KNOWLEDGE AND PERCEPTIONS OF AGRICULTURE PRACTICES AND LEGISLATION RELATED TO SOCIAL INFLUENCES AS PREDICTORS OF VOTING ON AGRICULTURE POLICY

Thesis

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ABSTRACT

Animal protection legislation continues to be prevalent on U.S. political agendas, therefore, it is important for agriculture communicators to be able to communicate with stakeholders about the economic and social value of agriculture. In addition, as animal rights lobbying organizations continue to improve and strengthen their public presence, it is critical that agricultural communicators make the public aware and informed of agricultural issues through increased use of mass media technologies. This study sought to examine the agricultural presence in a technologically advanced social networking medium as well as to gain an understanding of consumers’ knowledge of agriculture. This study was unique in that it assessed this information and then related it to the voting outcomes of two different animal protection legislation bills. Theories used to guide this study included messaging appeals, social cognitive theory, social learning theory, cognitive dissonance theory, semiotics, and knowledge gap.

A content analysis was performed on a census of 111 YouTube videos related to California Proposition 2. In addition, 508 questionnaires were collected from voluntary participants at the 2009 Ohio State Fair. Basic descriptive quantitative statistics were completed on the data. In addition, open coding was used to analyze the qualitative portions of the study.
Results of this study suggest that the YouTube videos related to Proposition 2 mostly supported the issue, while only a small fraction opposed the proposition. In addition, the majority of the videos used emotional messaging appeals while rational appeals were used on a less frequent basis. Findings from the questionnaire indicate that consumers do not differentiate between animal rights and animal welfare. Consumers reported positive regards for the humane treatment of animals and perceived that the majority of farmers raised their animals in a humane manner. Most of the participants knew that the majority of livestock were raised in conventional livestock housing systems, but indicated that traditional housing was more humane. Participants expressed that traditional livestock housing produced the healthiest animals, but conventional housing was most protected from disease. In addition, consumers identified that traditional housing would produce the safer and most wholesome food, while conventional housing would produce more consumer friendly prices. The majority of respondents were unaware of livestock legislation that had passed in six states and were also unable to accurately describe the difference between HSUS and a local humane society. Lastly, the participants favored the idea of an Ohio Livestock Care Standards Board now known as Issue 2.

Suggestions were made for further research. In addition, recommendations were made to agricultural communicators and educators. These recommendations included suggestions for improving agricultural campaigns, further research ideas, and educational suggestions.
Dedicated to my parents who provide unconditional love and support and who taught me the value of hard work and dedication.
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CHAPTER 1
INTRODUCTION

Throughout history humans have relied on animals for food, protein, and many byproducts. As the domestication of animals has evolved, society has increasingly become more concerned with the well being and treatment of animals. As a result, groups collectively known as animal rights organizations have emerged and animal protection legislation has become prevalent in the political agenda. The mass media plays a key role in covering such legislation and developing consumer’s perceptions of animal care. However, the influence of celebrities, media images and popular networking sites such as YouTube seem to be disseminating an emotional stance on animal care rather than a scientific base.

History of Animal Rights

There is evidence that humans were thinking about the cognition of animals in the 17th century when Rene Descartes philosophized that animals had no thought (Regan, 2004). Since then, more theories have been posited about the cognition of animals. Many people now believe that animals possess “conscious awareness” (Regan, 2004, pg. 2). This in turn suggests that animals can feel pain, think, plan, and possibly have feelings. When animals are afforded human like characteristics, many people identify with them and become concerned with the way in which they are treated and cared for, thus resulting in a push for animal protection.
The European Union has led the way in animal protection standards. In 1822, Great Britain implemented their first animal protection legislation (Radford, 1996). This legislation was titled ‘An Act to Prevent the Cruel and Improper Treatment of Cattle,’ which later became known as the Martin’s Act (Radford, 1996). More recently, the Treaty of Rome, written in 1957, addressed the concern for animal protections (Sullivan, Vietzke, & Coyne, 2008). In 1997, the Treaty of Amsterdam provided revisions to the Treaty of Rome, which included additional animal protection measures (Sullivan et al., 2008). In addition to the measures included under the Treaty, numerous others have been developed in the European Union; some of these include the Wild Mammals (Protection) Act, Animal Health Act, and Welfare of Animals (Slaughter or Killing) Regulations (Radford, 1996). Animal protection laws have continued to progress in the European Union, and treatment regulations have been initiated on animal production systems, including calves and egg laying hens. Additionally, politicians have banned veal crates (Sullivan et al., 2008). With the success of these acts, similar legislation has begun to be seen in other countries, including the United States.

The first animal protection organization was formed in the United States in 1866; this organization was known as The American Society for the Protection of Animals (Jasper, 1996). However, it was not until the last 30 years that animal rights has surfaced and intensified in American society (Garner, 1996). In the early 1980s, the animals rights organization People for the Ethical Treatment of Animal (PETA) was developed (Jasper, 1996). In addition, during the 1980’s visible animal rights protests formed in the United States (Jasper, 1996). Videos and shocking footage of animal research labs were released through the news media in 1981 and 1984 by PETA and the Animal Liberation Front.
News coverage of the abuse in animal laboratories provided a boost to the animal rights movement. By the end of the 1980s, one million Americans supported animal rights organizations through various forms of contribution. Protests peaked in June of 1990 when 30,000 activists participated in the ‘March for the Animals’ in Washington D.C. (Jasper, 1996). The concern for animal protection among the general public has made animal rights and protections prevalent in the United States political agenda (Garner, 1996).

Prior to the movement toward animal protection, two primary federal regulations were in place in the United States concerning animals. These included the Humane Methods of Slaughter Act of 1901 and the Federal Meat Inspection Act of 1906 (Becker, 2009). The Humane Methods Slaughter Act stated that “...livestock must be slaughtered in a humane manner to prevent needless suffering, research methods on humane methods of slaughter, the non-applicability of these statues to religious or ritual slaughter, and the investigation into the care of non-ambulatory livestock” (“Humane Methods,” 2009). In addition, the Federal Meat Inspection Act provides regulations on: ante mortem and post mortem inspections, humane methods of slaughter, meat inspectors, marks of inspection, labeling, packaging, sanitation, export inspections, import inspections, storage, handling, and record keeping, among other things (Food Safety Inspection Service, 2009).

In 1966, the Animal Welfare Act became a federal law in the United States (United States Department of Agriculture, 2009e). Since then the Animal Welfare Act has been amended six times, the most current amendment being in 2007 (United States Department of Agriculture, 2009e). The Animal Welfare Act has provided many benefits in terms of animal welfare in the United States; originally set legislation to “...regulate
the transportation, sale and handling of dogs, cats, and certain other animals intended to be used for purposes of research or experimentation, and for other purposes” (United States Department of Agriculture, 2009a). The Act has been expanded to include: all warm blooded animals being used for experimentation or exhibition, has set restrictions on animal fighting, set requirements of health certifications by a veterinarian, established that an Institutional Animal Care and Use Committee must be in place at institutions of animal experimentation in order to insure the most humane care, and created holding periods for shelter animals (United States Department of Agriculture, 2009f; United States Department of Agriculture, 2009b; United States Department of Agriculture, 2009c; United States Department of Agriculture, 2009d). Animal protection regulations have increasingly become part of the United States political agenda, but they have also become more prevalent on the minds of members of the Senate and House.

An animal rights lobbying organization, The Humane Society of the United States (HSUS), released a humane scorecard for the members of 2008-2009, 110th congress. According to their score card, 27 of the United States Senators scored a 100 or 100+ on the humane scorecard (Humane Society Legislative Fund, 2009). A score of 100 or 100+ indicated that the Senators favored and took a pro-animal stance on all issues important to HSUS; to achieve a 100+ they also had to sponsor or co-sponsor an issue important to HSUS (Humane Society Legislative Fund, 2009). In addition, 65 members of the house obtained a score of 100 or 100+. With the support of the members of congress it seems that animal protection legislation will continue to be introduced.
Recent Livestock Legislation

Within the last few years, the focus has shifted from federal legislation to individual states for animal protection legislation. Much of this legislation has been proposed by animal rights organization such as HSUS. In 2009, HSUS played a role in the passing 121 new state animal protection measures (The Humane Society of the United States, 2010). The Prevention of Equine Cruelty Act, also known as the “Horse Slaughter ban,” was originally implemented in Texas and Illinois in 2007 (Becker, 2009). In addition, livestock housing legislation, proposed by animal rights organizations such as HSUS, has become prevalent and has now spread to seven states. Florida became the first state whose citizens voted to ban gestation crates for housing sows in 2002 (The Humane Society of the United States, 2009b). Following Florida, Arizona voters banned both gestation crates and veal crates in 2006; Oregon followed in 2007 by banning gestation crates through voluntary legislation; Colorado also took a voluntary stance on legislation in 2008 by banning gestation crates and veal crates; 2008 also saw voters in California who voted to ban gestation crates, veal crates, and egg laying hen cages; and lastly, Maine and Michigan voluntary implemented legislation in 2009 banning veal crates and gestation crates in Maine and veal crates, gestation crates, and egg laying hen cages in Michigan (The Humane Society of the United States, 2009b). The passing of livestock housing legislation (Proposition 2) in California became monumental, as it was the first large agricultural state to be effected by such legislation.
California Proposition 2

On August 9, 2007, livestock housing legislation was proposed by animal rights organizations in California when they filed a state petition (Sumner, Rosen-Molina, Matthews, Mench, & Ritcher, 2008), which would include the “Treatment of Farm Animals Statute” on the November 2008 general election ballot (Sumner et al., 2008; California Farm Bureau Federation, 2008b). Proposition 2, as it was popularly known, included limits on minimum space requirements for the confinement of veal calves, gestating sows, and laying hens (Sumner et al., 2008).

The heart of the language included in the proposition was as follows:

In addition to other applicable provisions of law, a person shall not tether or confine any covered animal, on a farm, for all the majority of any day, in a manner that prevents such animal from:

(a) Lying down, standing up, and fully extending his or her limbs; and

(b) Turning around freely. (Sumner et al., 2008, p. 11).

Agriculture is California’s number one economic industry (Benson, 2008), and passing Proposition 2 posed economic concerns on the future of California’s economy. California produced very little veal, their pork industry was small, but their egg industry was expected to be greatly influenced by Proposition 2 (Lee, 2008b). In 2008, California produced over 5 billion eggs from about 20 million laying hens (National Agricultural Statistics Service, 2008; Sumner et al., 2008). The value of California’s egg production was $337 million in 2007 and $440 million in 2008 (National Agricultural Statistics Service, 2008; Sumner et al., 2008). Predictions were made that Proposition 2 would
cause a near complete elimination of egg production in California by 2015, when the Proposition takes effect (Sumner et al., 2008). This elimination would cause a decrease in local and state revenue taxes, along with the loss of thousands of jobs (Lee, 2008a). Many California egg producers may be forced to relocate or go out of business; resulting in a decreased ability for California consumers to buy safe, affordable, fresh, and locally grown eggs (California Farm Bureau Federation, 2008c). Proposition 2 was projected to change how animal products were produced in California; and concurrently influenced where animal products would be produced in the future (Sumner et al., 2008).

During the campaign, opponents of the proposition attempted to tell their side of the story through television and radio interviews; talks to local boards of supervisors, chambers of commerce, and rotary clubs; forum debates with proponents; and farm tours (Lee, 2008a). In addition, opponents had support from numerous major California newspapers including the Los Angeles Times and the San Francisco Chronicle, the American Veterinary Association, and Governor Arnold Schwarzenegger (Lee, 2008a; California Farm Bureau Federation, 2008c; California Farm Bureau Federation, 2008a). Despite strong arguments, the opposing side failed to communicate its message clearly. “The No on 2 Coalition” stated that they were unable to overcome “an emotional, manipulative, dishonest and often deceptive campaign by the backers of Proposition 2” (Lee, 2008b). Additionally, Leland S. Shapiro, DVM, from L.A. Pierce College said “We failed as an industry to educate the public about how we care for our animals. We’ve also failed to produce sufficiently versed agricultural ambassadors in our major universities that are capable of telling our side of the story” (2008, p. 1). After the passing of Proposition 2, HSUS vowed to propose livestock housing legislation in other large
agricultural states, Ohio and Indiana have both been targeted since (White, 2009; Truitt, 2009).

Proponents of Proposition 2 reached consumers with their campaign through the use of news and media outlets including commercials, YouTube videos, news releases, coverage in the New York Times Magazine and celebrity representation on talk shows such as the Oprah Winfrey Show and Ellen DeGeneres (The Humane Society of the United States, 2008b). Supporters of the proposition included The Humane Society of the United States, the California Veterinary Medical Association, ASPCA, United Farm Workers, Farm Sanctuary, the Sierra Club and others (The Humane Society of the United States, 2008a). The Humane Society of the United States (2008b) regarded the passing of Proposition 2 as common sense message suggesting “…that all animals, including those raised for food deserved to be treated humanely…”

As this study explores California Proposition 2 it is important to note the dissonance that HSUS created in relation to this legislation. On March 12, 2008 CNN covered the story “‘Downer’ cows entered food supply, company admits” (CNN, 2008). A video released to the media on January 30, 2008 by HSUS showed a downer cow being mistreated at a slaughtering facility (CNN, 2008). This video created substantial dissonance among consumers months before California voters would determine the fate of California Proposition 2. It is evident through their campaign trail that HSUS relied heavily on cognitive dissonance to produce their desired outcomes.
Ohio’s Issue 2

In response to threats of HSUS legislation and proposed negotiations with HSUS, Ohio became the first state to take a proactive approach to creating their own livestock care legislation (White, 2009). This legislation was given the title of “Issue 2” and was decided by voters on November 3, 2009. The issue passed with 63.66% (n=1,959,669) of voters in favor of the issue and 36.4% (n= 1,118, 805) opposed (Jennifer Brunner Ohio, 2009a). Only one of Ohio’s 88 counties did not vote in favor of Issue 2 (Jennifer Brunner Ohio, 2009b). Issue 2 is an amendment to the Ohio Constitution that includes a Livestock Care Standards Board (The Ohio Ballot Board, 2009). The Board is responsible for setting standards for the care and well being of livestock, maintaining food safety, supporting locally grown food, and protecting Ohio farmers and families (The Ohio Ballot Board, 2009). Thirteen members sit on the Board and are appointed by the Governor, the President of the Senate, and the Speaker of the House of Representatives (The Ohio Ballot Board, 2009). Members appointed to the Board must be Ohio citizens and both political parties must be represented. A diverse array of expertise is represented in the 13 member board which includes the following: the director of the Ohio Department of Agriculture, three family farmers, a food safety expert, two members from a statewide farming organization, two veterinarians, a dean of an Ohio college of agriculture, two consumers, and one local humane society representative (The Ohio Ballot Board, 2009). Issue 2 was an animal welfare proposal; however, organizations in favor of animal welfare, such as HSUS, opposed the issue (The Humane Society of the United States, 2009a).
The Issue 2 campaign used a diverse array of communication outlets to reach voters including: automated phone calls, direct mail, television, radio, and online advertising, social media, yard signs, and billboards (American Farm Bureau Federation, 2010). Issue 2 was supported by Governor Ted Strickland, Ohio Veterinary Medical Association, Ohio Association of Second Harvest Food Banks, Ohio Farm Bureau, American Humane Association, American Veterinary Medical Association, and many other organizations and individuals (Safe Local Ohio Food, 2009).

Issue 2 was opposed by the Humane Society of the United States, Ohio Sierra Club, Ohio Farmer’s Union, Ohio Environmental Stewardship Alliance as well as others (The Humane Society of the United States, 2009c). These opponents reserved their resources and spent little money on the campaign (Pacelle, 2009). HSUS stated that they will likely return to Ohio in 2010 with their own ballot initiative (Johnson, 2009).

The American Farm Bureau Federation recognized Ohio for their proactive efforts at their 91st annual meeting (American Farm Bureau Federation, 2010). The component’s of Ohio’s Issue 2 was discussed and it was emphasized that HSUS’s goals do not focus on farmers, consumers, and animals best interests. Those attending were encouraged to look to Ohio as an example to figure out what would work in their state (American Farm Bureau Federation, 2010). Since then states including Indiana, Idaho, and Missouri have began to create livestock measures similar to those presented with Ohio’s Issue 2 (NAFB News Service, 2010; Truitt, 2010).
Animal Rights vs. Animal Welfare

The difference between animal rights and animal welfare is often discussed with uncertainty (Francione, 2000). Many people confuse the terms, and it is unknown if the general population really understands the difference between the two. In addition, different groups of people will provide diverse definitions for the two terms. According to the American College of Animal Welfare Organizing Committee, animal welfare is defined as the ethical responsibility to care for the well being of animals, ensuring good health, the ability to cope effectively with their environment, and the ability express a diversity of behaviors specific to the individual species (American Veterinary Medical Association, 2009). Animal Rights is often defined as giving basic rights to animals similar to or the same as humans (Animal Welfare Council, 2009; The Vegetarian Resource Group, 2009). Gary Francione an animal rights extremist explains the animal rights position similarly, “…the rights position maintains that at least some animals are rightholders and that treating animal solely as means to human ends violates those rights” (1996, p. 42). However, Francione’s explanation of animal welfare is far removed from the animal welfare definition stated above. According to Francione “The welfare position maintains that animal interests may be ignored if the consequences for humans justify it” (1996, p. 42). It is evident that there are many ideas about the appropriate definitions for animal rights and animal welfare. The public’s perception and knowledge of these two terms becomes important when considering what they are hearing in the media and how it is influencing their voting decisions.
Internet Usage and Young Voters

In recent years the Internet has become a popular resource for many people, especially young adults. Understanding how people use the Internet to access information is important, especially in the case of campaigns and voting. The 2008 election saw a record number of young voters participating in primaries and caucuses (Marcelo, Kennedy, Lopez & Barr, 2008). Voting results in the 2008 primaries recorded a record number 6.5 million voters under age 30 (CIRCLE, 2008; Loftus, 2008). Advancements in communications and Internet technology along with the “Get-out-the-Vote” campaign targeted toward young voters predicted the 18-29 year old age group would be more involved in the 2008 election than ever before (Marcelo et al., 2008). In addition, individual states reported reaching out to young voters through social networking sites such as Facebook and Twitter as well as having specialized web pages on their election websites dedicated to targeting young voters (Loftus, 2008). It is known that 44 million young adults between the ages of 18 and 29 were eligible to vote in the 2008 election, making up 1/5 of the total voting population (Marcelo et al., 2008).

The voting trends for 2004 and 2006 among young voters were another supporting factor in the expected voter turnout for the 2008 election. Young voter registration and turnout increased in 2004 and 2006 (Marcelo et al., 2008). During the 2004 presidential election the young voter registration and turnout had the largest increase among all age groups (File, 2008). The 2000 presidential election recorded that 51% of all 18-29 year olds were registered to vote while 55% were registered in 2004 (Marcelo et al., 2008). Of the 51% of 18-29 year olds registered to vote, 40% turned out to vote in 2000 while 46% of the registered 55% turned out to vote in 2004 (Marcelo et
al., 2008). Due to the increase in young voter populations, campaign strategists recognized the importance of young voters in the 2008 election (Marcelo et al., 2008). Strategists increased the campaign materials focused at persuading and mobilizing the young voter, especially online (Marcelo et al., 2008).

The prediction of a large turnout of young voters in 2008 was proven to be true as the 18-24 age group was the only age group to show a significant statistical increase with a voter turnout of 49% compared to 47% in 2004 (U.S. Census Bureau, 2009). A total of 131 million citizens voted in the 2008 general election (U.S Census Bureau, 2009). The total voter turnout was up 5 million from 2004 (U.S Census Bureau, 2009).

