



A Website Content Analysis of Corporate Animal Welfare Messaging

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A Website Content Analysis of Corporate Animal Welfare Messaging

Abstract

The purpose of this study was to identify and describe the nature of corporate positions on animal welfare available on the websites of five meat producing companies in the U.S. The results of the content analysis illustrated that there were common topics among the dialogs the companies were willing to open related to their animal welfare positions. The companies typically took a general approach to animal welfare topics, commonly focusing on their corporate *policy* and their *commitment to animal welfare*. While each company focused on a unique combination of topics, companies commonly avoided mentioning more specific and possibly controversial topics and instead chose to focus on big-picture topics such as *a commitment to sound animal welfare practices*. Each company used a particular set of frames to couch individual animal welfare messages for consumers. The most common frame led was that the company is an *industry leader in animal welfare*. Eighteen thematic terms related to livestock production and handling emerged through the content analysis. Of those, *animal handling* and *humane* were clearly the most commonly used terms. Future research should include matching these content analysis results with the existing communication strategies of each company, conducting more content analyses on animal protein companies' other media outlets, as well as further exploring the presence of frames, topics, and terminology in news coverage in comparison to the online messages of animal protein companies.

Keywords

Content analysis, animal welfare, protein industry

Cover Page Footnote/Acknowledgements

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Introduction

Most consumers shape opinions and concerns about animal welfare with little or no direct knowledge of, or experience with, animal production practices (American Humane Association, 2013). As technologies have advanced in both animal production practices and public communications practices, information on how livestock are typically raised and processed into protein foods has become available to consumers on a multitude of media platforms. However, in terms of consumers' understanding of animal production and processing practices, more than half of consumers recently surveyed reported not having a solid source of information regarding animal welfare (McKendree, Croney, & Windmar, 2014).

The improvement of animal welfare is a shared responsibility and challenge for many industry professionals within the protein supply chain (Verbeke, 2009). One common way for animal protein companies to reach their consumers directly with messaging about their animal welfare practices is through providing information on their corporate websites. While the volume of online content and the reach of web-based activities continue to grow rapidly, the web, for most corporations, remains a mainstay tool to build relationships and communicate with consumers (Goodwin, Chiarelli, & Irani, 2011; Kim & Rader, 2010; Symonenko, 2007). Animal agriculture often points the finger at media outlets for miscommunication of key animal welfare issues; however, it is also the responsibility of animal protein companies to provide an outlet, such as a website, for consumers that contains accurate, transparent animal welfare facts (Croney, Apley, Capper, Mench, & Priest, 2012).

Animal welfare is an increasingly sensitive subject among consumers (McKendree, Croney, & Windmar, 2014). For most businesses, including those in the protein industry, persuasion strategies are critical in order to form and communicate socially acceptable standards of practice (Abrams & Meyers, 2012; Coombs, 1998). One persuasion technique is the use of message framing in corporate communication efforts, such as website content. Framing involves selecting aspects of a situation and making them more prominent to audiences by communicating content that performs four main functions: defining problems, diagnosing causes, making moral judgments, and/or suggesting remedies (Entman, 1993).

Research Problem and Need for the Study

The protein industry faces the challenge of improving its public communications about animal welfare via websites (Croney et al., 2012), yet more research on how best to communicate about animal welfare on corporate websites is needed. It stands to reason that an analysis of current corporate messaging will provide a more accurate public understanding of how protein companies view animal welfare issues and how they address animal welfare in practice.

Purpose of the Study: Describing Corporate Animal Welfare Messaging

The purpose of this study was to identify and describe the content related to animal welfare available on the websites of the top five meat-producing companies in the U.S.

Objectives

1. Identify common topics in each protein company's web-based messaging related to animal welfare.
2. Identify the persuasive frames used by each protein company to communicate about animal welfare related issues or practices.

