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From Opposite Corners: Comparing Persuasive Message Factors and Frames in Opposing Organizations' Websites

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Abstract

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Keywords

Website, content analysis, animal welfare, Humane Society of the United States, Animal Agriculture Alliance, persuasive communication

Research

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Katie Abrams and Courtney Meyers

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So What:

Agricultural and other science organizations consistently try to address negative messages about agriculture by basing their communication efforts on educating and informing publics. On the other hand, activist organizations with positions against mainstream agriculture seem to be using different strategies that have shown to be effective. Agricultural communicators need to understand how these communication strategies compare and how they might improve their own persuasive communication efforts with all types of audiences.

Introduction

Many industries wade in turbulent waters created in part by activist groups that have employed successful public relations strategies. Grunig (1992) defined activists as "two or more individuals who organize in order to influence another public or publics through action that may include education,

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compromise, persuasion tactics, or force" (p. 504). When activist groups are successful in their public relations strategies, they garner media attention, funding, power, and can ultimately affect change in entire industries (Coombs, 1998). The coal, health, chemical, and agriculture industries are just a few industries enduring and reacting to activist groups and nonprofits that seek to change their business practices. Businesses in these industries along with trade associations and nonprofits form their own groups to protect their interests. Examples of this are evident in the formation of the Center for Food Integrity ("Food industry groups combine," 2007) and the American Coalition for Clean Coal Electricity (Jones, 2008). These groups are sometimes referred to as "front groups" because their nature is to deliver messages of a particular perspective that do not outwardly appear to be sponsored or backed by other entities (Apollonio & Bero, 2007).

The livestock, or animal agriculture industry, is one such industry currently enduring what could be seen as a public relations crisis, in which animal agriculture opponent organizations, like the Humane Society of the United States (HSUS), are successfully changing and eliminating segments of animal agriculture in some parts of the country as evidenced through the passing of legislation to ban animal confinement systems in various states (Kilian, 2008); and the conflict between Ohio Livestock Care Standards Board and HSUS throughout 2010 and 2011 (Kick, 2010; Pacelle, 2011). The animal agriculture industry struggles with what seems to have become a public relations battle to influence publics on issues like animal welfare, human health, and environmental impacts.

Literature Review/Theoretical Framework

The United States' agricultural system has intensified as a result of technological and market forces, urban/suburban sprawl, and a decreased interest in farming as an occupation. Livestock production in particular is highly associated with trends toward greater farm concentration and corporate industrialization (Morrison, Nehring, Banker, & Somwaru, 2004; Lobao & Meyer, 2001). Livestock production today requires human input and control of the animals' lives from conception to slaughter in order to meet consumer demand for meat products. Recent changes in legislation (*Prop 2: Standards for confining farm animals,* 2008), food labeling, and growth of the market for products touting improved animal welfare practices demonstrate the public's increasing concerns for animal welfare (Greene et al., 2009).

Most people form opinions and concerns about the welfare of livestock with little or no direct knowledge of, or experience with, animal production and processing. As a result, members of the general public are more susceptible to information from media and interest groups on the issue of animal welfare in production agriculture (Zimbelman, Wilson, Bennett, & Curtis, 1995). Furthermore, the mass media are likely to use information provided by animal welfare or animal rights interest groups such as the Humane Society of the United States (HSUS), People for the Ethical Treatment of Animals (PETA), and the Animal Welfare Institute because these organizations provide shocking, newsworthy images and resemble watchdogs and whistleblowers (Munro, 2005).

Persuasion in social issues

Persuasion strategies are of utmost importance in forming and proliferating socially acceptable standards and, eventually, changing or maintaining business practices, especially when access to power resources is low (Coombs, 1998). Turner and Killian (1987) identified four tactical mechanisms animal advocates use in their campaigns – persuasion, facilitation, bargaining, and coercion. These four tactics essentially represent a continuum with persuasion being the most modest and coer-

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cion being the most confrontational. Persuasion is communication aimed at shaping, reinforcing, or changing an individual's or group's attitudes and/or behaviors regarding an issue, object, or action under which the receiver(s) has free will (Perloff, 2008). Persuasion tactics often refer to the groups' use of communication materials including websites, petitions, pamphlets, surveys, and videos (Turner & Killian, 1987).

