They are always changing what they say about what we should and shouldn't eat. I think that red meat is just fine.

Even though his wife is adamant about him watching his red meat intake, Robert felt as though you can't trust nutrition sources. Robert is certain that he is going to continue to entertain his backyard guests with a big juicy steak anytime he gets the chance regardless of what the TV said about red meat.

Will Johnson

Will is a student at a large four-year university studying political science. Will works out five days per week and plays intramural sports with his friends. Health and fitness are important for him until the weekend. He likes to go out and have drinks with his friends on the weekend that "aren't the healthiest." When he goes to class during the week, he packs a lunch and takes a protein shake for his breakfast. He only shops for himself, so portion sizes are important; he needs to be able to store his food and it stay good for a long period of time.

I'm really busy, so I usually only shop once every two weeks. I buy a lot of frozen foods so that they will stay good longer. I look at nutritional facts like fat content and stuff like that but I can't always afford to get the healthiest foods because they are more expensive. I buy a lot of ground beef and chicken breasts.

Will is living paycheck-to-paycheck and spends his disposable income on things other than food. He knows he wants to read nutrition labels but that for him they still do not play as big of a role as the bottom line price.

I can't remember why I look at fat content, maybe because it's less greasy. My girlfriend doesn't even eat meat so we usually just have a lot of beans and pasta with our meals. I like to eat meat at home when she's not there though.

Will's commitment to being healthy is often sacrificed for the sake of the price of his healthy foods or to be able to eat or drink with his peers. His commitment to a strict diet is weak due to everything he had going on in his life; however, he does share some habits or perceptions that are evident in his shopping.

I'm kind of nervous about buying pre-packaged foods because I feel like those company's goals aren't to make better food but to make more money. When I graduate and have a real job, I would like to be able to buy local foods or organic foods or something. Just something that I know is made for quality and not profit. I want farm food, not industrial food.

Will clearly has an idea of what he wants to eat but does not seem to have a vision of exactly what kind of trend he wants to adopt.

In parallel to the consumer persona, the producer interviews yielded these personas with less quotes about food beliefs and more background information about what they did themselves.



Figure 1. This image represents the producer findings for visual aid purposes only.

In any business, there is competition among producers, and each producer caters to a certain type of customer. Animal-based food producers are not exempt from this basic business model. Previously in this section, consumers were categorized into profiles based on similarities in what they desire in an animal-based food product. The data leads us to believe that there is not a single product that could satisfy all consumers. Fittingly enough interviews revealed that there are different producers to meet varying needs of the consumers. Much like their consumer counterparts, each producer has different beliefs and attitudes about food. Profiles were created to reflect production styles and consumer awareness of all the producers interviewed by including background information about their production style and career.

Ben Collinsworth

Ben and his wife, Bailey, own a livestock auction facility as their primary means of income; Bailey works full time at a local junior college as a secondary source of income. They are between 50 and 60 years old, and have a grown daughter away at college. Aside from the sale barn, the couple owns 8500 acres on which they run a cow-calf operation. A cow-calf operation is a system in which calves are born and raised until large enough to be weaned and sold to either a stocker operation or feedlot. Cows are kept and cared for year-round.

Ben identifies himself a cowboy. He does a lot of the hands on work, including the feeding, sorting and maintenance. *“A cowboy’s work is never done.”* Ben cares deeply and emotionally for the animal. *“[A] rancher is a steward of the land; [I] care for the animals.”*

His goals as a rancher are to feed the growing population and to make a profit to support his family, not necessarily turn a high profit. *“Very few people make money in this industry.”*

The challenges he feels like he is facing are low cattle numbers after a recent drought, and that cattlemen are fighting US policy makers and the industry needs advances in genetic quality to continue to feed the population. Ben says *“buying cattle is like a chess game,”* and *“a rancher has to be involved in the legislature [to] feed the masses”*.

Ben understands of the consumer’s concern that the animals are cared for properly. As a producer, he believes no one works harder than him to see that his cattle are safe and even cherished. Ben expresses that consumers need to know that the US has the safest food in the world and that ranchers are truly compassionate for their animals.

Although he acknowledges differing consumer and producer views, his main concern is meeting the immediate needs of his family and the demand for his product.

Allen Hammond

Allen owns about 50 head of cattle on a 400 acre cow-calf operation. He is single and has two grown children. Ranching is a secondary means of income; oil and gas royalties serve as his primary means. Allen operates the ranch himself with the aid of a cash-paid ranch hand. He is mid-50s and lives in a semi-rural area.