In 2008, the Pew Internet and American Life Project reported that 42% of 18-29 year olds surveyed indicated that they learned about political campaigns from the Internet (Kohut, 2008). In that same year, it was reported that 46% of Americans used the Internet, email, and texting to access information about the election (Smith & Lee, 2008, Gueorgvieva, 2008). Additionally, 12% of 18-29 year olds surveyed reported that they had posted their own political information and opinions on the Internet (Smith & Lee, 2008).

In their book on millennial technology’s impact on politics, Winograd and Hais (2008) discussed how the country would see the political process dramatically change through the millennial generation and its use of the Internet. This was evident in the 2008 elections. Candidates Clinton, Obama, Biden, and Edwards all announced their intentions to run through online video in 2007 (Gueorgvieva, 2008). During the primaries, Hillary Clinton used a weekly online podcast to engage her supporters by answering questions they posted to her site. By recruiting volunteers, raising money, and increasing their
exposure at minimal costs, politicians and proponents of legislation have exploded onto the Internet (Gueorgvievea, 2008). A substantial section of the voting population is specifically turning to sites like YouTube to learn about political issues. Of Americans responding to the previously mentioned Pew study, 35% indicated watching online political videos on sites such as YouTube (Smith & Lee, 2008).

In 2006, Cornfield and Rainie from the Pew Internet and American Life Project stated that “YouTube is the new ‘killer app’ that will transform U.S. politics” (p. 3). The 2006 campaign delivered on that promise, with more politicians turning to YouTube to increase exposure. In fact, many lesser-known candidates came to the forefront due to the videos posted on YouTube (Gueorgvievea, 2008). Campaigns began hiring people to track such sites, as not only were positive videos going up for politicians and proponents of legislation, but critics and opposing viewpoints were posted as well. Due to this political video push, YouTube introduced YouChoose2008 as a sub-site for voter education on candidates and issues (Gueorgvievea, 2008).

The population’s turn to YouTube for information was not surprising. YouTube has been referenced as one of the most popular sources for online videos in recent years (Rhoades & Ellis, 2010). In 2007, YouTube was identified as one of the most frequently accessed, fastest-growing sites on the Internet. Hundreds of thousands videos are uploaded on YouTube daily, with 20 hours of video being uploaded every minute (YouTube, 2009a). In addition, YouTube reports that 51% of their users visit YouTube on a weekly basis if not more frequently (2009a). Of those who use YouTube, 52% of those between 18 and 34 years of age frequently share videos with their social acquaintances (YouTube, 2009a). Not only does the site make it possible for anyone to
upload and share videos, but users can also build social relationships around common interests or political beliefs (Cheng, Dale, & Liu, 2007).

**YouTube in Politics and Agriculture**

A study by McKinney and Rill (2009) sought to explore the effects of YouTube presidential debates on the democratic attitudes of those who viewed the debate. The presidential primaries of 2007-2008, saw the first use of YouTube in a presidential debate (McKinney & Rill, 2009). YouTube partnered with CNN to create the social networking based debate in which viewers were able to post video questions to the Internet for the candidates to respond to (McKinney & Rill, 2009). The study concluded that the use of YouTube to participate in a political debate does not affect one’s democratic attitudes, but rather it is the additional engagement in politics that increases democratic attitudes (McKinney & Rill, 2009). YouTube is an additional media outlet that individuals can access in order to engage in politics, the wider their ability to engage in politics the greater their political involvement.

An agriculture based study looked at YouTube to determine the components of messages concerning food safety. The study found that many of the messages concerning food safety were educational, but not always credible (Rhoades & Ellis, 2010). In addition, the study concluded that videos containing attractive images recruited more viewers than the videos that were less attractive (Rhoades & Ellis, 2010). The study suggested that agriculture communicators should interlink videos when creating campaigns on YouTube, be attentive to competing messages, and continue to study how agricultural issues are framed on YouTube.
Knowledge and Perceptions of Agriculture

Rob Smart (2009) from the Huffington Post has recognized that a farm-to-plate knowledge gap exists between farmers and consumers. This is not surprising as the majority of consumers are now generations removed from the farm (American Farm Bureau, 2001; American Farm Bureau, 2007). As industrialization has advanced in agriculture, less people are needed as laborers on the farm (Smart, 2009). Thus, more and more people have moved to an urban setting and have become more distant from agriculture; as a result the public’s perceptions of agriculture no longer correspond with the realities of agriculture (American Farm Bureau, 2007). The following studies have explored the agricultural literacy of consumers.

“Most Americans whether young or old, have limited knowledge about agriculture and food production.” (Frick, Birkenholz, & Machmes, 1995, p. 44).

However, since human survival depends on food, it is suggested that every individual should have some knowledge of agriculture (Frick et al., 1995). A study by Frick et al. (1995) sought to explore the knowledge and perceptions of agriculture by both urban and rural adults. The study found that both rural and urban respondents were more knowledgeable about animals than plants, and respondents held a general negative conception of agriculture policy. In addition, those who lived on farms were found to be the most knowledgeable in regards to agriculture, followed by those who resided in a rural non-farm dwelling, and then those residing in urban areas. The study also found that respondents with higher levels of education possessed more agriculture knowledge and both urban and rural respondents were found to be somewhat knowledgeable about
agriculture (Frick et al., 1995). The study recommended that further efforts be made to educate the public about agriculture (Frick et al., 1995).

A study by Duncan and Broyles (2006) sought to explore student knowledge and perceptions of agriculture, as they recognized that the U.S. population is becoming less knowledgeable about agriculture as it becomes more suburbanized. It was noted that the knowledge and perceptions that high school students hold regarding agriculture may be influenced by outlets such as media, family, and involvement in clubs (Duncan & Broyles, 2006). The study also analyzed student knowledge and perceptions of agriculture in a pre-test and post-test design, before and after students attended Virginia Governor’s School for Agriculture (Duncan & Broyles, 2006). The study found that on the pre-test 90% of students only answered 6 of 21 questions regarding agriculture correctly (Duncan & Broyles, 2006). On the post-test, 90% of the students answered 10 of 21 questions regarding agriculture correctly (Duncan & Broyles, 2006). Thus, the study concluded that educational programs, such as the Virginia Governor’s School for Agriculture, can improve the knowledge and perceptions of agriculture held by students (Duncan & Broyles, 2006).

The results of these two studies conclude that the general public does not have adequate knowledge and perceptions of agriculture. This lack of adequate knowledge and perceptions may be attributed to the farm-to-plate knowledge gap. In order for agriculturalists to continue to work toward narrowing the farm-to-plate knowledge gap they must be able to identify the areas in which consumers lack knowledge, as well as identify what is influencing their perceptions of agriculture. The study of images may be able to contribute to both of these problem areas.
Images

When an individual views an image there are many ways in which that image can engage the individual’s attention, emotion, or allegiances (Messaris & Moariarty, 2005). These are identified as the principles of image power. Images can produce a representation to everyday life. If an individual is able to relate an image to their life, it is likely to have an emotional connection with that individual (Messaris & Moariarty, 2005). The composition of an image is also said to have the ability to manipulate an individual’s point of view, thus influencing their perceptions and responses (Messaris & Moariarty, 2005). In addition, images also have the ability to promote implicit argumentation (Messaris & Moariarty, 2005). Implicit argumentation of images can often produce a false assumption. An example given by Messaris and Moriarty (2005), is that of a TV advertisement about a nutritional supplement for body builders, the advertisement shows a picture of a muscular man with the nutritional product; someone viewing this image may assume that the product will produce these muscular results, however, this is not a guaranteed outcome of product usage. A similar example may be the “Happy Cows come from California” advertisements. These advertisements promote dairy products by saying that happy cows come from California, the image in this advertisement shows cows in green pastures with a blue sky. Someone, viewing this advertisement may assume that cows can only be happy if they are in green pastures.

The last principle of image power is associational juxtaposition; this occurs when the pairing of two images produces an unconscious association of the two images (Messaris & Moariarty, 2005). The effects of this association are strengthened with repetitiveness and conditioning (Messaris & Moariarty, 2005). These principles of image
power seek to address how people learn from the images they see (Messaris & Moariarty, 2005).

**Statement of the Problem**

The National Research Agenda developed by the American Association for Agricultural Education (AAAE), Association for Communication Excellence (ACE), Association for International Agricultural and Extension Education (AIAEE), Association of Leadership Educators (ALE), NCAC-24 Agricultural Education Research Committee, and The National Council for Agricultural Education has identified four research priority areas for the agriculture communication discipline (Osborne, n.d.). These priority areas include: enhancing decision making within agriculture sectors of society, aiding the public in effectively participating in decision making related to agriculture, build competitive societal knowledge and intellectual capabilities, and develop effective agriculture work forces for knowledge-based societies (Osborne, n.d.).

This study explored the first two priority areas by identifying the following concerns. As animal protection legislation continues to be prevalent on U.S. political agendas, it is important for agriculture communicators to be able to communicate with stakeholders about the economic and social value of agriculture. In addition, as animal rights lobbying organizations continue to improve and strengthen their public presence, it is critical that agricultural communicators make the public aware and informed of agricultural issues through increased use of mass media technologies and influencing the public to make decisions related to agriculture.

This study sought to examine the agricultural presence in a technologically advanced social networking medium as well as gain an understanding of consumer’s
knowledge of agriculture. This study was unique in that it assessed this information and then related it to the voting outcomes of two different animal protection legislation bills. Thus, the results of this study will contribute toward the research priority areas of enhancing decision making within agriculture sectors of society and aiding the public in effectively participating in decision making related to agriculture.

**Purpose of the Study**

Due to the increasing concern for animal wellbeing in the public sphere, as well as the increasing presence of animal protection legislation, it is important that communicators are adequately disseminating information; in addition, it is important that communicators possesses an awareness of the general public’s knowledge on the topic. As the Internet has increasingly become a venue for political advertisements and as it reaches a multitude of people, it is important that communicators consider the Internet as an avenue for communication. Communicators and educators must be aware of competing messages and the sources used to reach the public. The goal of this study is to determine the agricultural presence in YouTube videos pertaining to Proposition 2 as well as to assess a non-generalizable sample of the public’s perception of agricultural practices and legislation prior to Issue 2. Having an understanding of the agricultural YouTube presence as well as the public’s perception is important to agricultural communicators and educators; this information will allow them to understand what information the public currently possesses as well as indicate the effectiveness of agricultural campaigns. Agricultural professionals will be able to analyze their current uses of messaging and establish improvements to their information dissemination processes in order to increase the public’s knowledge of agriculture through the use of this information. Having an
understanding of how competing organizations use YouTube to interpret agriculture and understanding the current perceptions of agriculture will provide a strategic outlook to promote agriculture and spread the agricultural message to citizens.

**Research Objectives**

The purpose of this study was to examine the agricultural presence in YouTube videos pertaining to Proposition 2. A secondary purpose was to assess a non-generalizable sample of the public’s perception of agricultural practices and legislation prior to Issue 2 campaigns. Specific research objectives which guided this study included the following:

1. To describe characteristics of YouTube videos used in a livestock production legislative campaign.
2. To explain how rational and emotional appeals were used in a livestock production legislative campaign online.
3. To assess a sample of the general public’s knowledge and perceptions of humane treatment in livestock production practices.
4. To assess a sample of the general public’s perceptions of images picturing traditional and conventional livestock housing.
5. To assess a sample of the general public’s knowledge and perceptions of current and proposed livestock production regulations.
Limitations

The YouTube portion of this study is limited by the search terms used and the ever-changing nature of the Internet. Videos can quickly be put online or pulled offline, and thus some videos discussing Proposition 2 could have been overlooked. To ensure a complete sample, researchers tried several search terms. Search terms such as “prop 2” resulted in a similar list of subjects so the researchers used the original search term.

The survey portion of this study included a sample of individuals visiting the Agriculture/Horticulture building at the Ohio State Fair, thus it is not generalizable past those who attended the Ohio State Fair and visited this specific building. It is important to note that the results of this study may have been influenced by individuals visiting the building, personal bias of the survey administrator, other participants, or the other exhibits in the building.

Definitions of Terms

The following terms were imperative to this study and thus merit further explanation.

Animal Rights: Giving basic rights to animals similar to or the same as humans (Animal Welfare Council, 2009; The Vegetarian Resource Group, 2009).

Animal Welfare: The ethical responsibility to care for the well being of animals, ensuring good health, the ability to cope effectively with their environment, and the ability express a diversity of behaviors specific to the individual species (American Veterinary Medical Association, 2009).

Messaging Appeal: “Message designed to motivate the consumer to purchase” (Mueller, 1986, p. 3).
Emotional Appeal: A messaging appeal often used to by advertisers to provide a connection with the audience. Emotional appeals are messages that “attempt to stir up either negative or positive emotions that can motivate purchase.” (Kolter & Armstrong, 2006)

Rational Appeal (or Logical Appeal): A messaging appeal that is often persuasive in nature by implementing argument’s in the advertiser’s favor through the use of reasoning (Albers-Miller & Stafford, 1990; O’Guinn, Allen, & Semenik, 2003).

Social Networking Sites: “…Web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system. The nature and nomenclature of these connections may vary from site to site” (Boyd & Ellison, 2007, p. 211).

Agriculture Legislation: Laws and regulations that affect agriculture practices. The scope of this study deals mainly with legislation specific to livestock.

Special Interest Groups: A collection of individuals who share common beliefs pertaining to a specific issue (Brady, Clark, & Davis, 1995).

Traditional Livestock Housing: pasture raised animals in small scale production

Conventional Livestock Housing: technologically advanced indoor housing geared toward large scale production

Farm-to-plate knowledge gap: misunderstanding between consumers and farmers about where the food they eat comes from (Smart, 2009).
CHAPTER 2
LITERATURE REVIEW

This chapter seeks to explain the theories of messaging appeals, social cognitive theory, social learning theory, cognitive dissonance theory, semiotics, and knowledge gap as guiding principles for this study.

Messaging Appeals

Messaging appeals have been referenced as the most important component in advertising (Srivastava & Sharma, 2008). Advertising strategy suggests that an appeal should be created around the customer benefits (Kotler & Armstrong, 2006). Thus, as Mueller (1986, p. 3) defines it, an appeal is a “message designed to motivate the consumer to purchase.” Successful appeals contain three imperative characteristics; they are meaningful, believable, and distinctive (Kotler & Armstrong, 2006). There are various different types of appeals; however, the appeals used most often are feeling or emotion based appeals and logical or rational based appeals (Srivastava & Sharma, 2008; Zinn & Manfredo, 2000; Cronkhite, 1964).

Emotional appeals are messages that “attempt to stir up either negative or positive emotions that can motivate purchase.” (Kolter & Armstrong, 2006) Emotional appeals are often used by advertisers as they have been proven to provide a connection with the consumer (Srivastava & Sharma, 2008). Albers-Miller and Stafford (1999, p. 44) indicated that emotional appeals “rely on feelings for
effectiveness.” Emotional appeals tend to be subjective and very open to individual interpretation (Zinn & Manfredo, 2000). Advertisers can appeal to emotion through sexual imagery, fear, threats, promises, humor, and empathy (O’Guinn, Allen, & Semenik, 2003).

Logical appeals are focused on traditional message processing and are designed to influence a consumer’s beliefs about a message (Albers-Miller, & Stafford, 1999). These appeals are generally persuasive in nature focusing on brand attributes and providing arguments in the advertiser’s favor (Albers-Miller & Stafford, 1999). While not generally used in service advertising, product advertising has been known to frequently use logical appeals (Albers-Miller & Stafford, 1999). Logical appeals use reason to show that something can be gained or loss, ask a rhetorical question, show irony, social modeling, and to present information (O’Guinn, Allen, & Semenik, 2003).

**Emotional Appeals in Political Advertisements**

As explained above messaging appeals are often used for advertisements of products or services. In recent years political advertisements have become more prevalent in a variety of communication mediums with consistent use of emotional appeals. A study by Brader sought to discover if the use of emotional appeals in political advertisements affected the public’s response to the message (2005). The study found three valuable findings related to political advertisements which are as follows: 1) images and music can manipulate emotions and thus affect voting behavior, 2) voters favor sponsors of positive advertisements and dislike opponents of negative advertisements and, 3) advertisements with emotion change the way voters make voting decisions (Brader, 2005). Bader (2005, p.402) concluded that “politicians can have a hand in
changing the emotional tenor of politics with serious consequence for political behavior.” Additional work by Brader (2006) has suggested that non-verbal cues are instrumental in eliciting emotions of the viewers. In studies of political advertisements it has been shown that emotional appeals are used more frequently than logical appeals (Brader, 2006). The emotions most often extracted from political advertisement include fear, anger, and enthusiasm (Brader, 2006). It has also been noted that political advertisements often cue more than one emotion (Brader, 2006). Advertisements that cue positive emotions (e.g. pride, enthusiasm, happiness) have been found to contain images often associated with success and the “good life” such as children, white picket fence neighborhoods, and aesthetic landscapes (Brader, 2006). Thus, it can be expected that those which cue negative emotions (e.g. fear, anger, threat) regularly contain images without people in them, depressing landscapes, and images of harm (Brader, 2006).

**Emotional and Rational Appeals in TV Advertising**

Additional work in studying emotional and rational appeals has been done in the arena of product advertising. A study by Page and Brewster (2007) assessed the presence of emotional and rational appeals in food advertisements for children. The study conducted a content analysis on 147 children focused food commercials. Both rational and emotional appeals were found to be used in the commercials. The most common emotional appeal used in the commercials was fun/happiness, which was present in 125 of the commercials (Page & Brewster, 2007). Taste/Flavor was found to be the most common rational appeal used in the commercials as it was found in 77 of the commercials (Page & Brewster, 2007). The study hoped to find an abundance of rational appeals that focused on health and nutrition, as this has become a concern with increasing
numbers of childhood obesity; however, only 12 commercials mentioned health and nutrition (Page & Brewster, 2007). The researchers attributed the lack of health and nutrition information to the fact that this information does not appeal to children and thus is not an adequate selling point (Page & Brewster, 2007).

As new technology has emerged it is important that researchers look beyond television for advertising trends. YouTube offers an Advertising Brand Channel which allows corporate advertisers, local retailers, and self-service advertisers to post their marketing campaign (YouTube, 2009b). In addition, researchers should also assess their current advertising trend and the trends of others. For example, agriculturalists have traditionally informed the public about issues through the use of rational appeals like facts and science (American Farm Bureau, 2007). As found in the study by Page and Brewster (2007), the advertisement which seems logical may not always be the selling point to the consumer.

**Demographics in Advertising**

The consideration of demographics is an important key to successful advertising. William Lazer (1994, pg 4) defines demographics as “the study of the human population dealing with size, composition, and distribution of populations.” Effective advertising involves the use of demographic data to gain the competitive edge against other advertisements (Lazer, 1994). A popular trend in advertising is the use of celebrities (Kahle & Homer, 1985). Different celebrities attract different demographic populations; if a message portrayed by a celebrity’s presence is consistent with the product message, and the message is structured to fit the targeted demographic population, an effective advertisement will be produced (Kahle & Homer, 1985). By looking at demographics,
advertisers are able to target certain populations and create messages that will appeal to the consumer’s social cognition.

**Social Cognitive Theory**

Social Cognitive Theory (SCT) is a broad theory related to human behavior (LaRose & Eastin, 2004). Determining the effects of mass media on individuals is commonly looked at through the lens of SCT (Bandura, 2009). Behavior is an observable act within SCT that is determined by the outcomes of behavior, prior experience, or behaviors demonstrated by others (LaRose & Eastin, 2004). Additionally, SCT has also been described as producing a behavior based on a person and environment interaction (Lent, Brown, & Hackett, 1994). The theory explains three types of agency through which items such as mass media may affect an individual (Bandura, 2002). These include direct personal agency, proxy agency, and collective agency. A direct personal agency occurs when an individual influences themselves (Bandura, 2002). Individuals are influenced in a proxy agency when they seek out others in order get something they desire; those usually sought after would be those of expertise and power. Lastly, a collective agency occurs when individuals are influenced by a group. Bandura suggests that all three agencies are used by individuals on a regular basis in order to succeed (2002). Thus, the study of this theory is focused on how daily cognition of an individual is influenced by social inputs (2009).