While face-to-face communication tends to be more persuasive than mediated forms (Bordia, 1997), websites are a particularly useful tool in persuasion for activist organizations. They area public relations mass medium that "allows managed communication to flow directly between organizations and mass audiences without the gatekeeping function of other mass media" (White & Ramen, 1999, p. 406). Often containing messages for multiple audience types, websites are a way for organizations to facilitate communication with the media, government, donors/sponsors, members, and consumers, as well as communicate internally (Johnson, 1997). In addition, the Internet has been seen as a way for activist groups to alter the power resource dynamic in issues management efforts (Coombs, 1998).

Elaboration Likelihood Model

The Elaboration Likelihood Model (ELM) describes two cognitive mechanisms by which persuasion occurs — the central and peripheral routes. The central route to persuasion is characterized by increased attention to the information and arguments in the message. This route can result in longer-lasting attitude change and attitudes predictive of behavior. The peripheral route involves less cognitive effort; people tend to focus less on the arguments and more on peripheral cues in the message to help them decide whether or not to accept the message. This type of processing generally results in less attitude change and temporary attitudes susceptible to counter-persuasion (Petty & Cacioppo, 1996).

The ELM was one of the first models of persuasion to recognize that receivers are not passive message recipients nor always consciously deliberating or elaborating on persuasive messages. A receiver's attention depends on how much motivation or ability one has to attend to a persuasive message. An individual's level of involvement is influenced by motivation, personal relevance, status of knowledge, and competence regarding the message. Changes or shifts in attitude are related to the receiver's level of involvement and the availability of peripheral cues. The more involved a receiver is, the more likely central processing will occur (Petty, Cacioppo, & Goldman, 1981). When receiving a message, people will treat its content (arguments) and non-content factors (photos, speaker, sources) differently depending on their level of involvement with the issue. Low-involved receivers may use arguments as a peripheral cue simply noting the number of arguments and assume the message with more arguments is of higher quality. High-involved receivers are more likely to consider the quality of those arguments (Petty & Cacioppo, 1986). With photos, the impact of affective imagery on attitudes is high when the individual has low-involvement. That effect disappears when involvement increases (Miniard, Bhatla, Lord, Dickson, & Unnava, 1991). Source expertise plays a different role in attitude change depending on involvement as well. Pornpitakpan (2005) found that science and university-based sources generally have high credibility, which is positively related to persuasiveness in changing attitudes and gaining behavioral compliance. Under low involvement, source expertise affects attitudes regardless of argument quality (Petty & Caccioppo, 1986).

Message frames

In addition to message factors (arguments and non-content factors), an important persuasive element is the message frame (Perloff, 2008). Frames are cultural structures that organize understanding of social phenomena. Frames are used to determine what content is relevant to discussion of a concern; to define the roles of stakeholders; to outline relevant beliefs, actions, and values; to determine the language used to discuss the topic; and to outline the values and goals of the content area (Hertog & McLeod, 2001).

Framing involves the selection of some aspects of a situation and making them more salient through communicating text to perform four main functions: define problems, diagnose causes, make moral judgments, and/or suggest remedies (Entman, 1993). One ethical perspective on the use of frames is that they are used every day to organize life experiences and make sense of them (Goffman, 1974). Another idea is that frames create "word games," which distract receivers from fully understanding ideas (Perloff, 2008, p. 294). For example, in the context of animal agriculture, animal welfare groups refer to large-scale operations as "factory farms," while the industry refers to these facilities as Concentrated Animal Feeding Operations (CAFOs). Factory farms seem to have proliferated as the frame of choice among the public perhaps because it is easy to understand, whereas CAFOs "is clumsy and deliberatively non-descriptive" (Marcus, 2005, p. 15).

Fraser (2005) examined a variety of sources to present a comparison of arguments in the animal agriculture debate made by organizations against the industry and organizations trying to protect it. Table 1 displays and describes the six dominant frames Fraser (2005) identified and how each side portrays the issue.