Allen identifies as being a full time rancher. He does most, if not all, of the care and maintenance himself or by supervision of a single ranch hand. He takes his own calves to auction and believes *“record keeping is very important.”* Allen believes consumers need to know his cattle are raised without hormones or antibiotics. *“Health is everybody’s main concern,”* he says. He also wants to show and explain his country lifestyle. *“People are always asking what we do... I give tours all the time.”*

As a secondary means of income, Allen’s goals include keeping the cattle as a tax write-off, to break even on the operation, and to process some calves for his and his family consumption. His says his main challenge is the high cost of maintaining an operation.

Allen takes consumers’ concern of health into raising his livestock and changed some practices to meet their desires, including hormone-free and antibiotic-free. However, because selling cattle is not his primary means of income, he is not overly concerned about the industry’s relationship with consumers. Nonetheless, he is happy to show off his operation to any consumer who is interested.

Brad Diller

Brad is essentially a banker who gives farmland real estate loans. The company he works for is owned by an organization comprised of cattle producers in the region, so he has an inside

perspective of the industry. The loans he works with are on average, \$2 million for much larger scale operations than Ben and Allen have. Brad is between 45 and 50, married with two teenage children. Brad and his family live on 15-20 acres and raise various livestock species, including horses, cattle and rabbits.

Brad believes there are two large challenges that plague the beef cattle industry: the average age of a beef producer is exceeding the age of 60 and the high cost to start any beef operation.

“Nobody wants to ranch cows anymore and unless you’re wealthy... you can’t be successful in this business.” He foresees that very few producers will own a vast majority of the industry.

Brad suggested *“the mega ranch era is coming to an end.”*

Brad observes many sales of yearlings to feedlots. Yearling is a calf that is approximately a year old and has been weaned from its mother. A feedlot is a cattle feeding system in which calves are bought typically at the yearling stage and are fed until they are mature enough to enter the harvesting phase. Brad admits that most of the yearling sales take place on a verbal description of the calves; he has witnessed video sales and believes they have proven to be unsuccessful.

Brad is very concerned about issues within the beef industry and doesn’t necessarily hear consumer grievances. As a financial advisor he is really focused on aiding industry dynamics to meet the growing demand of beef.

Bobby Knight

Bobby primarily raises pigs for the purpose of exhibition but supports the food supply. He owns about 50 sows outside Sacramento, California. He is in his late 40s and has children. Bobby is involved with the California State Pork Board, by serving on committees, public outreach, and in youth development.

Bobby's main goals are telling the public about the producer side of raising pigs. *"If we don't talk, then someone will talk for us, like Wayne from Humane Society of the United States (HSUS)."* Bobby wants to use everyday conversation and networking to explain to people what he does.

Bobby's challenges are that he feels many of his fellow producers don't care. *"Producers don't have a buy in [be]cause they have so few sows."* He believes there is not a universal effective way to educate the public, and that there are consequences for speaking out as a producer. *"Talking for the industry can get you attacked,"* Bobby said. He sees an immediate need to educate the public about pork and currently feels the best way to do that is through personal connections, not publicly.

Consumer perception is a huge concern for Bobby. He feels that he is one of the only producers willing to speak out about his practices. He wants to engage consumers in an open discussion and address any concerns they may have.

Jake Calloway

Jake is a fat cattle buyer for a commercial feed lot; the term fat cattle refers to a calf that is ready to be processed for consumption. He grew-up raising cattle; he also owns his own ranch with 100-150 head of cattle. He is approximately 30 years old, married with two young children, both less than six years of age. Jake is passionate about the beef cattle industry and loves his job.

Jake's goals are to make a marketable, safe food product through humane practices. He is annoyed by activist groups including People for the Ethical Treatment of Animals (PETA) and HSUS.

Jake believes consumer perceptions of the beef industry are negative and, therefore, consumers misconstrue facts. During our interview, Jake took an offensive approach to describing the interaction between consumers and producers. He believes he is facing is the dwindling size of agriculture, as a whole. He believes the news media presents a biased perspective of cattle producers and emphasized the importance of producers using facts to counteract the news media: “[producers] use facts to rebuttal [poor media].” Jake referred to some consumers as “the over educated housewife.” According to Jake, “the consumer doesn’t give a crap about the science.” “People don’t care... they want their food and they want it now.”