Humans possess multiple capabilities which allow them process, retain, and use cognitive information effectively, thus affecting their current or future behavior (Bandura, 2009). Thus, SCT is often referenced as predicting behavioral outcomes or suggesting behavioral incentives (LaRose & Eastin, 2004). A common humanistic
capability is that of symbolizing. Through symbolization humans are able to understand their environment as well as develop and control environmental aspects of their life (Bandura, 2009). Cognition then interacts with environment and determines “which environmental events will be observed, what meaning will be conferred on them, whether they may leave any lasting affects, what emotional impact and motivating power they will have, and how the information they convey will be organized for future use.” (Bandura, 2009, p. 95) Symbols are what allow people to convert their experiences into cognitive thought (Bandura, 2009). In addition, to the capability of symbolizing, humans hold the capability of self regulation.

The notion of self-regulation is commonly based on the idea of negative feedback; which in this context suggests that individuals compare their perceived performance and cognitive standards in order to minimize inconsistency between the two (Bandura, 2009). The self–regulation of behavior is driven by goal setting (Lent, et.al., 1994). Setting goals allows one to provide organization and structure to their behavior, as well as maintain a behavior and reach desired outcomes (Lent, et.al., 1994). Bandura concluded that self regulation does not only contain discrepancy reduction, but also discrepancy production (2009). The example of goal setting verifies Bandura’s conclusion, as by setting a goal one would be producing discrepancy, but as a goal is met discrepancy would be reduced (Bandura, 2009). In order to self regulate one must be able to self reflect.

Self-reflection has been identified as a human capability within the SCT. Individuals have the ability to distinguish between correct and incorrect cognitive thoughts (Bandura, 2009). Possessing this ability allows humans to examine their actions
and reflect on the components of each action (Bandura, 2009). Reflections made by an individual thus affect the current and future happenings of their life.

The last capability found in social cognitive theory is the vicarious capability. This is the ability of humans to observe others and gain skills and knowledge rapidly through observation (Bandura, 2009). Thus the learning that occurs through observation comes from a large social context. Vicarious learning teaches individuals about reality as it expands their scope beyond their normal daily routine (Bandura, 2009). Bandura suggests that much of this social learning is observed through electronic resources, which are contributing to sociopolitical change. As a result social cognitive theory is often used to study societal functions.

SCT is an example of an important theory that surfaces in media and communication research. The theory suggests that by observing others’ behaviors, people develop rules to guide their own actions or previously learned behaviors (Nabi & Oliver, 2010). This influence may be established through direct or indirect interaction with others (Corwin, Sargent, Rheaume, & Saunders, 1999). Social influences develop an individual’s beliefs, emotions, and cognition (Bandura, 1986). Additionally, social influences map standard emotional reactions through modeling, instruction, and social persuasion (Bandura, 1986). SCT has been found to be an important theoretical framework to explain media usage (LaRose & Eastin, 2004). When SCT is applied to media such as YouTube, the viewer’s behavior is influenced when attractive images are present within the message that catches the viewer’s attention (Nabi & Oliver, 2010). Bandura (1989, p. 4) once said, “Because of the biodirectionality of influence between behavior and environmental circumstances, people are both products and producers of
their environment.” The use of SCT is an efficient approach to looking at how consumers react to advertisements based on their environment and demographic background.

**Social Cognitive Theory in Practice**

In a study by Krampen (2000), components of SCT were used to provide an assessment of political action and voting behavior of young adults. The study looked at how self-concept of political competence, political knowledge and frequency of political activities, internal locus of control for politics, and trust and satisfaction with politics changed over time from adolescents to adulthood (Krampen, 2000). Based on the social-cognitive model of political participation, the researcher sought to discover how individuals become politically uninterested. The data collected from the study showed that early political interventions could reverse this trend (Krampen, 2000). The researcher proposed to revise the social-cognitive model of political participation to the extended social-cognitive model of political socialization and political participation in the life span (see Figure 1) (Krampen, 2000). This model indicated that social antecedents in the life span such as family, school, college, jobs, mass media, peers, and perceptions and experiences with politics influenced the personal resources of an individual. Thus political cognitions would be developed resulting in a political behavior (Krampen, 2000). This process would be extended one step farther in adulthood as the political behavior would determine the political action (Krampen, 2000).
The model proposed by Krampen is relevant to this study as it seeks to determine if the social antecedents in life influence voting decisions. Looking at YouTube to study this relation is very unique as one could argue that YouTube is comprised of at least three of the social antecedents. YouTube notably contains the influence of mass media, but it also contains the social connections with family and peers through social networking. As YouTube appeals to young and old alike it is an important medium through which to study political behavior.

Additionally, SCT provides other relevance to this study as it has been used to explain consumer responses to advertisements. A study by Young, Lipowski, and Cline (2005) studied SCT as an explanation to consumer’s behavior in response to direct-to-
consumer prescription drug advertisements. The study found that individuals developed an expected outcome of communicating with their physicians about the drug advertisement on the basis of self-efficacy (Young et.al., 2005). Thus patients were seeking more information about the drugs they had seen advertised (Young et.al., 2005).

The results found by Young et.al. (2005) are relevant to this study in the context of political campaign advertisements. It could be suggested that through the theoretical components of SCT, one may seek out further information about a campaign based on the expected outcome developed while watching the advertisement. Thus, this information becomes important to campaign strategists as the knowledge of individuals seeking out more information after watching an advertisement could be beneficial to the success of their campaign.

**Social Learning Theory**

Social Learning Theory (SLT) explains approaches to social behavior through the interaction of one’s cognitive, behavioral, and environmental influences (Akers & Lee, 1996; Bandura, 1977). Individuals often learn through the interactions of their daily environment; this may include observing other’s behaviors and using or participating in forms of mass media (Bandura, 1969; Perry, 2004; Klapper, 1960). The knowledge gained through observation is then cognitively stored and later used to influence future behaviors (Klapper, 1960). SLT can be identified through indentificatory events (Bandura, 1969). An indentificatory event is defined as “…the occurrence of similarity between the behavior of a model and another person under conditions where the model’s behavior has served as the determinative cue for matching responses (Bandura, 1969, p. 217).” Often, an individual will develop certain thought, feelings, and actions based on
those of a social model (Bandura, 1969). However, pseudo-identification can also occur. This is when different situations or observations generate comparable behaviors in different individuals (Bandura, 1969). Although one may be able to identify the source of an individual’s behavior, it is difficult to specify the specific influence of the social behavior (Bandura, 1969).

Both positive and negative behaviors are influenced through the same processes of SLT; however the mechanisms through which they operate may be different (Akers & Lee, 1996). Akers & Lee referred to the principal mechanisms of SLT as “…differential association (direct and indirect interaction with others), differential reinforcement (instrumental learning through rewards and punishers), imitation (observational learning), and cognitive definitions (attitudes) that are favorable or unfavorable, functioning as discriminative (cue) stimuli, for the behavior.” (1996, p. 318). These mechanisms have the ability to influence a variety of behaviors.

Social learning is said to be one of the many effects of mass media (Klapper, 1960). The ideas presented in mass media are often reflected by individuals in the general public (Klapper, 1960). For example, fashion, nutrition, popular home products, how to interact with others, and much more are disseminated through mass media outlets (Klapper, 1960). This notion ties closely to the ideas presented in the Social Cognitive Theory.
Social Learning Theory in Practice

SLT is widely used in the fields of health behaviors. Studies have been done regarding both physical and mental health (Akers, 1996; Bandura, 1973). In the book *The Control of Aggression*, Bandura discusses how SLT can explain aggressive behavior. A study by Akers and Lee sought to explore how SLT can explain components of adolescent teen smoking, despite the effects on one’s physical health (1996). The use of SLT has also been used in advertising research.

A study by Smith (1994) sought to explore how SLT attributes to gender differences in children’s advertising. Many behaviors can be learned from advertisements, including gender roles (Smith, 1994). Children tend to remember more about same sex models they see in an advertisement rather than opposite sex models (Smith, 1994). In addition, it is suggested that children learn to behave in the same ways that they observe same sex models behaving (Smith, 1994). Advertising has taught children that boys cannot play with girl toys, but girls can play with toys that boys would generally play with (Smith, 1994). Thus, it is common to see the advertisement of neutral products directed toward the male gender (Barthel, 1988; Smith, 1994). It is suggested that this learned behavior of gender continues through adulthood as women who smoke have been known to smoke Marlboro cigarettes, but a man who smokes would likely not smoke Virginia Slims (Smith, 1994). The advertisements observed through a content analysis in Smith’s study confirmed that advertisements create social learning through gender roles (1994).

It is known that product advertisements create social learning through gender roles, but it is also valuable to explore how gender roles are used in political campaign
advertisements. Kahn (1993) suggested that the campaign appeals used by male and female candidates differ and thus impact voting outcome. In addition, campaigns often show men and women sticking to their stereotypical role, such as women being social issue oriented and men being more economically oriented (Kahn, 1993). Women in campaign advertisements have to be tactful in choosing their campaign appeal in order to avoid losing voter confidence in their ability; meanwhile, men are free to use a more diverse range of campaign appeals as voters are more confident with a male’s ability (Kahn, 1993).

**Cognitive Dissonance Theory**

Dissonance occurs when conflict exists in an individual’s mind between two cognitions (Aronson, 1969). Leon Festinger developed the theory of cognitive dissonance in 1957; he concluded that cognitive dissonance was present when cognitive information was inconsistent with ones perceived personal attributes (as cited in Hunt, 2004). Three assumptions concerning human cognition lay the foundation for Cognitive Dissonance Theory. These assumptions include the following: “...(1) people have a need for cognitive consistency; (2) when cognitive inconsistency exists, people experience psychological discomfort; and (3) psychological discomfort motivates people to resolve the inconsistency and restore cognitive balance. (Hunt, 2004, p. 147)” In instances of dissonance one may change one or both of the conflicting cognitive thoughts in order to add consonance, allowing the cognitions to come in line with one another and restore cognitive balance (Aronson, 1969). Oshikawa (1969) identifies three ways in which dissonance is developed; these include “…1) after making an important and difficult decision 2) after being coerced to say or do something which is contrary to private
attitudes, opinions, or beliefs, and 3) after being exposed to discrepant information.” (Oshikawa, 1969, p. 44)

Dissonance becomes very prevalent in decision making, especially decisions of a complex nature. If there is considerable conflict before a decision, the dissonance that follows the decision is also expected to be significant (Festinger, 1964). Thus one would validate their decision rather quickly to reduce dissonance (Festinger, 1964). However, Cognitive Dissonance Theory does not imply that the right decision will be made; it simply suggests that one would rationalize their decision in order to feel confident and secure with themselves as well as appear rational to others (Aronson, 1969).

**Cognitive Dissonance Theory and Special Interests Groups**

Those who belong to a special interests group share common positions on a specific issue with others in the group (Brady et.al., 1995). Examples of such groups include the Sierra Club, HSUS, and Green Peace among many others. Special interests groups seek to make their issue a major public concern by creating dissonance through media outlets (Brady et. al., 1995). To demonstrate this process Brady et. al. (1995) provided the example of the World Wildlife Fund eliciting videos of elephant slaughter to the media in order to support their save-the-elephants movement. After creating dissonance in the media, special interest groups “…promote themselves as the solution to the problem by fighting for the ‘right laws’…” (Brady et.al., 1995, p. 48). Individuals then equalize their dissonance created as a result of the elephant slaughter videos by supporting or following the special interests group. When it comes to political campaigns, politicians as well as special interests groups will develop a campaign that creates dissonance among voters in their favor (Brady et.al., 1995).
Cognitive Dissonance and Voting

A study conducted by Regan and Kilduff examined voters optimism regarding the chance that the candidates they voted for in a presidential election would be elected (1988). Both voters entering and exiting the voting polls were asked the research questions (Regan & Kilduff, 1988). The study found that a majority of the people interviewed both before and after voting, were very optimistic that their candidate would be elected (Regan & Kilduff, 1988). The researchers attribute this finding to Cognitive Dissonance Theory suggesting that “…these results confirm that optimism about favorable outcomes is increased when people act on their preferences in significant and irrevocable ways, such as by voting or betting.” (Regan & Kilduff, 1988, p. 106). Cognitive dissonance applies to this example as someone who bets a large sum of money would have great cognitive dissonance at the thought of losing all the money they bet, so to reduce that dissonance and return to a comfortable state one will be optimistic that they will win and not lose any sum of money.

When looking at the issue of livestock production for food, it has been concluded that consumers continue to trust farmers to produce safe food (The Center for Food Integrity, 2009). Consumers put their trust in farmers more than anyone else involved in food production and agriculture (Barnett, 2009). As special interest groups continue to publicly accuse livestock production of various incriminating occurrences dissonance develops in the minds of consumers (Barnett, 2009). It is unclear however, if the majority of consumers return to cognitive balance by remaining optimistic or if they contribute to a cause supported by a special interests group to correct the wrong doing.
Semiotics

Semiotics is a theory of signs and codes (Blaney and Wolfe, 2004; Eco, 1979). Visual signs help one interpret a message while a code helps an individual understand what the message means (Moriarty, 2005). This theory suggests that signs and codes are closely related to language and everyday communication of a culture (Blaney and Wolfe, 2004). Thus, words and visual images promote a cultural ideology. Each visual image or word is composed of a combination of cultural ideologies which creates a sign system. A sign system is a group of signs that imply meaning for one sign or image (Blaney and Wolfe, 2004).

In the study of semiotics, signs are defined as anything that represents another entity, thus the meaning of a sign is determined by a following thought or action (Hoopes, 1991; Moriarty, 2005). According to Saussure, the father of European semiology, a sign may also be referred to as a signifier (Moriarty, 2005). The signifier then promotes the content for which the sign stands, which is also known as the signified (Moriarty, 2005). Charles S. Peirce, also a father of semiotics, created a model similar to Saussure’s idea of the signifier and the signified, but he added the concept of the interpretant (Moriarty, 2005). The interpretant is established when a sign generates a mental idea in one’s mind (Moriarty, 2005). Peirce’s model of a sign is shown in Figure 2.
A subject that becomes imperative is the relationship between the sign and the object or the signifier and the signified. Pierce theorized three types of relationships to explain how a sign is tied to an object (Moriarty, 2005). These relationships include iconic, indexical, and symbolic relationships. An iconic relationship is when the sign and the object look alike or similar (Moriarty, 2005). Pierce offers the example of an iconic relationship as a photograph is similar to a portrait (Moriarty, 2005). Pierce’s examples of smoke to fire or symptom to disease are examples of the indexical relationship; which is when the sign and object are indicators of each other (Moriarty, 2005). Lastly, the symbolic relationship describes when the sign is a symbol for the object (Moriarty, 2005). For example, Pierce identified a flag as a sign and its corresponding country as the object (Moriarty, 2005). Understanding the relationship between the sign and the object thus allow researchers to analyze the resulting mental image that is likely to occur among viewers.

An additional point for analysis between the sign and the object was extended by researchers Roland Barthes and Stuart Hall to include connotation and denotation (Moriarty, 2005). Connotation is referred to as the meaning which is established by the
object; the meaning of an object is generally cultural (Moriarty, 2005). Denotation is defined as “…the direct, specific, or literal meaning we get from a sign. (Moriarty, 2005, p. 231)” An example that demonstrates the functionality of connotation and denotation is as follows: a magazine ad shows a picture of a tractor, the tractor is at the denotative level. The connotative level of the ad might associate the tractor with terms such as farm, farmer, country, and crops. Connotation and denotation become especially important when studying visual communication and the influence of visual images in advertising (Moriarty, 2005).

**Semiotics in Advertising**

Semiotics is often used to study marketing and advertising. All components of advertising (i.e. brands, logos, commercials, design) can be analyzed at a “surface” and “underlying” level (Beasley & Danesi, 2002). The surface level of advertisements includes components such as color, shapes, text, and images (Beasley & Danesi, 2002). It is through the surface level components that the underlying level of the advertisement is composed; the underlying level of the advertisement obtains meanings elicited from the advertisement (Beasley & Danesi, 2002). Many studies have looked at semiotics and advertising (e.g. Mcilwain, 2007; Langrehr & Caywood, 1995; Page, 2006; Arnold, Kozinets, & Handelman, 2001; Rhoades & Irani, n.d.).

A study by Rhoades and Irani (n.d.) sought to explore how semiotics applied to images in Tractor Supply Company advertisements. The study found that these advertisements tended to be patriotic, focused on the stereotype of a farmers serene lifestyle, mainly pictured middle aged men, and women supporting their husbands (Rhodes & Irani, n.d.). These findings confirm that these advertisements focus on myths
and stereotypes of agriculture (Rhoades & Irani, n.d.). As it has been established that much of the U.S. population does not have adequate knowledge of agriculture and that most individuals are generations removed from the farm it is important to understand how images in advertisements are affecting the public’s perception about agriculture (American Farm Bureau, 2001; American Farm Bureau, 2007; Duncan & Broyles, 2006; Frick et al., 1995).

A similar study by Arnold et al. (2001) sought to explore the semiotic components of Wal-Mart advertisements. As Rhoades & Irani’s study found Tractor Supply Company’s advertisements to be patriotic, this study found Wal-Mart flyers to be symbolic of the American life (Arnold et al., 2001). A focus on a stereotypic “hometown” ideology was also found in the Wal-Mart advertisements (Arnold et al., 2001). The results of this study could suggest that the morals assumed to be held by Wal-Mart customers are relayed through institutional semiotics in their advertisements (Arnold et al., 2001).

Although the images used as part of this research study aren’t those of advertisements, they may provide the researchers valuable information about what consumers see in the media in relation to livestock housing. It will also allow the researchers to better understand the cultural meanings and values that consumers draw from such images.
Knowledge Gap Theory

Knowledge Gap Theory suggests that information is obtained more quickly by those who have a higher socioeconomic status rather than those who have a low socioeconomic status (Tichenor, Donohue, & Olien, 1970). This idea becomes very valuable when studying mass media infusion. It has been suggested that mass media infusion is absorbed at different rates across different socioeconomic groups, thus impacting the rate of information obtained by individuals (Tichenor, et. al., 1970). Information diffused through the mass media will reach more people and be absorbed more readily by those with high socioeconomic status rather and low socioeconomic status (Ettema, Brown, & Luepker, 1983). Those who are more knowledgeable have been observed to be generally more accepting of social patterns in behavior, beliefs, values, and elements of technology, thus supporting the theory of knowledge gap (Tichenor et. al., 1970; Gaziano,C. & Gaziano, E., 1996). However, it should not be assumed that a lack of knowledge immediately indicates a knowledge gap, as the theory applies to knowledge that holds universal value (Gazaiano, C & Gaziano, E., 1996). Knowledge gap is often measured by determining the correlation between one’s knowledge and their level of education (Weenig & Midden, 1997). It has been suggested that knowledge gap could also be attributed to a lack of motivation to cognitively digest certain information (Weenig & Midden, 1997).

Knowledge gap is closely related to the digital divide suggesting that those who have lower incomes and reside in rural areas have less access to media outlets (Rainie, Madden, Boyce, Lenhart, Horrigan, Allen, & O’Grady, 2003). Alternatively, those with higher levels of education, higher income, and residence within an urban or suburban
location generally have abundant media access (Rainie et.al., 2003). When discussing the knowledge gap in agriculture the problem becomes that those who have experience with agriculture do not have the resources readily available to share their knowledge within media outlets. In addition, the agriculture information that is in the media often tends to be misguided, like the “Happy Cows come from California”. Thus, those who regularly use media outlets are receiving misconstrued messages about agriculture and their agriculture knowledge becomes based on these messages.