Table 1

Frames of Animal Agriculture Used by Animal Welfare Groups and Agricultural Organizations

Frame	Animal Welfare Groups	Agricultural Organizations
Animal welfare	Detrimental to animal welfare	Beneficial for animal welfare
Agribusiness owners	Mainly controlled by large corporations	Mainly controlled by families and individuals
Profit vs. animal care	Motivated by profit	Motivated by traditional animal care values that lead to profit
Food supply	Causing increased world hunger	Augmenting world food supplies
Healthiness	Producing unhealthy food	Producing safe, nutritious food
Environmental impacts	Harmful to the environment	Not harmful, and often beneficial, to the environment

Note. Adapted from Fraser (2005, p. 636).

Purpose & Research Questions

Activist groups help set standards used to judge what is socially acceptable in business and other realms of practices (Coombs, 1998). "Activists gain legitimacy when they use socially accepted stan-

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dards as the basis for their challenges" (Coombs, 1998, p. 293). In regards to animal agriculture, the HSUS's mission is to "confront …the worst cruelties of factory farming in modern agribusiness such as confinement of animals in crates and cages" (HSUS, n.d., About Us section, ¶2). On the other side of the debate is the Animal Agriculture Alliance (AAA), a non-profit group that acts as a public relations arm and unified voice for the animal agriculture industry. This organization "educates consumers, teachers, and the media …[using] consistent accurate messages based on sound science" (AAA, n.d., Questions and Answers section, ¶1-3).

Both the HSUS and the AAA have the goal of persuading members of the general public and policymakers about issues related to animal agriculture through multiple methods. Advocates for social movements use a variety of communication materials to communicate on behalf of their causes (McHale, 2004); therefore, evaluating the persuasiveness of their communication tactics could provide insight into potential changes in those causes including the one examined in this study, animal agriculture.

The purpose of this study was to examine and compare the persuasive message factors through a content analysis of the animal agriculture communication campaigns on the AAA and the HSUS Factory Farms Web sites. To meet this purpose, the following research questions were proposed:

RQ1: Do the organizations differ in the amount of coverage devoted to each animal agriculture industry?
RQ2: What sources are the organizations citing to support their arguments?
RQ3: How do the organizations use images and multimedia to supplement message content?
RQ4: What is the frequency of the frames identified previously by Fraser (2005) in the organizations' communication campaigns?

Methodology

This study used content analysis to examine and compare the persuasive message factors in the HSUS Factory Farms and the AAA animal agriculture communication campaigns. Content analysis is "a method of studying and analyzing communication in a systematic, objective, and quantitative manner for the purpose of measuring variables" (Kerlinger, 2000, as cited in Wimmer & Dominick, 2003, p. 141). Content analysis can be used to analyze a variety of communication texts (media coverage, television programming, historical documents, website content, etc.) to achieve a number of research purposes such as describing content, testing hypotheses, exploring media image, and establishing a need for additional studies (Wimmer & Dominick, 2003). The organizations' websites were chosen as the communication medium to analyze because they contain messages for multiple stakeholders (Johnson, 1997), are unfiltered by media gatekeeping (White & Ramen, 1999), are up-to-date (in this particular case), and offer a diversity of message delivery methods and supplemental materials such as text, photos, print materials, video, photo slideshows, and audio.

The researchers used a program called GSiteCrawler to create sitemaps for each organization's website to determine and characterize the population of website pages and ensure all relevant pages were included in the content analysis. This program filtered and refined results based on domain name and file type, checked for duplicate pages with same content but slightly different URLs, and compiled a listing of all of the URLs. The HSUS Factory Farms website contains 1,264 website pages and the AAA website contained 602 pages. After researchers eliminated website pages not relevant to the research questions and those that contained repetitive content, both the HSUS Factory Farms website and AAA website contained 78 pages so the entire population of 156 pages was analyzed.