3. Identify key terminology related to protein companies' production and processing practices.

Review of Literature

As corporate public relations strategies focused on social responsibility have become common approaches to building favorable relationships in industry (Kim & Rader, 2010), numerous communications researchers have examined the concept of message framing in the specifically in the food industry. Social responsibility can be defined as a form of private self-regulation by practiced by organizations to mitigate industrial harms and provide good deeds for the public and their environments (Sheehy, 2015). The literature suggests framing can impact how media consumers understand and perceive various topics (Provencher, 2016). Controversial topics such as animal welfare, may spur consumers to form strong opinions, but those consumers' opinions may not be based on accurate information and may in fact contradict with their own preferences for meat quality (Font-i-Furnols & Guerrero, 2014). Their ability to form solid opinions is further confounded by their individual sense of ethics and perceptions of animals as mindful beings (Knight, Vrij, Cherryman, & Nunkoosing, 2004). It has become more important for agricultural communicators and food companies to develop accurate messaging about animal production practices (Kubitz, Telg, Irani, and Roberts, 2013) and to emphasize the industry's efforts to be socially responsible (Kim & Rader, 2010).

Framing in Public Relations

A key persuasive technique in public relations and media is the development of message frames (Perloff, 2008). Message frames employed in public relations to indicate to audiences what content is most relevant. Frames define the roles of the key players involved and highlight key beliefs, actions, and values. They also guide strategic choices related to the language used to discuss the topic, and they help keep outward communications focused on the values and goals of the communicating organization (Hertog & McLeod, 2001). The framing paradigm is frequently used in communications research for analyzing public communication messages (Rendahl, 1995). In the case of public relations, literature suggests that taking a strategic approach to message framing is useful for organizations that must communicate with audiences about potentially divisive issues.

Hallanah (1999) explained that public relations professionals have been referred to pejoratively as “imagemakers” and “spin doctors”—labels that only partially portray their role in constructing social reality. However, framing is much more than simply articulating an issue with a positive “spin” through an appeal to emotion. Successful, professional, ethical framing involves a logical approach. Pan and Kosicki (1993) suggested framing can be found in a series of structures within the message. These include three types of structures. Syntactical structures are stable patterns of arranging words and phrases in text scripts and the orderly sequencing of events in a text in a predictable or expected pattern. Thematic structures are propositions or hypotheses that explain how the elements in a text are related; they typically include words that indicate cause or result, such as *because*, *since*, and *so*. Metaphoric structures include text that subtly recommends how readers should interpret the text (Hallanah, 1999).

The theory of framing in public relations is closely connected with the journalistic theory of framing (Lewin, 1947), which affects public issue *agenda setting* (Goffman, 1974). The interaction of these theoretical pieces of the mass communications process suggests the necessity to understand the intentional constructions (or framing) of information from a public relations

perspective because they directly affect how journalists, and, therefore, the public understand public issues, such as animal welfare.

Public Perceptions of Animal Welfare

Font-i-Furnols and Guerrero (2014) explored features that could influence consumer behavior, preferences, and their perceptions of meat and meat products based on psychological, sensory, and marketing factors. The researchers synthesized previous literature on psychological belief formation, suggesting that beliefs based on previous information or experiences in addition to personal characteristics may impact consumer attitudes, buying preferences, and intentions despite the information being accurate, inaccurate, correct, or incorrect. While consumers may express concern about issues such as animal welfare and believe that measures to ensure animal welfare should be implemented by producers, they may not consider these issues when purchasing and meat products (Guerrero, Claret, Rodriguez, Hernandez & Dalmau, 2013). Font-i-Furnols and Guerrero (2014) commented:

The meat industry currently faces the challenge of providing more and clearer information that stimulates consumption by asserting environmental sustainability and animal welfare and providing more convenient and healthy options while recognizing the new and changing role that meat and meat products have in our lives. (p. 363)

As the protein industry faces increased pressure to maintain a transparent production system, public perceptions of animal agriculture practices have often driven the direction of the industry. These public perceptions of animal production and processing methods are formed based on the information the public receives about animal welfare, no matter the source. McKendree et al. (2014) found the individuals most concerned with animal welfare were young females, though it was evident that consumers of many demographics were not plugged into a reliable source of information on the subject. More than half the respondents (56%) did not have a primary source for obtaining animal welfare information. Additionally, survey participants who identified a primary source for this type of information most commonly listed animal protection organizations, including the Humane Society of the United States (HSUS), and People for the Ethical Treatment of Animals (PETA) (McKendree et al., 2014).