Jake believes there is a need for an education process to make consumers more aware of their food products. Consumers need to understand “our product is 100% safe.” “Some of these things [like GMOs and implants] are necessary evil... due to cost and demand [of this product]”

Jake emphasized, “We need to be proactive instead of reactive.” However, he did not have a plan of how to approach educating the public.

In summary, Jake wants consumer to care and understand his struggles as a producer in a logical manner, the way he does. He strongly believes someone should educate consumers but not necessarily him.

Aaron Seedig

Aaron has two cow-calf operations; one in North Texas and a larger one in New Mexico. The New Mexico operation sells between 120-180 calves each season, and most sales occur via the internet and video on Rural Farm Development TV (RFDTV). Aaron is in his late 50s, married with the grown children and grandchildren. His cattle operations are his family’s primary means

of income; his wife, Alicia, works full time as well. He identifies as a happy-go-lucky guy with a positive attitude about the beef industry.

Aaron had stronger opinions about what consumers should know about his product. Aaron believes it is important know the difference between vaccine and growth hormone. *“Health-nuts want grass-fed so, I raise 100% all natural, grass-fed.”* There are no growth hormones in his cattle, and he raises all natural, grass-fed beef.

His goals as a producer are to have a good vaccination program, implement a learning program and to produce healthy cattle. When asked what challenges he faced, he said, *“no problems,”* then commented about the high cost of feed.

Aaron is open to what the consumer wants in a product, and is happy to make adjustments to his practices to meet their demands. He considered implementing an education program along with his operations, but overall implied there was a sort of balance between his product and consumers.

Alice Harper

Alice is in her 50s, married and has three children 10 -18 years-old. She grew up in California raising commercial cattle, and now raises cattle with her family. She is the founder of *Cattle Queens*, a company that can be hired by professional stock shows to give free tours through the show barns, teaching attendees about different projects and aspects of agriculture. She is very involved in breed associations; she serves as president of a breed association, involved in National Young Farmers and her husband is head of a county breed association.

She is passionate about educating the public *“[There is a] need to educate the public about agriculture.”* There are two key topics she wants to communicate: Food is safe, and animals are

treated humanely. She believes the best way to educate the consumer is through conversation: *“We’ve got to be more proactive in telling our story, there are a lot of publications, but people really want to talk... all the literature in the world won’t hit the target.”* Alice discussed several challenges she believes the beef industry faces: there is a struggle to get voters to vote based on fact and not emotion. She believes, *“true knowledge is based on fact not emotion.”* She does admit she is not trying to change the consumer’s opinion, just share some facts. Alice continues to say *“there is a real reason to do these things”* – referring to docking, tagging, dehorning, etc. She wants consumers to know that livestock is more than a food source; only 2% of the animal is thrown away, and the rest is used for byproducts. She also had a strong dislike for the term *“slaughter”*, she insisted to use the word *“harvested”*.

Alice is passionate about educating consumers about common practices used in animal production operations. She understands consumers’ concerns and interest associated to the industry and is ready to discuss with any willing participant.

CHAPTER V

CONCLUSION

Increased food options readily available to consumers have created a communication disconnect between what consumers desire in an animal-based food product and what practices producers are using to meet those demands. The purpose of this study was to investigate communication between producers and consumer of animal-based food products. Bandura's (1986) social cognitive theory helps to explain the decision-making process by evaluating three determinants: personal, behavioral, and environmental. In our investigation, we sought to describe how personal and environment determinants are perceived to influence behavior. Specifically what drives consumers to buy animal-based food products, and what drives producers' production decisions. Guided by social cognitive theory, a grounded theory approach was used to describe the process. The behavior of purchasing animal-based food products in this study was not manipulative therefore was used as an identifier among consumers.