The news and media information sections of the websites contained 719 pages. These pages would make for a worthwhile study on their own, but were eliminated because the goal of the present study was to analyze the website's persuasive message factors targeted more toward policymakers, donors, stakeholders, and the general public than the media.

For most categories, the units of analysis were ideas (sentences) and images on the website pages, excluding the navigation and site identification banner. Coders examined only the content area of each webpage, links (to other website pages or multimedia), and images. Again, only the links and images that pertained to the content/message on the page were analyzed. A code book and code sheet were developed to determine the presence of (1) animals addressed, (2) sources, (3) photos, (4) photo characterization, (5) multimedia, and (6) frames.

Two coders were trained to use a code book and code sheet. After the initial training, a random sample of 10% (n = 16) of the population was coded to determine intercoder reliability. Scott's *pi* was used to calculate intercoder reliability; this statistic is similar to Cohen's kappa, which is another statistical test used to measure intercoder reliability for nominal data (Landis & Koch, 1977). A score of .68 was obtained, which indicates a good strength of agreement among the coders of these communication texts (Landis & Koch, 1977). The remaining Web pages were coded then the data were entered into a spreadsheet and analyzed using SPSS 16.0.

Findings

Data were analyzed using SPSS to obtain descriptive statistics (means and frequencies) and make comparisons between the HSUS and the AAA on content and persuasive message factors. Box plots of the data were examined and four extreme outliers (data observations that lie more than three times the interquartile range) from HSUS (n = 74) and one from AAA (n = 77) were removed from the data. The data violated the assumption of normality, which is common for count data (UCLA: Academic Technology Services, Statistical Consulting Group, n.d.), so non-parametric statistical tests were used to make inferences. As a result of non-normality, standard distributions are high.

RQ1: Do the organizations differ in the amount of coverage devoted to each animal agriculture industry?

Each website was analyzed to determine which animal agriculture industries were addressed. Several webpages addressed multiple specific industries or addressed animal agriculture in general, along with a few specific industries. Most (n = 63, 42%) of the pages on both websites were dedicated to animal agriculture in general. The layer hen industry (includes content about chickens and eggs) was present on 10 webpages in the AAA site and 26 pages in the HSUS site. A Chi-square test for independence indicated a significant association between organization and coverage of the layer hen industry, x^2 (1) = 9.01, $p < .01$, along with the broiler chicken x^2 (1) = 9.61, $p < .01$, geese x^2 (1) = 4.45, $p < .05$, and fish x^2 (1) = 3.48, $p < .05$ industries. The breakdown of all of the industries can be seen in Table 2.

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Table 2

Comparison of Animal Agriculture Industries Addressed on the Organizations' Websites

	AAA		HSUS		Total		
Industry	n	Percent	n	Percent	n	Percent	χ^2
Animal agriculture in general	36	24%	27	18%	63	42%	1.24
Layer Hens	10	7%	26	17%	36	24%	9.01**
Dairy Cattle	15	10%	13	9%	28	19%	0.01
Broiler Chickens	4	3%	18	12%	22	15%	9.61**
Pigs	11	7%	12	8%	23	15%	0.01
Beef Cattle	7	5%	14	9%	21	14%	2.28
Turkeys	4	3%	10	7%	14	10%	2.19
Ducks	4	3%	11	7%	15	10%	2.94
Geese	2	1%	10	7%	12	8%	4.45*
Veal Calves	4	3%	8	5%	12	8%	0.95
None	10	7%	0	0%	10	7%	8.30**
Sheep	3	2%	2	1%	5	3%	0.00
Fish and Crustaceans	0	0%	5	3%	5	3%	3.48*
Goats	0	0%	2	1%	2	1%	0.55

Note. The percentages do not add up to 100% because each Web page could have more than one industry represented. * $p < .05$; ** $p < .01$

RQ2: What sources are the organizations citing to support their arguments?