With so few Americans having first-hand knowledge of animal production practices, the public must rely on media sources to receive its animal production knowledge. Kubitz et al. (2013) suggested steps be taken to educate general interest journalists about global and domestic agricultural issues to improve the quality of coverage relating to agricultural topics. Kubitz, et al. (2013) maintained that agricultural communicators could “help the agricultural industry maintain a positive image and reputation with the general interest media and their audiences” (p. 92). This concept of improving communications about animal welfare with the media and consumers is prevalent in the literature (McKendree et al., 2014; Verbeke, 2009), and an underlying assumption related to these claims is that the industry could benefit from coherent messaging across all organizations engaged in the effort.

Methodology

This study was conducted using content analysis methods to identify and describe the nature of corporate positions on animal welfare available on the websites of five meat producing companies in the U.S. Content analysis has been used to analyze a variety of communications (media

coverage, television programming, historical documents, website content, etc.) to achieve a number of purposes such as describing content, testing hypotheses, exploring media image, and establishing a need for additional studies (Wimmer & Dominick, 2003). It involves a systematic reading of a body of text, images, and symbolic matter, not always from the user's or author's perspective (Krippendorff, 2012).

The five companies chosen as subjects of this research were identified as top five animal protein producing companies in the U.S. in terms of annual sales by multiple surveys and reports, including *Food Business News* (Wautrous, 2012). In no specific order, these companies were Cargill, Tyson Foods Inc., Sysco, Smithfield Foods, and JBS. These five companies are global industry leaders, and their websites were selected as objects in this study because of the companies' potential to set industry trends related to public communication about animal welfare. Each company maintained a dedicated page or pages on its website devoted to providing information about corporate positions and practices related to animal welfare. This key website content was chosen as the appropriate content to examine, as the webpages clearly represented the "hub" of each company's animal welfare-related content and obviously represented each company's corporate-wide position on animal welfare issues.

The content gathered from the Tyson Foods Inc. website came from the central *Why Animal Wellbeing is Important* page and the subsequent *Animal Wellbeing Policy and Commitment* page. Cargill's animal welfare content was gathered from the pages *Animal Welfare* and *Our Policy—Animal Welfare at Cargill and Why It Is Important*. JBS provided animal welfare website content on its *Animal Care* page. Smithfield's animal welfare website content was gathered from the *Our Commitment to Animal Care* page of the latest sustainability report. Sysco's content was gathered from both the *Animal Welfare* and *At Sysco, Animal Welfare is Human Nature* pages.

This key animal welfare-related content was collected on May 19, 2017. The applicable content was copied to a text document, which was then loaded into NVivo 11 qualitative visual data analysis software to be coded. The NVivo 11 software assisted researchers in identifying common topics, persuasive frames, and key terminology in each organization's animal welfare content. The units of analysis (as described by Krippendorff, 2012) for this study were the web page or pages clearly designated by the companies as their sources of information about animal welfare and the blocks of text within those pages.

Following a combined deductive and inductive approach (Braun & Clarke, 2012) to identify thematic topics, frames, and terminology, researchers began the analysis with a partially constructed codebook containing codes initially developed based upon animal production-related frames presented by Abrams and Meyers (2012). Abrams and Meyer's (2012) six frames were adapted from Fraser (2005) and found to be commonly used by animal welfare groups and agricultural organizations to communicate about animal agriculture. The frames included animal welfare, agribusiness owners, profit vs. animal care, food supply, healthiness, and environmental impacts (Abrams & Meyers, 2012). Also, as new topics, frames, and terms emerged, a constant comparative method was employed to validate their existence throughout the content. According to Glaser and Strauss (1967), the constant comparative method can be used during open coding to systematically break down and analyze a set of data by using the insights found in an earlier data set to inform the next iteration of data collection. As new topics, frames, and terminologies were detected, content that had already been coded was re-coded to include these new emergent components.