**Knowledge Gap Theory in a Health Campaign**

A study by Ettema et.al. (1983) sought to study the effects of a cardiovascular health campaign on knowledge gap. The study was conducted in two communities. One community was identified as the experimental group and the other was designated as the comparison group (Ettema et. al., 1983). The campaign was delivered to only the experimental group through public service announcements on the radio as well as weekly newspaper columns for 20 weeks (Ettema et. al., 1983). Subjects in both communities were surveyed before and after the campaign. The results showed that in the experimental community a knowledge gap existed during the pre-test, but had decreased significantly after the campaign at the time of the post-test (Ettema et. al., 1983). Conversely, a small knowledge gap existed in the comparison community at the time of the pre-test, but a significant widening in the knowledge gap was observed in the post-test (Ettema et. al., 1983). The researchers concluded that an information campaign in the mass media can narrow as well as widen a knowledge gap (Ettema, et. al., 1983). It is suggested by this research that the increase and decrease in a knowledge gap through an informational campaign can be attributed to one’s motivation (Ettema, et. al., 1983). If information is
readily available as well as easy to interpret at least minimal motivation will be produced to retain and recall the information (Ettema, et. al., 1983).

A study like this can easily be related to any campaign, including an agricultural campaign. As agriculturalists strategize a specific campaign they can learn from this study that a campaign that is well balanced, readily available, and understandable is likely to decrease a knowledge gap. The campaign must be equipped with indicators for motivation to have the largest effect on narrowing a knowledge gap. By learning from studies such as this, agriculturalist can produce more effective campaigns.

**Summary**

Throughout this chapter many theorist and research studies have demonstrated the use of messaging appeals, social cognitive theory, social learning theory, cognitive dissonance theory, semiotics, and knowledge gap. Discussion of political and non-political advertisements, behaviors, social influences, cognition, how images are perceived, and the process through which knowledge gaps exist provides a foundational framework for this study. Applying this information and theories to agriculture provides a beneficial framework to this study.
CHAPTER 3
METHODS

Much of the information presented in the literature review does not provide examples specific to agriculture, but can be beneficial when applied to the field. This study explored and described consumer’s knowledge and perceptions of agriculture as well as their thoughts surrounding various agriculture topics and images. In addition, this study sought to explore how individuals are influenced and how their pre-conceived opinions are acted upon during legislative campaigns that concern livestock production. Due to the lack of studies that collectively examine the results of agricultural legislation based on society’s knowledge and perceptions of agriculture, there was a need to discover how people make voting decisions. In addition, there was also a need to discover how social media influences the voting decisions of individuals when voting on agriculture policies. This was a two-phase study that first examined campaign advertisements on YouTube (Phase I) and then examined the responses of individuals when asked questions about agriculture and agricultural legislation (Phase II).

The following research objectives guided this study:

1. To describe characteristics of YouTube videos used in a livestock production legislative campaign.

2. To explain how rational and emotional appeals were used in a livestock production legislative campaign online.
3. To assess a sample of the general public’s knowledge and perceptions of humane treatment in livestock production practices.

4. To assess a sample of the general public’s perceptions of images picturing traditional and conventional livestock housing.

5. To assess a sample of the general public’s knowledge and perceptions of current and proposed livestock production regulations.

PHASE I

Research Design

The research design for Phase I of this study included a content analysis of a census of YouTube videos relative to California Proposition 2. Content analysis is a research tool used to establish the content of communication in a systematic and quantitative description (Kaid & Wadsworth, 1989). Videos and computer files are often researched using content or document analysis (Ary, Jacobs, Razavieh, & Sorensen, 2006). This content analysis consists of a basic research design including descriptive, quantitative qualities.

Subject Selection

The researcher obtained a census of YouTube videos by entering a conclusive search term into the search bar on the YouTube home page. A census is a study of all subjects of interest in a population (Ary et.al., 2006). Additionally, due to the inclusion of all subjects in a population a census produces the most valid and least biased results (Riffe, Lacy, and Fico, 1998). The search term used was “Proposition 2 California.” Other search terms were tested to ensure that researchers were evaluating the most
complete sample. These search terms included “California Proposition 2”, “Prop 2 California”, and “California Prop 2.” These search terms produced comparable samples, thus the researcher elected to use the original search term.

The census of YouTube videos produced 111 videos relative to California Proposition 2. Of these videos, 103 were deemed usable and examined as part of the research. As the study was interested in the effect of the videos on the legislative campaign and voting outcome, videos posted after the election (November, 2008) were not included in the sample. Of those videos dismissed from the research, five were dismissed due to removal of the video from YouTube before coding. Additionally, two videos were found to have unrelated content, and one video was posted after the election date.

**Instrumentation**

Instruments used in the coding process included a coding sheet (Appendix B) and a coding guide (Appendix C). A coding sheet is an instrument used in content analysis to document the content of the items being analyzed as part of the study (Riffe et.al., 1998). The coding sheet was two pages long and was printed on hard copies for use in this study. Hard copy coding sheets were elected for this research as a computer would be needed to watch the YouTube videos and a paper coding sheet allowed for flexibility and ease of use. In addition, the coding sheet was designed for simplistic use with a fill in the blank and checkbox format. Riffe et.al. (1998) recommend that coding sheets be organized to follow the general content of the item being analyzed. Although, the content order of the YouTube videos was likely to vary, the researcher organized the coding sheet in the most logical order. Information that could be recorded prior to watching the video such as title

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of the video, author of the video, length of the video, and so on were listed first on the coding sheet. Then items that could be identified early on in a video such as animation, presence of celebrity’s opinions, demographics of people in the video, and other items were listed next. Items that were likely going to be covered later in the videos, or that required hearing the complete message to draw a conclusion, were listed last on the coding sheet. Examples of some of these items include: the type of messaging appeals used by the message, the inclusion of an agricultural education component, and promotion of a move to action.

The coding sheet was developed on the basis of the first two research objectives used in this study. It was determined that verbal and visual communication would be most prevalent in the videos, but a percentage of the videos could also contain written communication. Due to the expected use of verbal communication in the majority of the videos, the researcher constructed questions on the coding sheet that would reflect the tone of the message being delivered. Riffe et al. (1998) emphasized the importance of thorough question development when analyzing verbal communication as the inflection and the tone of the message determine the meaning and thus an analysis would not be complete without capturing those items. In addition, Riffe et al. (1998) also identified the difficulty of determining certain aspects through visual communication, such as age. To increase the reliability of determining the ages of individuals in the videos, researchers coded for wide age ranges as suggested by Olson (1994) and Riffe et al. (1998). When considering analysis on written text, Riffe et al. (1998) concluded that the reader must be able to understand the text and the topics addressed. Thus the researcher and another
individual were selected as the coders as they both had quality experience and knowledge of agriculture and California Propositions 2.

The coding sheet incorporated six broad categories of coding items. These included: video demographics; context of the videos; demographics of individuals in the video; validity of information provided in the videos; messaging appeals used by the video; and influences or actions suggested by the video. The video demographic category included coding items such as title, author, length, sponsor, and producer of the video, as well as video category, rating, views, and time on-line. Items such as the political view on the issue presented, the segments covered, presence of animation, the presence of celebrity’s opinions, and the presence of animals were coded for in the context of the videos category. These items were coded as they provided relevant insight to the social influences present in the videos. The next category coded was the demographics for individuals in the videos; questions in the category included the number of people delivering the message as well as the ethnicity, age, and gender of those delivering the message. The credibility of the information in the videos was coded using questions concerning the presence of an agricultural education component, reference to supporters, and citation of sources. Videos were considered to have an agricultural education component if a reference was made to agricultural facts (e.g. currently XX billion animals are housed in factory farms). The next category of questions coded specific messaging appeals used in the videos. This section of the coding sheet allowed for coding multiple appeals as political advertisements often cue more than one emotion at once (Brader, 2006). Emotional appeals included items such as guilt, empathy, and pride as well as others. Empathy was coded in the context of the ability to identify
with and understand somebody else's feelings or difficulties. An example used to guide the coding for empathy included the following “These animals can feel pain and it is so sad to think that we are responsible for their pain.” In addition to emotional appeals, logical appeals were also coded. These included items such as gain-loss, informative, social modeling, and others. Gain-loss appeal was coded when a desirable or undesirable end state was focused upon. Social modeling was coded for when desirable behaviors were reinforced in the video. An example of the questions used to code messaging appeals are presented in Table 3.1.

The types of Appeals used by the message:
- Guilt
- Emotional Appeals
- Promise
- Empathy
- Humor
- Threat
- Fear
- Pride
- Sex

The types of logical appeals used by the message:
- Rhetorical Question
- Self-reference
- Gain-loss
- Informative
- Social Modeling
- Irony

Table 3.1: Examples Messaging Appeal Coding Questions

The last category included questions which coded influences and actions suggested by the videos. These questions included items that could provoke influence such as testimonials, extreme examples, misleading examples, the setting, and reference
to societal indicators. An example of the questions used to assess the influence of the videos is in Table 3.2.

<table>
<thead>
<tr>
<th>The message references giving human qualities to animals:</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ No □ Yes Ex.________________________________________</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The message promotes the family farm:</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ No □ Yes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The message compares farm animals to pets:</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ No □ Yes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The message mentions vegetarianism/ veganism:</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ No □ Yes</td>
</tr>
<tr>
<td>□ For proposition and promotes vegetarianism/ veganism</td>
</tr>
<tr>
<td>□ For proposition and claims to not be pressuring vegetarianism/ veganism</td>
</tr>
<tr>
<td>□ Against proposition</td>
</tr>
</tbody>
</table>

Table 3.2 Examples of Video Influence Coding Questions

To assist in the coding process it is suggested that a coding guide be developed for content analysis research (Kaid & Wadsworth, 1989). A coding guide provides coders with an instrument to assist them in the coding process as well as to determine boundaries for specific coding items (Kaid & Wadsworth, 1989). For this study the researcher
developed a two-page hard copy coding guide. This guide includes definitions of items to be coded and examples of instances that would result in coding for a specific item. The coding guide was used as a reference throughout the coding process. In addition to assisting the coders in the coding process, it also aided them in coding consistently.

**Data Collection**

A census of the YouTube videos was taken and recorded in one day in order to reflect a cross-sectional study design (Riffe et al., 1998; Ary et al., 2006). The census sample was then coded over a time period of three weeks in late fall of 2008. The coding was completed by two coders. One coder was an agricultural communications graduate student with an animal science background, while the other was an agricultural communications professor, also with an animal science background. Each coder was responsible for coding half of the video sample. The videos were downloaded once and watched an average of two times.

**Validity**

Validity is defined as “the extent to which an instrument measured what it claimed to measure.” (Ary et. al., 2006). It is important to note that validity should also ensure that focus is placed on the interpretation and meaning of items in the instrument as well (Ary et.al., 2006). Riffe et al. (1998) suggested that validity of content analysis is assessed through scientific and social validation. The researcher and an Assistant Professor of Agricultural Communication validated the coding sheet for this study. The coding sheet was a modification of a published content analysis study of YouTube videos related to food safety (Rhoades & Ellis, 2010). Through their validation they confirmed the scientific validation as well as the benefit to society the study could provide.
Threats to internal validity were minimal in this portion of this study as only the experimenter effect was prevalent due to the absence of human participants. Ary et. al. (2006, p. 300) described the experimenter effect as “…unintentional effects that the researcher him- or herself has on the study.” During the content analysis, coders could have unintentionally interpreted a video incorrectly or allowed personal bias to influence their coding.

Experimenter effect was also a threat to external validity concerning the content analysis portion of this study. In the context of external validity, experimenter effects suggest that the results may not be the same if a different experimenter was to conduct the study (Ary et. al., 2006). The interpretation of the YouTube videos could have varied in the presence of a different researcher. However, the inter-coder reliability conducted in this study provides control to the experimenter effect.

**Reliability**

“Reliability in content analysis is defined as an agreement among coders about categorizing content.” (Riffe et al., 1998, p. 104) To establish the coding sheet two coders developed the categories of relevance needed to meet the study goals, as recommended by Riffe et al. (1998). These categories and the development of the coding sheet were created through a thorough literature review of demographics in advertising, messaging appeals, animal rights legislation, and California Proposition 2. Following the development of the coding sheet, the coders underwent a coder training, which involved becoming familiar with the coding process and coding guide. Kaid and Wadsworth (1989) suggested that the reliability of the content analysis should be determined by comparing the coding of the different coders. It was recommended that this be performed
at least 5-7% of the study sample (Kaid & Wadsworth, 1989). The coders assessed their reliability by sampling the same 10% of the video sample and comparing their results. Through the comparison of their results, the coders then assessed their level of agreement by calculating an inter-coder Holsti’s reliability (North, et al., 1963). A calculated reliability of 85-95% is desired (Riffe et al., 1998). The inter-coder reliability achieved by the coders in this study was 93%.

**Data Analysis**

After the completion of data collection, data were entered into SPSS® and quantitative and descriptive statistics were calculated. Data frequencies were analyzed.

**PHASE II**

**Research Design**

The research design for Phase II of this study included the use of a directly administered questionnaire to determine the knowledge and perceptions of agriculture among a sample of Ohio State Fair attendees in 2009. Directly administered questionnaires are a research tool that enables researchers to obtain information from an array of individuals who have gathered at a common place for a common purpose (Ary et al., 2006). One benefit of directly administered questionnaires is that researchers are able to guide participants through the questionnaire (Ary et al., 2006). This basic research design incorporated descriptive and quantitative characteristics as well as qualitative justifications. The Ohio Farm Bureau supported this phase of the study. Their support provided expert knowledge in the field and topics present in the questionnaire, a location to conduct research, subject incentives, and compensation (in the form of
admission, parking, and food vouchers) for those who assisted in administering the questionnaires.

**Subject Selection**

A convenience sample was used for the directly administered questionnaire component of this study. Convenience sampling involves using readily available subjects as the study sample, thus making it a weak sampling procedure (Ary et.al., 2006). Convenience sampling was used in this study because it was difficult to predict the population elements that the study would encounter, thus limiting enumeration required for probability sampling (Ary et. al., 2006). The convenience sample was comprised of volunteers who attended the 2009 Ohio State Fair. Subjects were recruited in the Agriculture/Horticulture Building by the use of a sign above the research booth which read “Are you 18 year or older? Are you an Ohio resident? Do you want Free Ice Cream?” Each participant was given a coupon for a free single-dip ice cream cone from the Ohio Dairy Producers booth at the fair.

A sample of 508 questionnaires was collected over a period of eight days. Of those, 502 questionnaires were deemed usable and were included in the data analysis. A total of six questionnaires were eliminated from the research. Four questionnaires were deemed unusable due to lack of complete responses and two due to lack of Ohio citizenship. In addition to the 508 subjects who participated in the study, 57 other individuals inquired about the study and then declined participation. Sampling error is unable to be calculated in this study without replication and the use of probability sampling (Ary et.al., 2006).
**Instrumentation**

The instrument used in Phase II of this study included a directly administered questionnaire (Appendix D). The questionnaire was developed on the basis of the last two research objectives for this study. The researcher collected data for these two research objectives through the use of closed-ended and open-ended questions. Closed-ended questions are used when all the possible answers are known or limited (Ary et.al., 2006). The format of the closed-ended questions in this study included checklist and scaled item questions. Open-ended questions are used when there are numerous possible answers or when the answer is unknown, such as an opinion or justification (Ary et al., 2006). The questionnaire was three pages long and was printed on hard copy format for use in this study. Hard copy questionnaires were used in this study because the research location at the fair limited the use of electronic capabilities.

Ary et.al. (2006) suggested that questionnaires should be ordered in a fashion that is appealing to the research subjects. Questions that interest the participants and are easy to answer should be placed at the beginning of the questionnaire while demographic questions and questions that may make the participant feel uncomfortable should be placed toward the end (Ary et.al., 2006). Based on these guidelines the researcher organized the questions into three broad categories. The first category included questions about the displays in the building. These questions were included in the questionnaire as a request from the Ohio Farm Bureau staff. Since the participants were in the building to observe the displays, these questions provided a good introduction to the questionnaire. Following these questions, questions relevant to animal rights and animal welfare,
including an assessment livestock images and recent livestock legislation, were asked.

The questionnaire was concluded with demographic questions.

Information included in the animal rights/animal welfare category inquired if participants knew the difference between animal rights and animal welfare, if they believed livestock were treated humanely, and the importance of humane treatment of livestock. Examples of these questions are included in Table 3.3.

---

**Do you know the difference between animal rights and animal welfare?**

Yes    No

If Yes, explain the difference.

---

**On a scale of 1 to 5, do you feel that most livestock farmers raise their animals in a humane manner? A ranking of 1 would indicate not humane, 3 neutral, and 5 very humane.**

1  2  3  4  5

Why did you choose this ranking?

---

**On a scale of 1 to 5, how important is the humane production of food animals to you? A ranking of 1 would indicate not important, 3 neutral, and 5 very important.**

1  2  3  4  5

Why did you choose this ranking?

---

Table 3.3 Examples of Questions Assessing Animal Rights and Animal Welfare
Additional questions in this section assessed the participant’s perceptions of traditional and conventional livestock housing methods by asking them to compare two images. One image contained several smaller images of conventional livestock housing while the other contained several smaller images of traditional livestock housing. Traditional livestock housing included pasture-raised animals in small scale production, while conventional livestock housing included technologically advanced indoor housing geared toward large scale production. Picture A (Appendix E) depicted conventional livestock housing and picture B (Appendix F) depicted traditional livestock housing. Examples of these questions are in Table 3.4.
Which picture do you feel best represents how most livestock are currently raised in Ohio?  
A   B  
Why did you choose that picture?

Which picture do you feel shows the healthiest animals?  A   B   Both  
Why did you choose that picture?

Which picture do you feel shows the most humane treatment of animals?  A   B   Both  
Why did you choose that picture?

In which picture do you feel that the animals would be most protected from disease? A   B  
Why did you choose that picture?

Which picture do you feel will produce the most safe and wholesome food product? A   B  
Why did you choose that picture?

Which picture will produce consumer friendly food prices at the grocery store while still ensuring a safe and wholesome product? A   B  
Why did you choose that picture?

Table 3.4 Examples of Questions Assessing Perceptions of Livestock Housing

The last questions in this category were structured to assess the knowledge and perceptions of livestock legislation. In addition, questions were also asked to determine if
subjects were familiar with HSUS, who had sponsored many of the recent livestock housing legislation initiatives. Examples of these questions can be found in table 3.5.

<table>
<thead>
<tr>
<th>Are you aware that conventional livestock housing methods have been either voluntarily banned or outlawed through legislation in six states?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

| Are you familiar with your local humane society or the Humane Society of the United States? |
|--------------------------------------|-----|----|
| Yes | No |

If Yes, which one (or indicate if familiar with both)

________________________________________

Can you describe how your local humane society is different from the Humane Society of the United States?

______________________________________________________________

In November, 2009 there will be a Livestock Care Amendment on the ballot. This amendment will create a Livestock Care Board that will consist of family farmers, veterinarians, a food safety expert, consumers, a local human society representative, members from statewide farming organizations, a dean of an Ohio college of agriculture and the director of the Ohio Department of Agriculture. This Board will establish guidelines for food animal care including but not limited to the topics of biosecurity, animal health, disease prevention, housing, food safety and production practices. On a scale of 1 to 5, with 1 representing not improving and 5 improving greatly; do you feel that an Ohio Livestock Care Board would improve the humane treatment of animals in Ohio as well as the safety and wholesomeness of food produced in Ohio?