Sources were counted and source types were identified on each webpage. The HSUS website contained a section of 25 pages of secondary research reports "on animal agribusiness and its toll on farm animal welfare, the environment, and public health" (HSUS, n.d., Research section, ¶1). These pages contained a range of 11 to 198 unique sources. Because they used the American Medical Association citation style, each citation in the reference list was assigned a number. On many pages, several of the same sources were listed multiple times in the reference list, giving the appearance that the report cited more sources than it actually did. For example, on the *Impact of Animal Agriculture on Global Warming and Climate Change* page, 204 sources were listed, but after eliminating duplicate references, only 146 remained. Duplicate references were listed on nine of the HSUS pages. The AAA had four pages similar to the HSUS secondary research reports citing multiple science/university sources in AMA style, but they did not have the repeat listing of the same sources in the reference list. Descriptive statistics and results of the Mann-Whitney U test can be seen in Table 3. The organizations did not differ significantly on their use of sources overall, $U = 2621.50$, $p = .39$, but they did differ on a few types of sources used. Specifically, they differed on use of science or university sources ($U = 2332.00$, $p = .04$), farmers ($U = 2664.00$, $p = .03$), and businesses ($U = 2227.00$, $p < .001$). Some examples of sources in the "Other" category were court documents and those that were unclear as to the type.

Table 3

Differences in Use of Sources Between Organizations' Websites

	AAA			HSUS			
Source	*N*	*M*	*SD*	*N*	*M*	*SD*	Mann-Whitney U
Science/University	106	1.39	2.83	1183	16.00	35.45	2332.0*
Government	37	0.48	0.85	178	2.41	5.65	2506.0
NGO	110	1.43	2.78	91	1.23	1.79	2816.0
Media	34	0.44	0.95	106	1.43	2.93	2617.5
Business	1	0.01	0.11	44	0.59	1.37	2227.0**
Health	10	0.13	0.38	8	0.11	0.42	2719.5
Other	1	0.01	0.11	12	0.16	0.76	2685.0
Farmer	8	0.10	0.42	0	0.00	0.00	2664.0*
Joe/Jane	2	0.03	0.16	0	0.00	0.00	2775.0

Note. $^{*}p < .05$; $^{**}p < .01$

RQ3: How do the organizations use images and multimedia to supplement message content?

Photos on the pages were counted and characterized according to the content. The HSUS used significantly more photos than the AAA, U= 1343.0, p < .001. Most of the photos on the HSUS site were characterized as "Other" (n = 33, 27%) with "Anthropomorphized Animals" (portrayed as having human characteristics) coming in a close second (n = 32, 26%). The "Other" category included images of food, college faculty, and consumers. Table 4 shows the descriptive statistics and the results of Mann-Whitney U tests.

In terms of multimedia, the HSUS used significantly more videos than the AAA (U = 2050, p < .001). The AAA used significantly more audio (U = 2442, p = .001) and presentation files (U = 2479, p = .001) than the HSUS. Table 5 shows the descriptive statistics and the results of Mann-Whitney U tests.

RQ4: What is the frequency of the frames identified previously by Fraser (2005) in the organizations' communication campaigns?

A webpage could contain anywhere from zero to all six frames. The total number of frames used between the websites was similar (109 on AAA and 118 on HSUS), but the mix of frames used was significantly different. The animal welfare frame was used on 62% (n = 93) of the total webpages in the population, making it the overall dominant frame on the discussion of animal agriculture. The healthiness frame was the second most dominant frame appearing on 42 (28%) of the webpages. A Chi-square test for independence showed significant association between organization and the frames of animal welfare, x^2 (1, N = 151) = 9.01, p = .003, and healthiness, x^2 (1, N = 151) = 32.09, p < .001. Descriptive statistics are reported in Table 6.