Two coders participated in training sessions to establish understanding of themes and to identify units of analysis. One researcher initially coded the website contents using the initial

codebook. After the data had been coded thoroughly once, a second coder reviewed the analysis, and dissonance in coding was then reconciled, and further coding ensued. This approach aligns with Denzin's (1978) and Patton's (1999) views on creating reliability in qualitative analyses through analyst triangulation.

Findings

The content of the five websites was initially analyzed to describe general content characteristics as well as to identify common topics, persuasive frames and key terminology related to animal welfare.

General Characteristics

Each protein company's animal welfare webpages were structured differently in comparison with each other. No particular type of organizational structures was thematic across the five companies' pages. There were no obvious similarities among the visual hierarchies and site architectures for each site. In other words, each site took its own visual and organizational approach to communicating information about animal welfare.

Diverse Approaches to Messaging about Animal Welfare

Along with varying descriptive characteristics, each company chose to communicate its corporate messaging on animal welfare in unique ways. From promises of animal wellbeing to a description of animal welfare audits, each company dedicated a portion of its main animal welfare content to explaining to consumers the company's core values and goals concerning animal care. Each company's key messaging placed animal welfare at the forefront of the organization's operations, yet each company's approach was unique. Table 1 provides a brief description of the approaches each company took to portray their policies and positions.

Table 1

Descriptions of Key Messages Related to Animal Welfare Policies and Rhetorical Positions

Company	Term Used to Label Message	Key Description
Tyson Foods Inc.	Pledge	A promise to continue proactive implementation of animal welfare policies
Cargill	View	A description of Cargill's belief system detailing its animal welfare social responsibility

JBS®	Mission Statement	An explanation of how JBS strives to maintain a level of Respect for each animal
Smithfield	Commitment, Goals, Targets	A description of Smithfield’s steps to ensure animal care is prioritized
Sysco	Approach	An explanation of Sysco’s audit system to maintain a high level of care for animals

Each company used a unique term to describe the text that characterized its position. For example, Tyson Foods Inc. presented its position in the form of a *pledge* to continue to seek out opportunities to improve animal welfare across the company, while Smithfield outlined a specific set of steps the company uses, such as *commitments, goals and targets*, to monitor its animal welfare practices. While each of the companies took a different approach, the central message was much the same: animal welfare is a recognized priority.

Common Topics in Each Company’s Animal Welfare Content

Seven main animal welfare-related topics, some of which were labeled as thematic because they occurred in more than one corporate website, were identified in the main animal welfare content of the five companies’ sites. These topics emerged clearly in the analysis, and they denote the specific messages the five companies appear to have been communicating to their audience through their web content. In Table 2, the common topics are identified by company and frequency of reference.

Table 2

Common Topics Occurring in Companies’ Animal Welfare-Related Webpages

Topic	Companies Mentioning Topic	Frequency of Reference
Antibiotics	Smithfield	1
	Total	1
Audits	Sysco	4
	Cargill	4
	Smithfield	2
	Total	11

Cage-free	Sysco	2
	Total	2
Educational Programs	Cargill	3
	Smithfield	3
	JBS	1
	Tyson Foods Inc.	1
	Total	8
Housing	Smithfield	2
	Sysco	2
	Cargill	1
	Total	5
Policy	Smithfield	11
	Sysco	5
	Tyson Foods Inc.	4
	Cargill	4
	JBS	2
	Total	26

Only one topic—*policy* explanations—was mentioned by all five companies. The most common topic, *policy* was mentioned most frequently (n=26), including 11 times by Smithfield. Following *policy* in popularity, a *commitment* to animal welfare practices and company *audits* were the second most popular (n=11), with Tyson Foods mentioning commitment five times. More specific topics such as *antibiotic* (n=1) use and *cage-free* (n=2) poultry were more rarely mentioned by only Smithfield and Sysco.