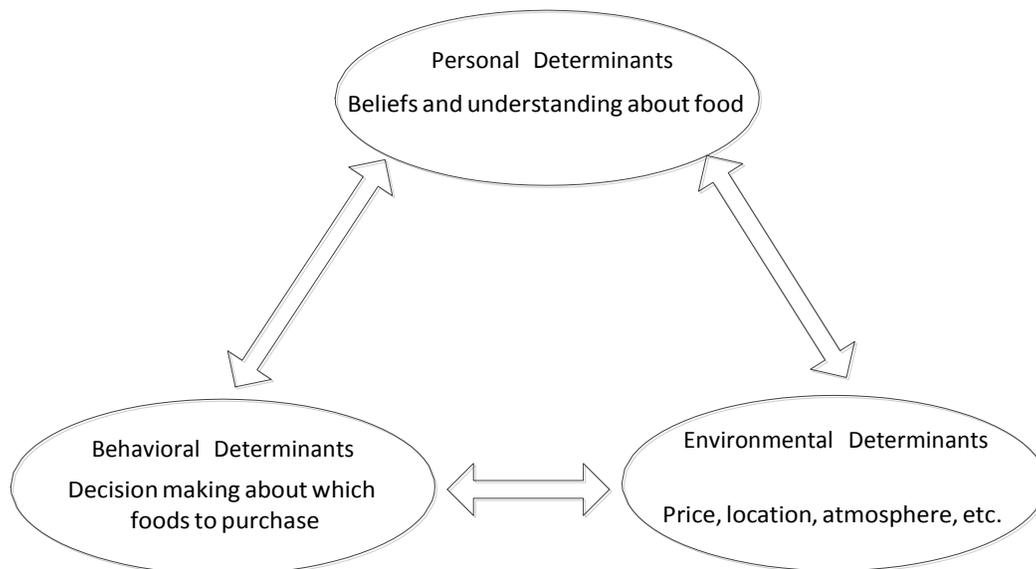


Figure 2. This figure is an adapted version of Bandura's Theory of Mass Communications

(2001) that serves as our theoretical framework.

Personal determinants were found to be a range of factors that influenced the behavior. These included beliefs about food, its preparation, and its effects on the body alongside the environment. Consumers in this study had ranging levels of intensity and sensitivity when discussing their food consumption. Consumers like Amber Josephson had much different attitude and ambition to discuss food compared to consumers like Will Johnson. Consumers that contributed to the persona of Janice Allen held, by industry standards, confused perceptions of healthy foods, however, were confident in their choices based on these confusions.

Environmental determinants were also pertinent in a range of influences including family size, price, shopping area, and information cues. Family size and age played a role in limiting the types of items and how they were packaged. Families like that of Jennifer Dean seemed to need re-sealable bags and portion sized containers. Consumers that contributed to the profile of Amber Josephson were much more concerned with the production practices and health concerns that she had learned about from media outlets. The consumers in this study seemed to be in tune with non-traditional media outlets, thus were represented by Amber. Consumers like Amber also were interested in having domestically grown food. This is important for legislative information. Consumers that contributed to the profile of Robert Wood presented a confidence in media sources that conflicted with those consumers that resembled Amber. Those like Robert have a distrust of media information and relies more on his beliefs. An interesting point of environmental determinants was that nearly every consumer in this study mentioned price, however, few named it as a primary decision-making influence.

In the consumer portion of this study, further research is inevitable. This study had a limitation of time and resources causing the number of participants to be relatively low compared to the size of the animal-based food industry. Furthermore, in the beginning of this study, we designed a mixed-methods study that would use the influences found to establish advertisements that would be used to account for the measurement error associated with interviews. This design was beyond the limitations of the project. Therefore, the study was reduced to include the qualitative portion only.

Producer's beliefs about what influence consumers to purchase animal-based food products are just as varied as the consumers' profiles. Some believed agri-tourism is the key to catering to the needs of consumers. The farmer's market trend is great for selling to locally minded consumers or consumers who want a relationship-based transaction. Producers are also transitioning to making a larger variety of products including gluten-free, organic and hormone free. Some producers were concerned about internal industry problems that they pay little attention to what the consumer needs or desires. Others expressed a great deal of concern about consumers' interests and reported that they change practice methods regularly to accommodate popular trends. Several producers shared the desire for consumers to learn more about the industry and make informed and logical decisions about their food choices. Although consumers can quickly change what they desire in a product, changes in a production operation are not as easily completed.

It can be concluded that there are different types of producers that cater to certain types of consumers. For example, there are organic ranchers to provide for consumers that desire organic products. Farmer's markets provide an easy way for local producers to market their product for the consumers that driven by locally grown and traceable foods. It is not reasonable for the entire food industry to change its production methods. However, as the proportion of consumers who have special needs grows, so shall the specialized food production industry.

Ideally, producers would have been included with the testing of influence infused advertisements to present a quantitative portion of this study that would validate the influences that are most common. Furthermore, a larger population of producers and would yield more attitudes towards consumers.

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