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Table 4

Differences Between Use and Characterization of Images on Organizations' Websites

	AAA			HSUS			
Photo Category	*N*	*M*	*SD*	*N*	*M*	*SD*	Mann-Whitney U
Other (food, consumers)	13	0.17	0.68	33	0.45	1.18	2492.5**
Anthropomorphized	1	0.01	0.11	32	0.43	1.01	2228.5**
Animals in distance	5	0.06	0.41	10	0.14	0.38	2585.0*
Not anthropomorphized	2	0.03	0.16	11	0.15	0.40	2537.0*
Confined animal, anthropomorphized	1	0.01	0.11	8	0.11	0.36	2654.0
Confined animal, not anthropomorphized	2	0.03	0.16	16	0.22	0.90	2612.0*
Farmers as individuals	5	0.06	0.30	0	0.00	0.00	2701.0
Dead or injured animal	0	0.00	0	6	0.08	0.32	2656.0*
Factory farm	0	0.00	0	1	0.01	0.12	2810.5
Bucolic farm	2	0.03	0.16	0	0.00	0.00	2775.0
Animal cruelty	0	0.00	0	1	0.01	0.39	2810.5
Total photos	31	0.40	1.48	124	1.68	2.53	1343.0**

Note. Percentages are of total number of photos for that organization that fall into each photo category. *$p < .05$; **$p < .01$

Table 5

Differences Between Use of Multimedia on Organizations' Websites

	AAA			HSUS			
Multimedia	*N*	*M*	*SD*	*N*	*M*	*SD*	Mann-Whitney U
PDF	33	0.43	0.87	27	0.36	0.49	2479.0
Video	10	0.13	1.14	33	0.45	0.99	2050.0*
Audio	11	0.14	0.35	0	0.00	0.00	2442.0*
Presentation	10	0.13	0.34	0	0.00	0.00	2479.0*
Photo Slideshow	1	0.01	0.11	3	0.04	0.16	2770.5

*Note.** $p < .01$

Table 6

Comparison of Frames Used on Each Organization's Website

	AAA		HSUS		Total		
Frame	*n*	Percent	*n*	Percent	*n*	Percent	χ^2
Animal welfare	30	39%	63	85%	93	62%	32.09*
Healthiness	29	39%	13	18%	42	28%	6.62*
Profit vs. animal care	11	14%	20	27%	31	21%	2.88
Environment impacts	15	19%	9	12%	24	16%	1.01
Agribusiness owners	12	16%	9	12%	21	14%	0.14
Food supply	12	16%	4	5%	16	11%	3.12

Note. Content regarding food safety was considered part of the healthiness frame.
* $p < .01$

Conclusions & Discussion

The first research question (RQ1) addressed the amount of coverage given to each industry within animal agriculture. An association was found between coverage of animal agriculture in general and a few particular industries, including layer hens, broiler chickens, geese, and fish and crustaceans. The HSUS was one of the key proponents of Proposition 2 in California. This Proposition stated that calves raised for veal, egg-laying hens, and pregnant pigs can be confined only in ways that allow these animals to lie down, stand up, fully extend their limbs, and turn around freely (*Prop 2: Standards for confining farm animals,* 2008*)*. The recent passage of Proposition 2 in California could be evidence of the HSUS' successful persuasion tactics and coverage of the layer hen industry brought to surface in this study.

Research Question 2 determined what sources the organizations used to support their arguments. Although the organizations did not differ in the total amount of sources used, the HSUS tended to use more science or university-based sources to support their claims. Science and university-based sources generally have high credibility, which is positively related to persuasiveness in changing attitudes and gaining behavioral compliance (Pornpitakpan, 2005). The ELM clarifies that the impact of source expertise on persuasion is greater when involvement is low; however, when involvement is high, it matters less in the receiver's decision (Petty & Cacioppo, 1986). This theory implies that although high-involvement audiences (e.g., HSUS members) may not be influenced by the perceived expertise of science and university-based sources, less involved audiences are more susceptible to the influence of sources used in persuasive messages. Another interesting finding is that AAA used significantly more farmers as sources than HSUS. In fact, HSUS did not use any farmers as sources in their website material.

Interestingly, the citation style on the HSUS secondary research reports yielded an inflated number of sources. By only examining the numerical value on the last reference, the reader may think the arguments are well-supported by 204 sources, when in actuality, there are 146 unique sources. Although 146 sources is still impressive, the number of sources can serve as a peripheral cue leading people to favor the position simply by noting it has a number of reasons supporting it. The ELM explains that reliance on peripheral cues occurs when the audience has low motivation or low ability to think about a message (Petty & Cacioppo, 1996).