1 2 3 4 5

Table 3.5 Examples of Questions Assessing Perceptions and Knowledge of Legislation
The questionnaire was concluded with demographic questions. These questions included information about the subjects experience with agriculture, residential information, voting history, education, income, ethnicity, and gender. These questions were asked in order to provide background information on the scope individuals included in the sample.

**Data Collection**

In August of 2009, six individuals administered questionnaires over a period of eight days. The administrators were both male and female, represented the Caucasian and African American race, and all were from an agricultural background. Questionnaire administrators underwent training prior to data collection. This allowed the administrators to practice and become familiar with the questions, learn how to listen carefully and pick out important details, as well as eliminate personal bias when talking with participants.

**Validity**

The validity of the questionnaire was determined by a panel of experts. These experts included researchers and members of the Ohio Farm Bureau staff who were experienced with the content area as well as the legislative issues addressed in the questionnaire.

The directly administered questionnaire contains several threats to internal validity as human subjects were involved in this portion of the research. The threat of instrumentation, selection, experimenter effect, subject effects, and diffusion were all possible in the directly administered questionnaire. A potential threat of instrumentation occurs when there is a change in the instrument or the instrument has questionable reliability (Ary et. al., 2006). Since more than one researcher administered the questionnaires, the wording of the questions may have varied slightly depending on the
researcher. In addition, instrument reliability was moderate and could only be calculated on a portion of the questionnaire.

Selection is identified as a potential threat when volunteers are used as part of the research (Ary et. al., 2006). All of the subjects who completed the questionnaire did so voluntarily. It has been suggested that those who volunteer may be different from non-volunteers for notable reasons (Ary et. al., 2006). Thus, the subjects in this study cannot be compared to those who did not volunteer to participate in the study.

The potential threat of experimenter effect was also possible in this portion of the research as the researchers may have unintentionally influenced the participants’ answers through non-verbal cues and personal bias. Subject effects are defined as a threat to internal validity when the subject’s behavior is changed due to the research (Ary et. al., 2006). Subjects could have answered the questions how they thought they were intended to be answered. Subjects may have also been deterred from answering the questions completely due to the incentive of free ice cream at the conclusion of the questionnaire, the sensitive nature of some of the questions, or the length of the questionnaire. The last threat of internal validity present in the questionnaire portion of the study was the potential threat of diffusion. Diffusion is a threat when participants communicate information about the research to other participants (Ary et. al., 2006). This may be possible if participants completed their questionnaire near a friend or family member, thus creating the possibility of disclosing information about their responses to the questionnaire to others.

Threats to external validity were also present in the directly administered questionnaire. These threats included the following: selection-treatment interaction,
setting-treatment interaction, subject effects, experimenter effects, and the novelty effect. The selection-treatment interaction was a threat to external validity due to the use of volunteers for study subjects. If this study would have been replicated in a situation where subjects were not volunteers it is not guaranteed that the same results would have been found (Ary et. al., 2006). If a difference in setting could affect the results of a study, then the study is known to possess the external threat of setting-treatment interaction (Ary et. al., 2006). The setting-treatment interaction threat applied to this study as the results may have been different if the study was conducted at a county fair rather than a state fair or if it was conducted outside of a fair setting. Subject effects were found to be a threat to internal validity for the questionnaire portion of this study, but they were also a threat to external validity. The same reasons for subject effects in internal validity applied for external validity, thus limiting the generalizability of the results. Experimenter effects were also a threat to external validity as different experimenters could have influenced the results of the study differently. For example, the differences between the personal biases, non-verbal cues and personalities of those administering the survey could have affected the results. Ary et. al. (2006) also includes observers as part of experimenter effects, noting that observers could alter the responses of the subjects. Many observers were present at any given time during administration of the questionnaires, thus this aspect of experimenter effects cannot be eliminated. Lastly, the novelty effect was also present in this portion of the study. The novelty effect is defined as when “A novel treatment may lead to excitement (or anxiety) among subjects that causes them to respond differently than they would in a normal or real-world situation.” (Ary et. al., p.
The novelty influence in this study was attributed to the participant’s excitement of receiving free ice cream at the completion of the questionnaire.

Steps were taken by the researcher to try and limit the occurrence of these threats of validity. For example, to control for the instrument and experimenter effect all questionnaire administrators underwent training prior to interacting with subjects. This training discussed the importance of reading each question word for word and also discussed how to eliminate influence and personal bias while administering the questionnaire. In addition, the novelty effect was reduced by not having ice cream at the research booth. Participants were given a coupon for ice cream after completing the questionnaire; although participant excitement may have still been present, the excitement was less than if subjects could see and smell the ice cream.

Reliability

Reliability is described as the process of determining the consistency of an instrument in measuring the items at hand (Ary et al., 2006). Due to the variety of questions comprised in the questionnaire, scale reliability was calculated on questions related to the images. Image questions all measured the perceptions of traditional and conventional livestock housing and thus responses were compared for consistency. Other items in the questionnaire measured a variety of different knowledge and perceptions of agriculture and thus reliability was unable to be calculated.

To measure the reliability of image questions, homogeneity measures were used (Ary et al., 2006). The measure of homogeneity used in this study was Cronbach’s alpha. Cronbach’s alpha is used when the items being measured are not scored as right or wrong, rather they are scored within a range such as attitude, or as in this study,
perception (Ary et al., 2006). A reliability coefficient of 1 indicates perfect reliability, while anything lower indicates the presence of measurement error. The reliability calculated for these questions was .543. This moderate reliability may have been reflected by the number of questions included, as only six questions were included in the reliability assessment. Ary et. al. (2006) indicated that longer tests produce higher reliability. In addition, standard error of measurement could have affected the reliability as the perceptions of individuals regarding the images could change if they were to answer the questions again due to social influences or an increase in knowledge (Ary et al., 2006).

Data Analysis

Upon the completion of the data collection, the data were entered into SPSS© and descriptive statistics were calculated. Qualitative information was evaluated through the use of open-coding and through identification of common themes within the data.

Summary

This chapter sought to describe the methods of this research study. This study consisted of two phases. Phase I included a content analysis of 111 YouTube videos related to California Proposition 2. A census of YouTube videos was identified using the search term “Proposition 2 California.” Descriptive statistics were calculated for this phase. Phase II include a directly administered questionnaire. A sample of 508 participants voluntarily completed questionnaires. The research sample was obtained in the Agriculture and Horticulture building at the 2009 Ohio State Fair. Data collected for this phase of the study were analyzed using quantitative descriptive statistics as well as open-coding for the qualitative information.
CHAPTER 4
RESULTS

This study sought to assess how agriculture was depicted in YouTube videos pertaining to Proposition 2 as well as to assess a non-generalizable sample of the public’s perception of agricultural practices and legislation. The purpose of this study was to gain insight into the public understanding of agricultural information and to determine the current influence of agricultural campaigns and how such campaigns can be improved. The theories that guided this study included messaging appeals, social cognitive theory, social learning theory, cognitive dissonance theory, semiotics, and knowledge gap. The study design included a content analysis of YouTube videos and a directly administered questionnaire distributed to voluntary participants at the 2009 Ohio State Fair. A census of 111 YouTube videos and a sample of 508 questionnaires were analyzed as part of this study. Descriptive statistics were calculated using the data. In addition, open coding was used to analyze the qualitative portions of the study. This chapter will detail the findings of the study.

Demographics

To assess the objectives of this study it was important to understand the demographics of the individuals in the YouTube videos as well as the demographics of the individuals who provided data as part of Phase II of this study. Demographics are important in regard to YouTube videos because it is important to understand how
demographics are used in advertising and how they may influence consumer’s perceptions. In addition, assessing the demographic characteristics of subjects who completed the directly administered questionnaire provides insight into understanding the beliefs of different demographic groups as well as how to effectively target different groups during a public information campaign.

**Phase I Demographics**

The researchers coded for the demographics of the people delivering the message in the YouTube videos. Coders evaluated whether the message was delivered by a voice only, one person, more than one person, or no person (text). One person was featured delivering the message in 58 (56.3%) of the videos, 36 (35%) were delivered by more than one person, and 8 (7.8%) were delivered by a voice only. The age of the people delivering the message was also coded. Videos that contained a variety of ages of people or those who did not contain people were coded as “none.” The age group of 40-50 year olds made up 36.9% (38) of the videos, the “none” category made up 34% (35) of the videos, and the 20-30 age groups composed 21.4% (22) of the videos. As with the age groups, ethnicity was coded as “none” if more than one ethnicity was present amongst the people delivering the message or if no people were present in the video. People of Caucasian ethnicity were in 70 (68%) of the videos, 25 (24.3%) were coded as none, and 6 (5.8%) contained African Americans. Asian and Hispanic ethnicities were not represented in any of the videos. Gender of the people delivering the message within the video was also coded for. Females appeared in the most videos at 36.9% (38). (See Table 4.1).
<table>
<thead>
<tr>
<th>Demographic</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40’s-50’s</td>
<td>38</td>
<td>36.9</td>
</tr>
<tr>
<td>None (no person in video or multiple people)</td>
<td>35</td>
<td>34.0</td>
</tr>
<tr>
<td>20′s-30′s</td>
<td>22</td>
<td>21.4</td>
</tr>
<tr>
<td>Young Children</td>
<td>4</td>
<td>3.9</td>
</tr>
<tr>
<td>Teens</td>
<td>2</td>
<td>1.9</td>
</tr>
<tr>
<td>60+</td>
<td>2</td>
<td>1.9</td>
</tr>
<tr>
<td><strong>Ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caucasian</td>
<td>70</td>
<td>68.0</td>
</tr>
<tr>
<td>None (no individual or multiple individuals)</td>
<td>25</td>
<td>24.3</td>
</tr>
<tr>
<td>African American</td>
<td>6</td>
<td>5.8</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>1.9</td>
</tr>
<tr>
<td>Asian</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Hispanic</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Females</td>
<td>38</td>
<td>36.9</td>
</tr>
<tr>
<td>Males</td>
<td>33</td>
<td>32.0</td>
</tr>
<tr>
<td>Both genders</td>
<td>31</td>
<td>30.1</td>
</tr>
<tr>
<td>None</td>
<td>1</td>
<td>1.0</td>
</tr>
</tbody>
</table>

Table 4.1: Demographics of the People Delivering the Message
Phase II Demographics

The researcher collected demographic information of Ohio citizens visiting the Agriculture and Horticulture Building at the Ohio State Fair. Demographics collected included: age, ethnicity, gender, highest level of education, voting status, area of residence, and agriculture experience. The age of participants had a range of 18 to 88. The mean age was 44.35, with a median of 46, and a mode of 50. When divided into age groups of 18-29, 30-39, 40-49, 50-59, 60-69, 70-79, and 80-89, the 40-49 age group had the most participants with 124 (24.7%). Eleven participants declined to answer this question.

Various ethnicities were represented among the participants. Caucasian was the most prevalent ethnicity with 412 (82.1%) of participants. African American’s were represented by 41 (8.2%) individuals. Ethnicity was not reported by 13 (2.6%) respondents. Responses were not reported in the instances when the subject did not understand the question being asked and in an effort not to offend the participants or misinterpret an ethnicity the questionnaire administers left the question blank.

Gender was not asked, but was identified by the researchers. A gender was not specified for ten of the questionnaires due to forgetting to fill in that question. Females contributed to 62.7% (n= 315) of the sample, while 35.5% (n= 177) of the sample was made up of males. (See Table 4.2)

A Bachelor’s degree was the most frequent response as the highest level of education, as it was indicated by 181 (36.1%) of the respondents. The category of “some college” which included any college experience below the bachelors level, followed with
122 (24.3%) responses. A high school diploma was the highest level of education for 99 (19.7%) of the participants. (See Table 4.2)

<table>
<thead>
<tr>
<th>Demographic</th>
<th>$f$</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40-49</td>
<td>124</td>
<td>24.7</td>
</tr>
<tr>
<td>50-59</td>
<td>114</td>
<td>22.7</td>
</tr>
<tr>
<td>18-29</td>
<td>106</td>
<td>21.1</td>
</tr>
<tr>
<td>60-69</td>
<td>64</td>
<td>12.8</td>
</tr>
<tr>
<td>30-39</td>
<td>52</td>
<td>10.4</td>
</tr>
<tr>
<td>70-79</td>
<td>24</td>
<td>4.8</td>
</tr>
<tr>
<td>80-89</td>
<td>7</td>
<td>1.4</td>
</tr>
<tr>
<td><strong>Ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caucasian</td>
<td>412</td>
<td>82.1</td>
</tr>
<tr>
<td>African American</td>
<td>41</td>
<td>8.2</td>
</tr>
<tr>
<td>Other</td>
<td>21</td>
<td>4.2</td>
</tr>
<tr>
<td>Asian</td>
<td>6</td>
<td>1.2</td>
</tr>
<tr>
<td>Hispanic</td>
<td>9</td>
<td>1.8</td>
</tr>
</tbody>
</table>

Table 4.2: Demographics of participants (Continued)
<table>
<thead>
<tr>
<th>Gender</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>315</td>
<td>62.7</td>
</tr>
<tr>
<td>Male</td>
<td>177</td>
<td>35.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelors</td>
</tr>
<tr>
<td>Some College</td>
</tr>
<tr>
<td>High School</td>
</tr>
<tr>
<td>Masters</td>
</tr>
<tr>
<td>Professional</td>
</tr>
<tr>
<td>Did Not Finish High School</td>
</tr>
<tr>
<td>GED</td>
</tr>
</tbody>
</table>

Three questions were asked about the respondents voting status. One question asked if the participants were registered to vote, followed by asking if they voted in the last election and the last three elections. The majority of respondents were registered to vote, with 95% (n= 477) indicating so. Similarly, 90.4% (n= 454) of participants indicated that they voted in the last election, while 9.2% (n= 46) did not. When looking at the distribution of voters in the last three elections, 79.5% (n= 399) of respondents voted and 19.9% (n= 100) did not. Of the 502 participants, one did not indicate if they were
registered to vote, two did not specify if they voted in the last election, and three declined to identify if they voted in the last three elections.

When specifying the area of residence, 202 (40.2%) participants indicated that they resided in a suburban area. The number of urban and rural residing participants was very similar; urban residence was identified by 128 (25.5%) respondents, while rural residence was identified by 126 (25.1%) respondents. A farm residence was indicated by 45 (9.5%) participants. Only one participant declined to answer this question.

Participants were asked to rank their experience with agriculture on a scale of 1 to 5, with 1 indicating no experience and 5 indicating that they have lived on a farm. The largest group of respondents, 132 (26.3%) reported living on a farm. Conversely, 128 (25.5%) respondents indicated that they had no experience with agriculture. (See Table 4.3)

<table>
<thead>
<tr>
<th>Rank</th>
<th>( f )</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>5- Lived on a Farm</td>
<td>132</td>
<td>26.3</td>
</tr>
<tr>
<td>4</td>
<td>53</td>
<td>10.6</td>
</tr>
<tr>
<td>3</td>
<td>101</td>
<td>20.1</td>
</tr>
<tr>
<td>2</td>
<td>87</td>
<td>17.3</td>
</tr>
<tr>
<td>1- No Experience</td>
<td>128</td>
<td>25.5</td>
</tr>
</tbody>
</table>

Table 4.3: Experience with Agriculture
Objective 1: To describe characteristics of YouTube videos used in a livestock production legislative campaign.

Several characteristics were evaluated to fulfill objective 1 of this study. These characteristics included items such as the number of days online before the election, length, number of views, category, number of comments, authors, sponsors, segments, presence of animation, presence of celebrity’s opinions, position on the legislation, promotion of a move to action, key references to certain aspects of the legislation such as giving human qualities to animals, promotion of the family farm, comparison of farm animals to pets, and the mention of vegetarianism or veganism. These characteristics allowed the researcher to analyze how certain characteristics were used by those who opposed and supported the legislation.

Of the 103 videos identified, the video clips were posted to YouTube an average of 39.69 (minimum = 1, maximum = 300, mode = 7) days prior to the November 4, 2008 election. Videos averaged a length of 1.73 minutes (minimum = 8 seconds, maximum = 10.2 minutes, mode = 30 seconds) (note: videos on YouTube are encouraged to be 10 minutes or less), and had been viewed an average of 4,161.74 (minimum = 31, maximum = 194,712, mode = 3,075) times. Those who post videos on YouTube have the ability to assign the video to a category. The following categories were represented: “Pets & Animals” was the most popular category the videos were posted to with 58 videos or 56.3% of the total sample. “News & Politics” followed with 23 (22.3%) videos, then “Non-Profits & Activism” with 15 (14.6%), “Entertainment” with 3 (2.9%), “People & Blogs” with 2 (1.9%), and “Education” and “Music” each with 1 video (1.0%). YouTube viewers had the ability to post comments to videos and 92 of the videos analyzed had at least one comment. The average number of comments posted was 12.7 comments per
video (minimum = 1, maximum = 270). Coders analyzed the comments for relevancy to Proposition 2. Of those 92 videos with comments, 76 (73.8%) contained a majority of comments that were relevant to Proposition 2.

There were various authors who posted the analyzed videos. However, the most frequent authors were animal rights organizations. Humane California authored a total of 35 (33.98%) videos, while Farm Animal Welfare authored 21 (20.39%) of the videos. Other authors included Animal News, centgov, Doggy TV, haydenvegan-PETA, Farm Sanctuary, Humane Society, The Marin Humane Society, veterinarycrocs, and several other individual authors. The sponsor of the video could differ from the author, so that was coded separately. Animal rights organizations were also the most frequent sponsors of the videos. Of the 103 video sample, 71 (68.9%) videos were sponsored by animal rights organizations. Videos classified as being sponsored by “other” made up 29 (28.2%) of the videos. Sponsors in the classification “other” included individuals, blogs, universities, political organizations, religious organizations, California for Safe Food Coalition of Public Health and Food Safety Experts, and unknown sponsors. Only 1 (1%) of the videos were sponsored by a farming/commodity organization. (See Table 4.4)
To determine what types of segments surrounding Proposition 2 were included in the sample, the researchers coded for the inclusion of segments such as farmers, animal welfare, human health, food safety, animal rights, factory farms, environment, and “other”. These segments were selected as these terms were often present in literature and news articles concerning Proposition 2. Coders marked all applicable segments for each video. Of the 103 video sample, 56 (54.4%) videos contained more than one segment. Animal welfare was included in 88 (85.4%) of the videos. In the sample, 27 (26.2%) videos covered food safety as a segment. Coded as “other” were 17 (16.5%) of the videos with segments including: characteristics of the proposition, fiscal impact, specialty meats, promotion, economics and job outlook affected by the proposition, religion, fraud, USDA & American Veterinary Medical Association, raising money for the proposition through an art show, proposition 8, and thanks for those who were supporting the proposition. Human health and the environment were both segment features in 16 (15.5%) of the
videos in the sample. Animal rights were only covered in 5 (4.9 %) of the video segments. (See Table 4.5)

<table>
<thead>
<tr>
<th>Segment</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animal Welfare</td>
<td>88</td>
<td>85.4</td>
</tr>
<tr>
<td>Factory Farms</td>
<td>39</td>
<td>37.9</td>
</tr>
<tr>
<td>Food Safety</td>
<td>27</td>
<td>26.2</td>
</tr>
<tr>
<td>Other</td>
<td>17</td>
<td>16.5</td>
</tr>
<tr>
<td>Human Health</td>
<td>16</td>
<td>15.5</td>
</tr>
<tr>
<td>Environment</td>
<td>16</td>
<td>15.5</td>
</tr>
<tr>
<td>Animal Rights</td>
<td>5</td>
<td>4.9</td>
</tr>
<tr>
<td>Farmer</td>
<td>3</td>
<td>2.9</td>
</tr>
</tbody>
</table>

Table 4.5: Segments Covered by Proposition 2 Videos
* Note: Videos could be coded for multiple segments of the issue and thus counted more than once.