The third research question (RQ3) examined how images and multimedia were used on the organizations' websites. The use of photos and multimedia seemed to serve three purposes: 1) they dis-

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played evidence of a certain viewpoint, 2) appealed to emotions, and 3) served as a peripheral cue for low-involvement audiences (Miniard et al., 1991). In this study, HSUS used significantly more photos and video than the AAA, which means the HSUS website may be more effective in persuading people to adopt their viewpoint when the viewer is lower in issue involvement. The HSUS tended to use more photos of anthropomorphized animals than the AAA. Photos depicting anthropomorphized animals, by definition, generate sympathy by humanizing the animals. These affect-laden photos can serve as a strong peripheral cue causing people with low involvement to be more persuaded by the images rather than the arguments (Miniard et al., 1999). The AAA had significantly more presentations available for download, which could be useful for distributing its viewpoint to larger audiences if people use them to speak to groups face-to-face. In-person communication can be more effective in forming, reaffirming, or changing attitudes than mass media channels like static webpages due to increased normative pressure (Bordia, 1997).

To answer the final research question (RQ4), Fraser's (2005) frames surrounding the topic of animal agriculture were shown to be present on these organizations' websites. This study went a step further and demonstrated the extent to which these frames appeared in messages. The issues in animal agriculture are predominantly communicated through animal welfare and human health frames; this study revealed the HSUS tended to use the animal welfare frame, while the AAA used the health frame. The health frame is powerful because it has direct consequences for most people when considering animal agriculture issues, whereas the animal welfare frame has more removed consequences. The AAA obviously was addressing a number of different issues more fully because the industry is confronted with multiple concerns beyond animal welfare. By contrast, as an animal activist group, HSUS was a single-issue advocate. Even the HSUS's concerns about health and animal care had animal welfare implications.

Implications & Recommendations

Based on theory and the results of this study, some implications are worthy of discussion. Findings indicated the Humane Society's Factory Farms website had significantly more content overall, more content regarding the layer and broiler industries, more science and university sources, and contained more message strategies indicative of effective persuasion than the AAA. The HSUS has integrated more communication strategies that appeal to both high- and low-involvement audiences throughout their website, whereas the AAA messages will primarily appeal mostly to those highly involved and motivated to think about animal agriculture issues.

Agricultural and other science organizations consistently try to address negative messages about agriculture by educating or informing the public. While this public relations strategy is useful when done well, it cannot be the sole effort because most people are not motivated or highly involved in animal agriculture. Education and information alone will not work with all audiences. Involvement will likely be higher when messages are framed using food safety and health issues, but agricultural organizations, like the AAA, need to recognize the power of capturing audiences possessing low involvement by using a combination of high-quality arguments and peripheral cues.

Both organizations have the goal of persuading members of the general public, agribusiness owners, and state and federal policymakers about issues related to animal agriculture through multiple methods. The existence of social movements that seek to decrease or prevent common animal agriculture practices demonstrates the necessity for the agricultural industry to be cognizant of pressures to change the status quo. This change may occur by force through market pressure and government regulations, or voluntarily in compliance with societal values and attitudes. As previously

stated, resulting policies and changes in consumerism and cultural values will partly be traceable to the efforts (or lack thereof) of these societal actors. From this study, the researchers speculate that those changes may lean more toward the viewpoint of the HSUS than a compromise if proponents of animal agriculture, the AAA and those alike, do not improve the persuasion tactics used in their communication efforts.

The primary limitation in this study is the purposive selection of organizations involved in communicating animal agriculture issues. Future research should investigate persuasive message factors of other organizations that communicate about animal agriculture to discover findings representative of other proponents and opponents of the issues. While this content analysis can explain the content of the public relations communication campaign and make theoretical inferences about persuasion effects, additional research is needed to test the effects of Fraser's (2005) frames, animal agriculture imagery, and source citation techniques (i.e., numbering vs. not numbering). Furthermore, future studies should examine the impact of website usability and design on the ability or motivation to process persuasive messages.

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