When assessing the side of the proposition that the videos supported the data showed that 89.3% (92) supported the proposition 3.9% (4) opposed the proposition and 6.8% (7) of the videos held a neutral position. Those with a neutral position tended to be authored by news or media organizations, this included 5 of the videos. The majority of the videos coded were not animated (n= 97, 94.2%). Due to the large amount of celebrity support given in favor of the Proposition 2 campaign the researcher coded for the
presence of celebrities’ opinions. Results showed that 36.9% (38) of videos contained a
celebrity’s opinions while 63.1% (65) did not possess celebrity influence. Figure 3
demonstrates the celebrity influence seen in the videos.

Few of the video’s promoted a move to action ($n = 10, 9.7\%$). A move to action
was represented in the videos by encouraging viewers to visit campaign websites for
more information, write congressmen, give endorsements, and eat vegetarian. Asking
viewers to vote was not considered a move to action for this study as almost every video
asked viewers to vote a certain way for the proposition and the focus was intended to be
on activities other than voting. In addition to promoting a move to action, many of the
videos made key references to certain items that may sway voter’s feelings such as comparing farm animals to humans or pets, promoting the family farm and promoting vegetarianism/veganism. The act of giving human qualities to animals was demonstrated in 18 (17.5%) of the videos. Examples of personification given to animals included talking, dancing, and singing animals, referencing animal’s feelings, intelligence, stress, fear, and comparison of animals in a factory farm to humans stuffed in an elevator, a hotel, and part of the human slave trade. Similarly, 19 (18.4%) of the videos compared farm animals to pets. This was often done by indicating that the individual in the video would never treat their dogs the way animals are treated on factory farms. Promotion of the family farm was reflected in 17 (16.5%) of the videos, while reference was made to vegetarianism/veganism in 8 (7.8%) of videos.

**Objective 2: To explain how rational and emotional appeals were used in a livestock production legislative campaign online.**

Messaging appeals have been referenced as the most important component in advertising (Srivastava & Sharma, 2008). Thus, the researcher decided it was important to understand how these appeals were used to appeal to consumers in campaign advertisements. Coders evaluated the messages for two major categories of appeals including emotional/feeling based appeals and logical/rational based appeals. Each category was coded for each video. All appeal types present in the videos were coded. More than one appeal was coded for many videos as advertisements tend to include multiple appeals for a greater impact (Brader, 2006).

With 58.3% ($n=60$) of the videos using guilt as a tactic, it was implied that if a viewer did not vote for the proposition animals would be mistreated (See Figure 4). Similarly, the 48.5% ($n=50$) of videos that exhibited empathy reached out to viewers by
showing images of sick and injured animals as well as cute chicks and goats to influence the emotions of animal lovers (See Figure 5). Promises made by video narrators claiming if one voted for the proposition one would save animals and support family farmers were made in 44.7% \((n=46)\). Humor and pride appeals both appeared in 8 (7.8%) of the videos, while the sex appeal was used once. (See Table 4.6).

Figure 4. Example of Guilt Appeal in YouTube Videos
Figure 5. Example of Empathy in YouTube Videos
<table>
<thead>
<tr>
<th>Appeal</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guilt</td>
<td>60</td>
<td>58.3</td>
</tr>
<tr>
<td>Empathy</td>
<td>50</td>
<td>48.5</td>
</tr>
<tr>
<td>Promise</td>
<td>46</td>
<td>44.7</td>
</tr>
<tr>
<td>Threat</td>
<td>36</td>
<td>35.0</td>
</tr>
<tr>
<td>Fear</td>
<td>31</td>
<td>30.1</td>
</tr>
<tr>
<td>Emotional</td>
<td>26</td>
<td>25.2</td>
</tr>
<tr>
<td>Humor</td>
<td>8</td>
<td>7.8</td>
</tr>
<tr>
<td>Pride</td>
<td>8</td>
<td>7.8</td>
</tr>
<tr>
<td>Sex</td>
<td>1</td>
<td>1.0</td>
</tr>
<tr>
<td>Total</td>
<td>266</td>
<td>258.4</td>
</tr>
</tbody>
</table>

Table 4.6: Feeling/Emotional Appeals used in Videos
* Note: Videos could be coded for multiple appeals and thus counted more than once.
The logical/rational based appeal that occurred most frequently in the video sample was gain-loss with 75 (72.8%) videos. Videos using gain-loss tried to show viewers logically what might happen if the Proposition failed or passed. Videos based upon gain-loss frequently showed the loss of quality of life for animals on farms that would occur if certain farming practices were not banned by the proposition. Figure 6 shows a video which opposed the proposition that used the gain-loss appeal by depicting headlines of predictions of bad things to come if Proposition 2 passed. Of the sample, 25 (24.3%) of the videos contained an informative appeal where they were trying to share the statistics behind the cause. Irony was the least used appeal, appearing in 3 (2.9%) videos (See Table 4.7). Irony was coded for when it was evident that the statement in the message conveyed a different meaning than it seemed to give.

Figure 6. Example of Gain-Loss in YouTube Videos
Objective 3: To assess the general public’s knowledge and perceptions of humane treatment in livestock production practices.

To create an effective campaign, agriculturalists must understand the knowledge and perceptions of the general public with regard to humane treatment of livestock. Having this understanding will allow campaign strategists to be able to frame campaign advertisements in a way that they will appeal to consumers. To assess the general public’s knowledge and perceptions, the researcher gathered information to determine if consumers were able to distinguish between animal rights and animal welfare, how individuals believed farmers treated their animals, and how livestock should be treated.

The perception of individuals indicating that they knew the difference between animal rights and animal welfare was nearly equally distributed. Those indicating that they did not know the difference was and 50.4% (253) of participants.

<table>
<thead>
<tr>
<th>Appeal</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gain-loss</td>
<td>75</td>
<td>72.8</td>
</tr>
<tr>
<td>Informative</td>
<td>25</td>
<td>24.3</td>
</tr>
<tr>
<td>Self-reference</td>
<td>16</td>
<td>15.5</td>
</tr>
<tr>
<td>Social modeling</td>
<td>16</td>
<td>15.5</td>
</tr>
<tr>
<td>Rhetorical question</td>
<td>7</td>
<td>6.8</td>
</tr>
<tr>
<td>Irony</td>
<td>3</td>
<td>2.9</td>
</tr>
<tr>
<td>Total</td>
<td>42</td>
<td>137.8</td>
</tr>
</tbody>
</table>

Table 4.7: Logical/Rational Appeals used in Videos
* Note: Videos could be coded for appeals and thus counted more than once.
When participants were asked to describe the difference between animal rights and animal welfare several themes arose. Four common explanations of animal rights arose. These included that animal rights are rules and legislation; animals have the same rights as humans and cannot be used for human benefit; animals do not have rights; and animal rights included proper treatment and necessities animals are entitled. Three common definitions of animal welfare were given. They included animal welfare was the rescuing of strays and protection of animals; that welfare was the proper treatment and care for an animal’s well being; and welfare is the idea of humane treatment while using animals for human benefit\(^1\).

Respondents were asked if they believed farmers in Ohio raised their animals in a humane manner. Participants were asked to respond on a scale of 1-5. They were told that a ranking of 1 would indicate not humane and a 5 would indicate very humane. The ranking of very humane had the most responses with 174 (34.7%). Not humane received the least amount of responses with 18 (3.6%). Two participants chose not to answer this question. (See Table 4.8)

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\(^1\) **Animal Rights:** Giving basic rights to animals similar to or the same as humans (Animal Welfare Council, 2009; The Vegetarian Animal Welfare): The ethical responsibility to care for the well being of animals, ensuring good health, the ability to cope effectively with their environment, and the ability express a diversity of behaviors specific to the individual species (American Veterinary Medical Association, 2009).
<table>
<thead>
<tr>
<th>Rank</th>
<th>$f$</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 (very humane)</td>
<td>174</td>
<td>34.7</td>
</tr>
<tr>
<td>4</td>
<td>161</td>
<td>32.1</td>
</tr>
<tr>
<td>3 (neutral)</td>
<td>112</td>
<td>22.3</td>
</tr>
<tr>
<td>2</td>
<td>35</td>
<td>7.0</td>
</tr>
<tr>
<td>1 (not humane)</td>
<td>18</td>
<td>3.6</td>
</tr>
</tbody>
</table>

Table 4.8: Do Farmers in Ohio raise their animals in a humane manner?

When participants were asked why they chose a particular ranking eight common responses arose. Three similar responses included the following: because I know, have seen, or heard that they treat their animals well; because I know, have seen, or heard that they do not treat their animals well; and some treat their animals well and some do not. Some respondents referenced media as being the reason for their ranking. In addition, some respondents indicated they chose their ranking because farming is the farmer’s livelihood and income and some chose a particular ranking because they were farmers or agriculture professionals themselves. The final common response was one of uncertainty; several people indicated that they were unsure of how animals were treated, hoped they were treated well, or would like to think that they were treated well. Positive views of treatment were displayed through comments such as “I know a lot of farmers; they treat their animals better than themselves.” A negative comment was often demonstrated through comments similar to the following: “What I hear may not be representative, but what I hear is mostly bad news.”

After thinking about how they believed farmers treated animals, participants were then asked how important the humane treatment of food animals was to them. They were asked to rank the importance on a scale of 1-5, with 1 representing not important and 5
very important. Of the participants, 317 (63.1%) indicated that the humane production of food was very important. (See Table 4.9)

<table>
<thead>
<tr>
<th>Rank</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 (very important)</td>
<td>317</td>
<td>63.1</td>
</tr>
<tr>
<td>4</td>
<td>116</td>
<td>23.1</td>
</tr>
<tr>
<td>3 (neutral)</td>
<td>56</td>
<td>11.2</td>
</tr>
<tr>
<td>2</td>
<td>11</td>
<td>2.2</td>
</tr>
<tr>
<td>1 (not important)</td>
<td>1</td>
<td>0.2</td>
</tr>
</tbody>
</table>

Table 4.9: How important is the humane production of food animals?

Several reasons evolved when the subjects were asked why they chose their ranking for the importance of the humane production of food. Two of the most popular reasons were that it is important to treat animals humanely because they will be our food, as well as that animals simply should not be mistreated. Health along with religious reasons, money and economic issues, and protection of family (mainly children) by insuring that they are provided with quality food were also common themes regarding the importance of humane treatment. In addition, some thought that although animals are used for human consumption they are still beings and can feel pain. Participants expressed their reasoning’s through explanations such as “they provide for us we should provide for them” and “I don’t want bruised meat.”
Objective 4: To assess the general public’s perceptions of images picturing traditional and conventional livestock housing.

Part of creating an effective agriculture campaign includes understanding how consumers perceive images of agriculture practices. If consumers perceive an image of agriculture poorly then that image should not be part of a campaign. In addition, consumer perceptions can also provide insight to the knowledge they have concerning livestock practices, thus indicating if education needs to be part of a campaign to produce effectiveness. To gain an understanding of how consumers perceive images of traditional and conventional livestock housing, the researchers asked participants to indicate which image best represented how most livestock were raised in Ohio, which image showed the healthiest animals, the most humane treatment, in which image the animals would be most protected from disease, and which image would produce the most safe and wholesome food product as well as consumer friendly prices.

When the participants were asked to compare two images of livestock housing several responses were given. The first question asked the participants to indicate which image reflected how the majority of livestock were raised in Ohio. The image of conventional livestock housing was labeled “Image A” at the time of data collection, while the image depicting traditional livestock housing was labeled “Image B” (See Figure 7). Of those responding, most (n=329, 65.5%) of the subjects indicated that conventional housing was used to raise the majority of animals in Ohio. Traditional housing was selected by 123 (24.5%) subjects while “both” images were selected by 45 (9.0%) subjects.
When the subjects were asked why they thought livestock was raised one way versus another the following responses were given. Those who indicated that most livestock were raised in conventional livestock housing referenced mass production, economic feasibility, technology, media influence, firsthand knowledge or experience, what they had seen, the lack of farmland, and the cleanliness, health, organization, and climate control seen in the images as justifications for their response. Some notable responses included “I know they’re in cages because that law hasn’t come to Ohio yet”; “Image A because agriculture is more modern, B is too primitive”; “Image A because it’s cleaner and healthier”; and “A, because I assume they’re all inhumane.”

Those who selected traditional livestock housing as most abundant in the state did so for the following common reasons: there are more small farms than large farms; what they have seen or what they know; they haven’t seen things like image A; first hand
experience; and wide open space. Many subjects referenced seeing images like image B while driving down the road. Unlike those who chose image A, only one person directly referenced the media as justification for their answer of image B. It is important to note that some of the respondents commented on the aesthetic nature of the image using words like “looks nice”, “natural”, “free/comfortable”, and “happy”. One respondent said “they look happy, outdoors, grassy ‘happy cows come from California’” while another said “Cows on a hill equals America.”

The majority of those who indicated that both images were prevalent in the state chose both because they thought image A and image B were equally distributed. However, some chose both because of species difference (e.g. chickens and pigs are housed like A, cows are housed like B). In addition, some respondents felt that neither picture was representative of livestock methods in the state, suggesting that a combination of the methods were used and that the method depended on what season it was.

Despite the fact the majority of respondents thought Image A was most abundant in the state the majority did not think it was humane. When asked which image was more humane 322 (64.1%) subjects felt that traditional housing (figure B) was more humane than conventional housing. “Both” images were the second most popular response with 111 (22.1%) responses, while image A followed with 68 (13.5%) responses.

Those who indicated that traditional housing was more humane justified their responses with these common themes: less crowded/not caged, natural setting, room to roam/free, and physical and mental health. Examples of subject responses for the theme less crowded/ not caged is as follows “Natural setting not crowded like prison” and “not
on way to slaughter, not caged.” The following example fit into the natural setting theme “breathe air not each other’s smells, stretch, and live naturally”. A notable response in the room to roam/free category was “can walk around, necks not stuck in pens.” Many respondents referenced the livestock’s mental health by saying they looked happier and an example of their physical health was given by saying that they looked healthier because image A looked “like they’re on life support.” Two notable references were made to media they are as follows: “looks like the ones in the commercials ‘happy cows’” and “when you pack animals together we are shown in media they are less humane.”

Subjects who indicated that both pictures showed humane treatment indicated so through the following themes: the animals looked healthy and happy in both images; humane treatment is not indicated by the housing method but rather the operator; neither picture showed inhumane treatment; or an image A image B comparison was not able to be made. Examples of responses for this answer are “nothing inhumane, each is better in its own way” and “In image A people are caring for them, in image B they’re out in nature.”

Image A was selected by individuals on the basis of themes including: health and happiness; environmental control; people taking care of them; cleanliness; technology; and experience. Responses that represented these themes include the following: “animals protected from each other”; “production based on science and research”; “environment controlled animals that are happy will produce more”; and “tended, cared for and looked at daily, can get a vet if there’s an issue.”
To determine if consumers think that animals are healthier in one housing method than another the research asked respondents to indicate which picture showed the healthiest animals. Of those responding 242 (48.2%) thought animals shown in image B were the healthiest, while “both” images were selected by 153 (30.5%) subjects and 104 (20.7%) respondents thought image A contained the healthiest animals.

Image B was selected most frequently as picturing the healthiest animals based on the common themes of out in the open, natural environment, room to roam, green space, free range, and physical and mental health. Some of the most notable examples of responses that represent these themes include the following: “outside/fresh food and air”, “The animals actually have room to breathe and live comfortably”, “natural nicer”, “more control over their freedom”, “coloring better green and pretty”, “happy, California be happy”, and “reading and exposure with media is that animals that are separated are healthier.”

The most common reasoning given for the both images appearing healthy was simply that they both looked healthy. Some specifics in regards to health were given such as all look “comfortable, heads up, and ears are perky”, “nobody looks sick, underweight, or without hair” and “cannot see any ribs, lost feathers, or rotten flesh.” The next most common themed response was a comparison of image A and B giving reasons why both were healthy. An example in this category included “B – are less likely to spread disease, A – preventative measures, controlled.” The last theme for this response was that an assessment of health was unable to be made from the pictures.

Individuals felt that Image A showed the healthiest animals for the most common themes of controlled, clean, and sanitary environment. An example for this response is
“more sanitary, controlled environment.” Another common theme for this response was that the animals were being closely monitored and that they were receiving balanced nutrition. Lastly, individuals with this response felt that the animal in image A looked healthier as the subjects felt those in B “look skinny”, “not very healthy”, and “look sick.”

When the research subjects were asked which image showed animals that would be most protected from disease the responses were very close with 230 (45.8%) indicating Image A and 222 (44.2%) indicating Image B. “Both” images was selected by 38 (7.6%) of subjects.

Image A was selected by respondents on the basis of the themes including: controlled environment, close monitoring, clean and sanitary, healthy and less exposure to parasites, and prevalence of vaccination programs. Some notable responses for selecting of Image A include “more controlled environment, but one bad apple could infect the rest” and “animals provided antibiotics and vaccines along with other medicines.”

Of those respondents who chose image B, did so because the animals were not confined or overcrowded. Some respondents referenced A as spreading disease more rapidly “like kids in school.” Other themes identified in the subject’s responses were animals in their natural habitat and freedom. One notable response related to media influence was as follows “After watching Food Inc. definitely B, A is slaughtered in dirty conditions”.

Those who chose both images provided the following justifications: protection of disease depends on other factors besides housing method, if taken care of properly
disease can be minimized in both, and image A and image B comparisons were given. An example of a good justification for both images was in Image A farmers are “very precautionous, shower in shower out” and in Image B if farmers are “rotating pastures and doing it right the livestock won’t have worms.”

When subjects were asked which image would produce the most safe and wholesome food product 224 (44.6%) selected image B, 165 (32.9%) selected image A, and 97 (19.3%) selected “both” images.

Those who selected image B did so on the basis of the themes including: the animals were not confined and thus would have less disease, they were outside in a natural free range environment, less chemicals were used while they were being raised, the animals were supplied with a natural food source, the animals were happier and healthier, or due to media influence. A response that referenced the absence of chemicals said “range animals have no chemicals pumped into them.” Other responses within this theme referenced the absence of hormones, antibiotics, steroids, insecticides, and pesticides. Similarly related, a response referring to natural food stated that in image B “animals are eating grass, in A the animals are being fed feed with chemicals in them.” Some responses that fell into the theme of health and happiness included that “the healthier the animal the healthier the food” and “Happy animals make happy meals.” The media responses were unique for this question as they referenced reading scientific studies which indicated that free range was healthier. Another media response to this question said “The spin media puts on it tells us to want free range.”

Image A was selected by respondents within the themes of: the animals are taken care of, there is a controlled environment and controlled nutrition, the animals appear
clean and in good health, presence of technology, mass production, and there are
treatments and tests to maintain health. “Someone’s taking care of them and monitoring
them,” said one respondent. In addition, another respondent concluded that the animals in
image A were “more protected and not exposed to elements.” Other notable responses
included that the “use of machinery is doing something good for them”, the animals
“look healthy and nice color of animal (not dirty),” and they are “better regulated.”

Common responses that were identified from respondents who answered “both
images” included: both images appeared to show healthy and safe animals, it could not be
determined from the pictures, it would depend on the management, both methods are
inspected and have laws to follow, and an image A to image B comparison indicating
pros and cons to both. One respondent provided the following; it “doesn’t have to do with
living conditions, just how animals are cared for.” Other examples of responses for this
question were “regulations set up the rules” and “A is more regulated, but B produces
hardier animals.”

When the research participants were asked which picture would produce the most
consumer friendly food prices, image A was selected by 352 (70.1%) of respondents,
followed by 102 (20.3%) selecting image B, and 34 (6.8%) selected both images.

Image A easily rose to the top as the most frequent answer for this question as
participants were able to identify that this housing method was cost efficient, involved
mass production, was controlled, required less labor and less land. Respondents identified
the efficiency and control of image A through answer such as it’s like an “assembly line,
more efficient” and there is “better control of the production by the farmer.” The
decreased labor intensity was identified by subjects through answers such as “one guy
can do a lot more; the animals are less labor intensive in this system.” Notable responses were given in regards to costs such as “if we go back to a pasture system we’ll increase the price of food by 5 fold”; “organic is more expensive”; and “Kroger and WalMart is cheaper than Whole Foods.”

Participants chose image B for reasoning’s such as there is less overhead costs, the animals are in their natural environments, there is less disease, and cost is justified by consumer values. Those who used costs as a justification provided answers along the lines of “it’s natural you don’t have to spend money on machines and buildings”; “Farmers don’t have to pay for grass”; and “not as many animals in the same area to spread disease.” Respondents who highlighted consumer values provided some of the following responses: “people are looking for healthier foods, we are a sick nation because we have crap in our food” and “if we’re going to eat animals it’s worth the price.”

The few respondents who selected both for this question did not seem to have any common answers except for they just thought it was both. Examples of responses were it’s a “toss up”, there is “no wrong answer”, and “more likely A, but probably both.”

Objective 5: To assess the general public’s knowledge and perceptions of current and proposed livestock production regulations.

Although the campaign for Issue 2 in Ohio had not officially kicked off at the time of data collection, the researcher believed it was important to understand what consumers knew about current legislation. To gain a better understanding of the attendees’ knowledge of agricultural legislation, researchers asked the participants if they knew that conventional livestock housing methods had been outlawed in six states. Next the researchers asked participants if they knew the difference between HSUS and their local humane society. This question was asked in regards to livestock regulation as HSUS
is often a sponsor of such legislation. In addition, researchers read a description of Ohio’s proposed Livestock Care Amendment and asked participants to rate the amendment’s ability to improve the humane treatment of animals in Ohio as well as the safety and wholesomeness of food produced in Ohio on a scale of 1 to 5.

Of the 502 participant sample, 405 (80.7%) participants indicated that they were not aware that conventional livestock housing methods had been banned in six states. Only 96 (19.1%) of participants were aware of such legislation.

The next question asked in relation to livestock legislation was to determine if participants were familiar with HSUS or their local humane society. If they answered yes, they were asked to specify whether they were familiar with HSUS, their local humane society, or both. A large number of participants, 408 (81.3%) indicated that they were either familiar with HSUS or their local humane society. Only 93 (18.5%) of the respondents indicated that they were not familiar with either one of the organizations. Of the participants who indicated they were familiar, 401 specified which organization they were familiar with. Local humane societies were the most common response as 245 (61.1%) of the individuals provided this answer. Indicating that they were familiar with both organizations was 130 (32.4%) of the participants. Lastly, 26 (6.5%) indicated that they were familiar with HSUS.

Participants were then asked if they could describe the difference between HSUS and their local humane society. Common responses were that local humane societies were at a local level and HSUS was at a national level and that there was no difference between the two. HSUS was also individually described as large scale and oversees all animals, a legislative lobbying organization with a policy agenda, and as extremist and
activists with animal rights agendas. Local humane societies were individually described as a pet shelter where you can adopt pets, part of the state government, and an organization that provides animal welfare. Many people could describe one organization or the other correctly, but very few could describe both. Of the sample, 55 (10.9%) individuals described some aspect or had a correct idea about HSUS, while 106 (21.1%) of the participants described local humane societies accurately.

Although the livestock amendment proposed for Ohio’s ballot in November of 2009 had not been given an official issue number at the time the research was collected, the researchers described the amendment to the participants and asked them if they thought it would improve the humane treatment of livestock. Respondents provided their answers on a scale of 1-5 with 1 representing not improving and 5 improving greatly. Those who thought the creation of a livestock care board would improve the humane treatment of animals included 176 (35.1%) individuals. Of those participating, 150 (29.9%) thought the livestock care board would make moderate improvements, designated by a ranking of 4. Eleven respondents declined participation for this question.

(See Table 4.10)

<table>
<thead>
<tr>
<th>Rank</th>
<th>( f )</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 Improving Greatly</td>
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<td>35.1</td>
</tr>
<tr>
<td>4</td>
<td>150</td>
<td>29.9</td>
</tr>
<tr>
<td>3</td>
<td>113</td>
<td>22.5</td>
</tr>
<tr>
<td>2</td>
<td>22</td>
<td>4.4</td>
</tr>
<tr>
<td>1 No Improvement</td>
<td>30</td>
<td>6.0</td>
</tr>
</tbody>
</table>

Table 4.10: Improvement of care through livestock care amendment
Summary

In this chapter descriptive statistics and qualitative themes have described the demographics of individuals in YouTube videos related to Proposition 2 as well as demographics of individuals who participated in a directly administered questionnaire. In addition, the characteristics of YouTube videos, the emotional and rational appeals used in YouTube videos, the public’s knowledge and perceptions of livestock practices and knowledge and perceptions of livestock legislation have been described. The majority of YouTube videos were in favor of Proposition 2 and many used emotional appeals to deliver their message. Many participants indicated that farmers raised their animals in a humane manner and also believed that animals should be raised in a humane manner. However, the responses provided in response to the images lacked accuracy and were found to be contradictory in some instances. For example, many respondents selected image B as being the healthiest, but when asked in which image the animals would be most protected from disease image A was selected the most. Lastly, the majority of participants were not aware of livestock legislation or the difference between HSUS and local humane societies. They were however, in favor of the creation of a livestock care board through Issue 2.
As society becomes increasingly concerned with the well being and treatment of animals, the extent of animal protection legislation has also increased. Despite efforts to improve animal care, legislative campaigns tend to be emotionally based rather than factually based. This emotional base has become an increasing concern among the agriculture community as many of the campaigns are supported by special interests groups with an animal rights agenda. In an effort to improve the ability of the agriculture industry to campaign effectively, as well as understand consumer’s perceptions and knowledge of agriculture and livestock legislation, this study sought to explore these items. With the guiding theoretical framework of messaging appeals, social cognitive theory, social learning theory, cognitive dissonance theory, semiotics, and knowledge gap, a content analysis was conducted on a census of 111 YouTube videos related to Proposition 2 in California. In addition, a sample of 508 Ohio consumers voluntarily participated in a directly administered questionnaire in which they were asked questions about their perceptions and knowledge of agriculture. Basic quantitative descriptive statistics were used to analyze data gathered from the research. In addition, open coding was used to analyze qualitative components of the study.
Conclusions

Demographic Conclusions

Demographic characteristics portrayed in a message can directly affect how a message is received by a target audience (Kahle & Homer, 1985). The demographics observed in the YouTube portion of this research indicate that Caucasian females between the ages of 40 and 50 might be the most appealing to the Proposition 2 voting audience, as these demographics were the most abundant. Thus, implications of social cognitive theory can be applied. Although the Caucasian race was found to be prominent in the sample, researchers found it interesting that more videos did not feature other ethnicities like Asian or Hispanic. The Hispanic/Latino race makes up 36.6% of the population in California, while the Asian ethnicity is represented by 12.5% of California’s population (U.S. Census Bureau, 2010). With these relatively high percentages, it would be assumed that video authors would also want to make a deep connection with those groups.

Females were more often portrayed in the messages than men. It may be predicted that the female gender poses a more emotional connection with an audience, therefore eliciting more emotional responses. Thus, under the guiding principles of social learning theory, using predominately women in the messages, a large population of women that identify with those in the message would be expected adopt the same position (Klapper, 1960). The presence of the 40-50 year old age group is logically expected. Generally, people feel that those who look mature are knowledgeable and provide expertise (Brownlow, 1992). Focusing on demographic characteristics that best
relate to the target audience will provide a strong connection and activate one’s social cognition (Bandura, 1986; Kahle & Homer, 1985).

Although the data collected in the directly administered questionnaire portion of the research is not generalizable beyond those who responded to the questionnaire, it highlights important information for communicators. The study found that the majority of the people who participated in this research were either in their 40s or 50s. It may be assumed that these age groups are likely to pay more attention to similar topics than others, or this age group might be the individuals most interested in the agriculture and horticultural exhibits in the building. It is important to note that both the content analysis and directly administered questionnaire indicated that the most abundant age demographic was those between the ages of 40 and 50. The commonality of these findings may be supported by the political activity of this age group. The PEW Internet and American Life Project indicated the political activity of individuals in these age groups is higher than those of other age groups (Smith, Schlozman, Verba, & Brady, 2009). Additionally, it could be assumed that these age groups were most prevalent because they are part of the baby boomer era. Therefore, due to prevalence and political activity, agriculturalists should consider targeting their communication and campaigns toward persons in this age group. The abundance of women participants over men could be attributed to the fact that several of the women may have had children with them who wanted ice cream, or they were more interested in the exhibits in the building.

Voting activity was also collected as part of the questionnaire to gain an understanding of voters and their behaviors. Based on this study it was determined that the majority of individuals who completed questionnaires were registered to vote. The
study results indicate that more research participants voted in the last election than did not; however, when assessing the past three elections, a decline in participant’s voting activity was observed. The decline in voters across past three years may be attributed to voter eligibility. It must be remembered that 106 of the study’s participants were in their twenties, indicating that some may not have been eligible to vote in the last three elections. It may also be attributed to the fact that the last large election was a presidential election, which tends to draw more voters than other election days.

Area of residence was also a demographic collected for this phase of the study. In 2000, the U.S. Census Bureau reported that 77.4% of Ohio’s population resided in an urban area, while 22.6% resided in a rural area (U.S. Census Bureau, 2000). The results from this study indicated that 65.7% of the participants resided in an urban or suburban area. In addition, 34.6% of participants reported living in a rural or farm area. Thus, the findings of this study suggest that a slightly larger percentage of rural participants were represented in this study than in Ohio’s total rural population. It may be assumed that rural residents were more attracted to the agriculture and horticulture displays in the building than urban residents.

**Objective 1: To describe characteristics of YouTube videos used in a livestock production legislative campaign.**

Based on this study and previous research it is evident that YouTube is being used for all forms of politics, including campaigns toward legislation. Of the 103 videos, analyzed in this study, a large portion ($n = 42, 40.7\%$) were posted at least one month before the November 4, 2008 election. This gave voters adequate time to access the videos before the election, including those who may have voted by absentee ballot. It is important as agricultural professionals to know the period in which many competitors
post their campaign messages to YouTube. This will allow agricultural groups in the future to strategically plan how to reach voters before their competitors.

The most prominent author selected category for the YouTube videos in this sample was “Pets & Animals” ($n=58$, 56.3%). These results are surprising as it might be assumed that “News & Politics” or “Non-Profits & Activism” would be the leading categories for this sample. “News & Politics” would be the most logical category for most videos due to the legislative content surrounding Proposition 2. Additionally, “News & Politics” may have been used less than “Pets & Animals” because it may not be as attractive to the majority of the younger population. Due to the abundance of animal rights organizations both authoring and sponsoring the majority of the sample, “Non-Profits & Activism” would also logically rise to the top. Agriculturalists should remember that animal rights organizations generally try to disguise their activist-like nature (Moore, 2007; McNitt, 2010). For example, many people are under the belief that the Humane Society of the United States is the same organization as the Humane Society in their town that shelters pets (as seen with the results of the directly administered questionnaire) (McNitt, 2010). This misconception may work in favor for the group because their true identity is not revealed. In the future, communicators should remember when posting to YouTube it is important to elect categories that will appeal to their audience.

The imbalance of videos for and against Proposition 2 is a very pertinent finding to this study. As in the election results, support of the proposition outweighed the opposition. Agriculturalists should take note of this difference and evaluate what the industry can do differently to reach voters. Using online resources more efficiently,
producing creative messages, and structuring messages to fit the voter audience need to be further researched in order to insure that the agricultural industry makes improvements in the near future. Animal rights groups, like the Humane Society of the United States (HSUS), will continue to fight for their cause. On March 2, 2010 HSUS introduced a Federal Prevention of Farm Animal Cruelty Act to the United States House of Representatives, which includes measures similar to those passed with California Proposition 2 (Open Congress, 2010). In addition to the majority of the videos favoring support of Proposition 2, it is also important to note that most frequent authors and sponsors of the videos were animal rights organizations. Agriculture organizations need to take a stand and eliminate the unbalanced nature of these campaigns.

It is also important to note that of the four videos that opposed the proposition, one contained a farmer providing negative commentary about the animal rights organizations, not a positive view that would make voters want to help such a farmer. If agriculturalists are going to use such venues they must help their constituents understand what constitutes effective persuasion.

Video segments used with the YouTube videos had unpredicted outcomes. With the majority of videos being sponsored by animal rights organizations, animal rights video segments would be expected. However, the opposite is true. Only 5 (4.9%) videos featured an animal rights segment. The majority of videos contained an animal welfare segment. Farmers are generally known as being animal welfare activists, as no one else cares more about the proper treatment of their animals than a farmer (Good & Murphree, 2008). This shows that animal rights organizations may mask their true desire to garner more support. By masking their animal rights goals it was easily achievable for the voting
population to agree with supposed animal welfare measures. As agriculturalists plan and prepare messages, they must learn to think like their competitors and address issues that are important to the audience. Communication campaigns should highlight the animal welfare side of livestock production.

Social influences present in the videos merit discussion in reference to the presence of celebrities’ opinions. Celebrity influence was present in 36.9% of the videos. This is a considerable proportion of videos that may have influenced voters. Based on the implications of social cognitive theory it is known that celebrity presence may have attracted viewers’ attention and thus prompted the viewers to model their own behaviors after the behaviors of the celebrities (Nabi & Oliver, 2010).

**Objective 2: To explain how rational and emotional appeals were used in a livestock production legislative campaign online.**

Appeals used in advertising are important for reaching and connecting with an audience (Srivastava & Sharma, 2008). If the viewers see themselves in the advertisement or feel emotionally connected with the advertisement, they are more likely to connect cognitively with the product or cause (Nabi & Oliver, 2010). This study found that the majority of the videos used emotional appeals over logical appeals when discussing Proposition 2. This was consistent with previous work by Brader (2006) which suggested political advertisements use emotional appeals at a higher frequency than rational appeals. With over 266 emotional appeals appearing in the videos, it is clear these authors feel that connecting to an individual by making them feel empathy or guilt will lead to their support. In addition, the abundance of emotional appeals over rational appeals may have been used to change the way voters make decisions, as previous work has suggested campaign messages with emotion change the way voters make voting...
decisions (Brader, 2005). With the majority of videos being for the proposition, it is not surprising that so many videos were based on guilt in regard to not helping animals and empathy for farm animals. The promise of better lives for the animals if voting yes was used to elicit support for the proposition. Not many videos took a logical approach beyond showing the gain or loss for animals depending on the fate of the legislation. Agriculturalists trying to make their message heard must work to combat these appeals and learn how to emotionally connect with users to share their message. Communicators must also appeal to the voters’ logical side and give more informative facts that are highly supported in order to demonstration how the facts differ from the competitors’ emotionally based messages.

**Objective 3: To assess the general public’s knowledge and perceptions of humane treatment in livestock production practices.**

The data suggests that participants did not have a clear understanding of the difference between animal rights and animal welfare, even though some may have thought so. When the question was asked if the participants thought Ohio farmers raised their animals in a humane manner 66.8% of the respondents gave a ranking of 4 or 5 indicating that they were humane. Many individuals responded by specifically referencing things they had heard, seen, or read in the media. By making reference to the media and basing their answer on what they observed through media, one could conclude that participants gained their perception through observation of the media, cognitively stored their observations, and now used their observations to influence their behavior, thus exhibiting implications of social learning theory (Klapper, 1960). Additionally, this finding supports the notion that social learning results from media messages as the ideas presented in the mass media are disseminated to the general public (Klapper, 1960).
Agricultural communicators should be aware of mass media effects on social learning in order to produce effective communication campaigns and combat their competition.

The data suggests that most respondents thought that the majority of animals were treated well due to what they had seen, heard, or personally experienced, not specifically through the media. This result provides good insight for the agricultural industry as it confirms that consumers still have positive perceptions of livestock production. It could also imply that consumers still hold a sense of trust for farmers. By using consumer’s positive experiences as a foundation, agriculturalist should be able to produce effective agriculture campaigns.

Similarly, the majority of respondents believed that the humane production of food animals was important. Consumer’s are concerned with food safety and want to ensure that their family, as well as themselves, are receiving the best product available. By demonstrating that farmers care for their animals and are just as concerned with food safety as the average consumer, consumers will be able to connect with farmers and continue to trust them.

**Objective 4: To assess the general public’s perceptions of images picturing traditional and conventional livestock housing.**

Much can be gained in regards to the perceptions consumers have about agriculture, the conclusions they draw from images, and how media images affect those perceptions. In addition, it provides valuable information in regards to what education needs to be provided to consumers in order to narrow the farm-to-plate knowledge gap.

The results of the study show that more participants thought that animals were raised in conventional livestock housing. Although this is accurate, the concern becomes the 24.5% (n=123) of individuals who thought traditional housing was more abundant.
Agriculture communicators should take note of the reference to the images consumers see driving down the road as well as the images they see on television. It is evident that this research supports the theory of semiotics suggesting that visual images promote a cultural ideology (Blaney and Wolfe, 2004). This was reflected through the response “Cows on a hill equals America.”

It is also important to note that consumers do not think that the most abundant livestock housing method is humane. The American Veterinary Medical Association (AVMA) indicates that the best livestock housing environments include: “freedom of movement; expression of normal behaviors; protection from disease, injury, and predators; adequate food and water; and proper handling” (AVMA, 2008). Neither traditional nor conventional livestock housing meets all of these requirements. Thus, there are pros and cons to each system; however, based on the responses to this question it is evident that consumers do not have adequate knowledge of livestock housing systems.

References to the media continually pointed to a commercial campaign (e.g. “Happy cows come from California”) that was intended to promote agriculture; however, this reference is leading consumers to believe that traditional livestock housing is more humane. Communicators should value this information as it indicates that the agriculture industry is influencing consumers to possess misconceptions about how animals are raised through idealization (Weise, 2002).

Interesting results were shown in that respondents thought traditional livestock housing produced the healthiest animals, but they also thought conventional housing protected livestock more from disease. Emotional reasoning seemed to influence the
subjects responses in regards to healthier animals being produced in image B as they referenced items such as “natural”, “happy”, “free”, and “green”; however, it seems rational reasoning was employed by the respondents when determining which was more protected from disease as they referenced “control”, “people taking care of the animals”, and “vaccination programs”. As related to semiotics, it suggests that consumers regularly see images of traditional livestock housing, thus they are able to relate cultural meanings to the image at the connotative level (Moriarty, 2005). Conventional livestock housing is not regularly seen by the average consumer and no cultural meaning is regularly associated with this image, thus one could conclude that this image was assessed at the denotative level (Moariary, 2005). Using this information, communicators should create advertising campaigns that allow consumers to make a positive cultural connection with conventional livestock.

The farm-to-plate knowledge gap seemed to be evident in the subject’s responses when asked which method produced the most safe and wholesome food. Most respondents identified traditional housing based on the reasoning that various chemicals were not used in traditional livestock housing. Thus, one may conclude that the average consumer is not aware that livestock which are pasture raised often receive supplement feeding besides grass. In addition, it is not apparent that consumers considered that pesticides and insecticides may be present in the grass which pasture raised animals consume. Also, it appears that an assumption was made that hormones, antibiotics, and steroids were only used in conventional housing methods, although in reality they may be used in both. One could attribute this apparent misunderstanding to lack of knowledge or consumer assumption that image B represents organic farming.
The possibility of the assumption of organic farming is more apparent in responses to the question concerning which image would produce the most consumer friendly prices, as some respondents mentioned that organic food was more expensive. The majority of respondents had the correct understanding that conventional housing produced more consumer friendly prices. However, the important take away point from this question is that many of those respondents who answered image B did so not because they thought it was cheaper, but because they were willing to pay extra for such products.

**Objective 5: To assess the general public’s knowledge and perceptions of current and proposed livestock production regulations.**

Although many respondents were familiar with either their local humane society or HSUS, the majority were unable to describe the difference. Many participants stated that there was no difference between the two, or that they were the same just one was local and the other was national. This common misconception could be attributed to the properties of the cognitive dissonance theory. Dissonance occurs when inconsistent information is present in one’s mind, the dissonance causes the person to be uncomfortable and as a result they correct one of their thoughts in order to restore cognitive balance (Aronson, 1969). When researchers asked participants to describe the difference, it appears that cognitive dissonance may have occurred in the minds of some of the participants. The question was implying that there was a difference; however many of the respondents thought the two organizations were the same, likely because both have the words “humane society” in their title. In order to balance the conflicting information respondents would change their thought of “there could be a difference” to “there isn’t a difference.” It is important for agriculturalists to recognize items that might cause dissonance when educating the public; this will allow them to prepare for the dissonance
and produce effective educational methods to use the dissonance to their advantage. For example, it has been suggested that cognitive dissonance can be used to change attitudes in learners by introducing components of the attitude gradually at intermediate stages (Smith, 2010). Using this strategy in a campaign could effectively change a voter’s attitude toward a given issue.

The majority of participants were not aware that legislation banning the use of veal crates, gestation crates, egg laying hen cages, or any combination of the three had been passed in six states (since the time of the questionnaire the legislation has been implemented in a seventh state). These results indicate evidence of the farm-to-plate knowledge gap. In addition, they demonstrate the lack of political awareness outside of the consumer’s own state.

When participants were read a description of the Livestock Care Amendment, which was later presented to voters in Ohio as Issue 2, positive responses were received. Many respondents believed that the amendment would make some kind of improvement in the humane production of food animals in Ohio. Only 10.4% of the participants felt the livestock care amendment would make little to no improvements. The later passing of Issue 2 reinforces the notion that voters support Issue 2.
Limitations

It is important to note that the YouTube portion of this study is limited by the search terms used and the ever-changing nature of the Internet. Videos can quickly be put online or pulled offline, and thus some videos discussing Proposition 2 could have been missed. To ensure the most complete sample, researchers tried other terms such as “prop 2”; however, these alternative search terms resulted in a similar list of videos. Therefore, the researchers used the original search term.

The directly administered questionnaire also provided limitations to the study. One of the main limitations of this portion of the research is that it is not generalizable beyond those who provided usable responses. Additionally, the results of this portion of the study may have been influenced by the volunteer nature of the participants, individuals in the building, the survey administrators, other participants, or the exhibits in the building. The questionnaire instrument was researcher developed and thus also provides a limiting factor. Due to the quick announcement of the livestock care amendment data collection had to commence quickly thus eliminating the opportunity for a pilot test. Future studies should seek to improve this research instrument.

The images used in the directly administered questionnaire also provide limitations as differences in the pictures could have influenced participant’s decisions. For example, the conventional housing image contained pictures showing humans taking care of the animals while no humans were present in the traditional housing image. This influence was prevalent in subject responses that chose conventional housing and justified their answer by saying “because there are people taking care of them.” Additionally, some participants were observed choosing an image based on the presence
of cute animals. Selecting images based on cute animals took away the importance of the questions being asked. Lastly, the traditional housing images showed only favorable weather. While some participants did ask about what would happen to these animals if bad weather arose, we could only ask them to answer the question based on the pictures present in the images. Therefore, some responses may have been different if less favorable weather was represented in the traditional housing image.

**Recommendations for Researchers**

For the YouTube portion of this study it is recommended that this study be replicated for this issue as well as other agriculture issues posted on YouTube and other social networking sites. In addition, it is recommended that researchers develop further studies to examine the use of rational and emotional messaging appeals in campaign advertisements.

For the directly administered portion of the study it is recommended that the study be replicated at a different venue and through random sampling in order to get a wider selection of the population. Further replication should also include sampling in a rural venue as well as an urban venue. A chi-square analysis of these geographical samples with the elements indicated as part of this questionnaire would provide valuable results in regards to the relationship between geographical region and knowledge and perceptions of agriculture, thus indicating if the farm-to-plate knowledge gap is widespread. In addition, further analysis should be completed to establish if those participants with an agricultural or rural background answered differently than those from other backgrounds.

Other research studies should be designed to expand on the findings of this study. For example, a focus group concentrated on the difference between animal rights and
animal welfare would provide insight to the perceptions consumers associate with each
term as well as the dissonance that may be present surrounding these two terms.
Additionally, a study assessing how consumers emotionally associate with different
livestock housing methods to provide further information concerning attitudinal beliefs
that may influence their perceptions and voting behavior. Further research should also be
conducted on the use of agriculture images in mass media and how consumers perceive
such images. This should include an assessment of the cultural ideologies that consumers
relate to when viewing agricultural images. Lastly, researchers should explore how to
counteract competing messages that appeal to viewers’ emotions.

**Recommendations for Agriculture Communicators and Educators**

As the mode of politics evolves in today’s technological age (Gueorgvieva, 2008),
agricultural communicators must be prepared when campaigning against larger wealthy
groups such as animal rights activists. Educators must prepare students in the
communication and agricultural education classrooms, teaching them how to
communicate better with consumers and how to communicate with voting constituents.
This may be accomplished by requiring students to take a political communication course
or other politically related courses. Political communication courses could also provide
students with insight to how political campaigns differ from the typical commodity
campaign. In addition, student centered learning may also provide strategies for students
to obtain maximum benefit from classes as well as possess the ability to demonstrate the
skills and concepts learned in class when presented with a real life situation (Martin,
2010).
Agricultural communicators should use this information to produce effective advertising campaigns for agriculture as well as to effectively educate consumers about agriculture in order to close the farm-to-plate knowledge gap. The findings show that respondents were somewhat knowledgeable about agriculture, but the perceptions and justifications provided are not always accurate. In addition, it provides valuable information about what consumers are interpreting through agricultural images.

Agriculturalists in Ohio should use the information in this study to prepare effective messages for similar future campaigns, as HSUS is currently gathering signatures for their own ballot measure for November 2010 (Torres, 2010). In addition, these findings may also be beneficial to other states who are initiating Issue 2 like proposals, as the findings of this study were shared with campaign organizers for Issue 2 prior to the election. These findings suggest that many participants are not familiar with livestock legislation. Therefore, communicators should shape an educational campaign to inform voters about potential future legislation. In addition, respondents thought that the livestock care amendment would improve the humane treatment of animals as well as the safety and wholesomeness of food produced in Ohio. Keeping a campaign focused on excellent animal care and food safety will be more likely to encourage voters to respond more favorably. The results suggest that proper treatment of animals is important. Reinforcing this notion when campaigning for agriculture will enable voters to feel emotionally confident that they are doing what is best for animals.
Summary

Conclusions regarding each research objective have been discussed in this chapter. It has been determined based on the results that the agricultural industry had very little representation in YouTube videos related to California Proposition 2. The YouTube videos also contained more emotional appeals rather than logical appeals. In addition, those who participated in the questionnaire portion of the study possessed some knowledge of agriculture, but often incorrect perceptions. Most of the participants had high regard for the humane treatment of food animals but are uninformed concerning livestock legislation and are unable to differentiate between animal rights and animal welfare. Additionally, social media images of livestock housing methods influence viewer perceptions. The results also suggest that consumers answer questions related to traditional housing from an emotional mind set and those regarding conventional housing from a logical mind set. It is imperative that agriculture communicators and educators value this research as well as others to work toward improving agriculture campaigns and narrowing the farm-to-plate knowledge gap. Additional research in this area should be conducted to aide in the continuous improvement of the agriculture industry’s ability to communicate effectively with consumers.
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APPENDIX A

RESEARCH PROPOSAL SUBMITTED TO INSTITUTIONAL REVIEW BOARD
**Principal Investigator**

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<thead>
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<th>University Status:</th>
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**Protocol Title**

Determining the effect of the Ohio Farm Bureau's Land and Living display on public perceptions and knowledge of agriculture at the Ohio State Fair.

**Source of Funding**

Ohio Farm Bureau

**For Office Use Only**

- **Approved.** Research has been determined to be exempt under these categories: 2.
- **Disapproved.** The proposed research does not fall within the categories of exemption. Submit an application to the appropriate Institutional Review Board for review.

Date of determination: 7/15/09 Signature: Office of Responsible Research Practices
APPENDIX B

YOUTUBE CODING SHEET
YouTube Analysis

Title of Video:____________________________________________________________

Author of Video:____________________________________________________________

Length of Video:_______________________ Views of Video:________________________

Video Category:_________________________ Video Rating ____________________

Video Sponsor:
☐ Animal Rights Org  ☐ Farming/commodity Org  ☐ Government  ☐ Celebrity  ☐ Other_______________

Video Producer:
☐ Animal Rights Org  ☐ Farming/commodity Org  ☐ Government  ☐ Celebrity  ☐ Other_______________

Type of video:
☐ Entertainment       ☐ Educational       ☐ News
☐ Other_______________

How long has the video been online: ______________________________________

Comments ☐ No  ☐ Yes how many____________________
☐ Relevant  ☐ Irrelevant

The segment is:
☐ For the proposition    ☐ Against the proposition    ☐ Neutral

The segment covered is:
☐ Farmer       ☐ Animal Welfare  ☐ Human Health  ☐ Food Safety
☐ Animal Rights  ☐ CAFOS       ☐ Environment  ☐ Other:_________________________

The video was: ☐ animated       ☐ not-animated

Presence of celebrity’s opinion:
☐ No  ☐ Yes

The message is delivered:
☐ voice only  ☐ 1 person  ☐ more than one person  ☐ None

The age of the person/people delivering the message:
☐ Young children  ☐ Teens  ☐ 20’s-30’s  ☐ 40’s-50’s  ☐ 60+  ☐ None

Ethnicity of person/people delivering the message:
☐ Caucasian  ☐ Asian  ☐ Black  ☐ Hispanic  ☐ other  ☐ None

The message is delivered by:
☐ male  ☐ female  ☐ both  ☐ None
Presence of animals:
☑ No   ☐ Yes Ex.________________________________________

The message uses:
☐ Positive testimonials  ☐ Negative testimonials  ☐ None

The message makes reference to supporters:
☐ No   ☐ Yes Ex.________________________________________

Includes an agricultural educational component:
☐ No   ☐ Yes Ex.________________________________________

Educational Component correct ☐ No  ☐ Yes

Includes extreme examples:
☐ No   ☐ Yes Ex.________________________________________

Provides misleading examples:
☐ No   ☐ Yes Ex.________________________________________

The video sites sources:
☐ No   ☐ Yes Ex.________________________________________

The setting of the video is:
☐ Farm  ☐ Outdoors  ☐ Public Event  ☐ Home  ☐ Other_________

The types of Appeals used by the message:
☐ Guilt  ☐ Emotional Appeals  ☐ Promise  ☐ Empathy  ☐ Humor  ☐ Threat  ☐ Fear  ☐ Pride  ☐ Sex

The types of logical appeals used by the message:
☐ Rhetorical Question  ☐ Self-reference  ☐ Gain-loss  ☐ Informative  ☐ Social Modeling  ☐ Irony

The message references giving human qualities to animals:
☐ No   ☐ Yes Ex.________________________________________

The message promotes the family farm:
☐ No   ☐ Yes

The message compares farm animals to pets:
☐ No   ☐ Yes

The message mentions vegetarianism/ veganism:
☐ No   ☐ Yes

☐ For proposition and promotes vegetarianism/ veganism
☐ For proposition and claims to not be pressuring vegetarianism/ veganism
☐ Against proposition

The message promotes a move to action:
☐ No   ☐ Yes Ex.________________________________________
APPENDIX C

YOUTUBE CODING GUIDE
**Animal Rights:**
Giving rights to the animals. (i.e. Animals have the right to feel no pain, right to live cage free ect…)

**Animal Welfare:**
Treating animals properly without harm

**Testimonials:**
1. Positive – in favor of agriculture (i.e. I’ve seen the extent of disease and parasite problems that are present in non-factory farms)
2. Negative – against agriculture (i.e. I’ve seen these farms they are dark, dusty, and horrible. I saw these crates and they reminded me of coffins)

**Makes reference to supporters:**
I.E. “HSUS and PETA support this proposition” or the “Pork Producers oppose this proposition”

**Includes an Agricultural Educational component:**
Reference to agricultural facts (i.e. currently XX billion animals are housed in factory farms).

**Includes extreme examples:**
Code YES if examples used include but are not limited to dead animals, not typical conditions, beating of animals, etc…

**Provides misleading examples:**
Codes YES if examples are given that imply that calves won’t be taken away from their moms, depicts animals that won’t be affected by the proposition (i.e. goats) or any other misleading example.

**Types of Appeals used by the message:**
1. Guilt – “to have some feeling of failing at their own ideals or ethical principles” (i.e. it is wrong to treat animals inhumanely, to prevent inhumane treatment vote for prop 2)
2. Emotional Appeals – “tend to provide subjective information, open to individual interpretation.” (i.e. I think, feel, or believe that these animals are being treated inhumanely)
3. Promise – assurance of “good physical outcomes for compliance” (i.e. If you vote for prop 2 these animal will no longer have to suffer).
4. Empathy – the ability to identify with and understand somebody else's feelings or difficulties (i.e. these animals can feel pain and it is so sad to think that we are responsible for their pain).
5. Humor – “heightened arousal, smiles, and laughter exhibited by an audience in response to a particular message.” (i.e. pig dancing, jokes, chicken making political jokes)
6. Threat – “illustrate undesirable consequences from certain behaviors” (i.e. if this proposition passes our food safety will be at risk of If this proposition doesn’t pass these animals will suffer and die)

7. Fear – “an emotional response to threats” (i.e. scared of food safety issues or the idea of animals suffering and dying)

8. Pride – the happy satisfied feeling somebody experiences when having or achieving something special that other people admire (I know that I’m doing the right thing by voting for proposition 2)

9. Sex – associated with sexual information (images, verbal elements, or both)

**The types of logical appeals used by the message:**

1. Rhetorical Question – “Questions where the answer is implicit within the question”

2. Self-reference – “relating information to ones self” (I’m a vegan so we should not be raising animals to eat)

3. Gain-Loss – “focuses on desirable end states” (gain), “focuses on undesirable end states” (loss), (i.e if you vote yes animals will no longer suffer)

4. Informative – increases audiences knowledge (factual, more than opinion)

5. Social Modeling – “This approach emphasizes modeling and portrayal of reinforcement of desirable behavior in messages in order both to teach relevant skills…and to increase self-efficacy or confidence in one’s ability to enact such behaviors

6. Irony – “any statement that conveys meaning different from the one it professes to give…; a discrepancy exists between what the words say and what they mean.”

Promotes a move to action:
Tells people to spread the word, have a party, protest ect…
APPENDIX D

DIRECTLY ADMINISTERED QUESTIONNAIRE
Interview Questions

Preliminary Questions

1. Are you 18 years of age or older? (If no discontinue interview)  
   Yes √  NO

2. Are you an Ohio resident? (If no discontinue interview)  
   Yes √  NO

Land and Living Display Questions

3. On a scale of 1 to 5, 1 being the lowest and 5 being the highest; how interesting did you find the land and living display?  
   1  2  3  4  5

4. On a scale of 1 to 5, 1 being the lowest and 5 being the highest; how would you rank your knowledge of agriculture prior to visiting this display?  
   1  2  3  4  5
   Why? ____________________________________________________________

5. On a scale of 1 to 5, 1 being the lowest and 5 being the highest; how would you rank your knowledge of agriculture after seeing this display?  
   1  2  3  4  5
   Why? ____________________________________________________________

6. What three words do you think of when you hear the word “agriculture”?  
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

7. What was your favorite part of the land and living display?  
   ____________________________
   Why?  ____________________________

6. What did you learn from the land and living display?  
   ____________________________________________________________

Animal Welfare/Animal Rights Questions

7. Do you know the difference between animal rights and animal welfare?  
   Yes √  No
   If Yes, explain the difference.  
   ____________________________________________________________

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8. On a scale of 1 to 5, do you feel that most livestock farmers raise their animals in a humane manner? A ranking of 1 would indicate not humane, 3 neutral, and 5 very humane.

1  2  3  4  5
Why did you choose this ranking?

__________________________________________________________________________

9. On a scale of 1 to 5, how important is the humane production of food animals to you? A ranking of 1 would indicate not important, 3 neutral, and 5 very important.

1  2  3  4  5
Why did you choose this ranking?

__________________________________________________________________________

10. Which picture do you feel best represents how most livestock are currently raised in Ohio? A B
Why did you choose that picture? ____________________________________________

11. Which picture do you feel shows the healthiest animals? A B Both
Why did you choose that picture? ____________________________________________

12. Which picture do you feel shows the most humane treatment of animals? A B Both
Why did you choose that picture? ____________________________________________

13. In which picture do you feel that the animals would be most protected from disease? A B
Why did you choose that picture? ____________________________________________

14. Which picture do you feel will produce the most safe and wholesome food product? A B
Why did you choose that picture? ____________________________________________

15. Which picture will produce consumer friendly food prices at the grocery store while still ensuring a safe and wholesome product? A B
Why did you choose that picture? ____________________________________________

16. Are you aware that conventional livestock housing methods have been either voluntarily banned or outlawed through legislation in six states? Yes No

17. Are you familiar with your local humane society or the Humane Society of the United States? Yes No
If Yes, which one (or indicate if familiar with both) __________________________________________

18. Can you describe how your local humane society is different from the Humane Society of the United States? ________________________________________________________________

19. In November, 2009 there will be a Livestock Care Amendment on the ballot. This amendment will create a Livestock Care Board that will consist of family farmers, veterinarians, a food safety expert, consumers, a local humane society representative, members from statewide farming organizations, a dean of an Ohio college of agriculture and the director of the Ohio Department of Agriculture. This Board will establish guidelines for food animal care including but not limited to the topics of biosecurity, animal health, disease prevention, housing, food safety and production practices. On a scale of 1 to 5, with 1 representing not improving and 5 improving greatly; do you feel that an Ohio Livestock Care Board would improve the humane treatment of animals in Ohio as well as the safety and wholesomeness of food produced in Ohio?
1  2  3  4  5

**Demographic questions**

20. On a scale of 1 to 5, 1 indicating no experience and 5 indicating that you have lived on a farm; what is your experience with agriculture?
1  2  3  4  5

Why did you rank your experience with agriculture this way? __________________________________________________________________________

21. What best describes the area you reside in? (i.e. urban, rural, farm, suburban) ________________________________________________________________________________________________

22. What county do you reside in? ________________________________

23. What is your zip code? ________________________________

24. Are you a Farm Bureau member?  Yes  No

25. Are you registered to vote?  Yes  No

26. Did you vote in the last election?  Yes  No

27. Have you voted in the last three elections?  Yes  No

28. What is your highest level of education? ________________________________

29. What is your age? ________________________________

30. What best represents your annual income?
   Less than $25,000  $25,000-50,000  $50,000-$75,000  $75,000-$100,000  More than $100,000

31. What ethnic background do you identify with? ____________________ 32. Gender (don’t ask) ___
APPENDIX E

PICTURE A – CONVENTIONAL LIVESTOCK HOUSING METHODS
APPENDIX F

PICTURE B – TRADITIONAL LIVESTOCK HOUSING METHODS