Persuasive Frames Used by Each Company

Each website was analyzed for the persuasive frames used by each company. The frames were identified using an emergent and constant comparison approach. Ten frames were identified, and

their descriptions are as follows (*a priori* frames previously identified by Abrams and Meyers (2012) are denoted with an asterisk).

- *Zero tolerance for abuse* – operating under a zero tolerance policy for abuse.
- *Animal care is prioritized over profit* – viewing animal care just as, if not more important, than profit from those animals.*
- *Animal welfare an established responsibility* – working to ensure that animal welfare is at the front of the priority order.*
- *Animal handling done in respectful manner* – ensuring animals are handled in ways that are most humane and least stressful
- *The customer’s opinion is valued* – hearing and valuing customer opinions and concerns.
- *Education on animal welfare* – participating in or enforcing educational programs to better understand animal welfare issues.
- *Employees play a role* – working to put employees in place who understand and comply with animal welfare related policies.
- *Supplying protein to the public* – respecting the animals’ role as a part of the food chain system that provides the population with animal protein.
- *Guaranteeing animal healthiness* – recognizing and working towards the overall physical and mental health of company owned animals.*
- *Recognized as industry leaders* – excelling in animal welfare standards, the company is viewed as an authority on animal welfare issues.

Table 3 characterizes the frames that were identified in the companies’ web narrative and frequencies at which each frame was identified. This data set displays each of the ten frames identified across the animal welfare pages on all five websites and the frequencies of occurrence among the webpages.

Table 3

Persuasive Frames Occurring on Company Webpages

Frame	Companies Using Frame	Frequency of Reference
Recognized as an industry leader in animal welfare	Cargill	12
	Sysco	12
	Tyson Foods Inc.	7
	Smithfield	3
	JBS	2
	Total	36

Animal welfare is an established responsibility	Sysco	10
	JBS	7
	Cargill	6
	Tyson Foods Inc.	5
	Smithfield	2
	Total	30
Employees play a role	Smithfield	5
	Sysco	7
	Tyson Foods Inc.	3
	JBS	2
	Total	17
Animal care is prioritized over profit	Cargill	6
	Tyson Foods Inc.	4
	Smithfield	2
	JBS	1
	Sysco	1
	Total	14
Animal handling done in respectful manner	Sysco	6
	Cargill	5
	JBS	2
	Total	13
Educational programs are in place	Cargill	6
	JBS	2

	Smithfield	2
	Sysco	3
	Total	13
Supplying protein to the public	Sysco	5
	Tyson Foods Inc.	3
	Cargill	2
	JBS	2
	Total	12
Guaranteeing animal healthiness	Cargill	5
	Tyson Foods Inc.	2
	Total	7
Zero tolerance for abuse	Cargill	4
	Smithfield	1
	Sysco	1
	Total	6
The customer's opinion is valued	Cargill	2
	Tyson Foods Inc.	2
	Sysco	1
	Total	5

There was diversity among the frames identified in the website narratives, and no two webpages contained exactly the same collection of frames in their animal welfare-related content. However, some frames were more prominent across all the companies' webpages. Being *recognized as an industry leader* in animal welfare was the most common frame, while *guaranteeing animal healthiness* was only mentioned seven times by two companies. *Animal care is prioritized over profit*, *animal welfare is an established responsibility*, and *recognized as an industry leader* were the three frames each of the five companies referenced at least once in their

position statements. Smithfield emphasized that *animal welfare is an established responsibility* while Sysco and Tyson Foods Inc. placed a priority on the *industry leader* frame.

Objective Three: Identify key terminology related to production and processing practices used in the corporate positions

After coding, 18 thematic animal welfare-related terms used to describe concepts related to common production and processing practices emerged. Table 4 details the key terminology identified.

Table 4

Key Terminology Related to Animal Production Practices

Terminology	Companies Terminology	Using	Frequency of Reference
Animal handling	Sysco		10
	Cargill		5
	JBS		2
	Tyson Foods Inc.		2
	Smithfield		1
	Total		20
Humane	JBS		6
	Sysco		5
	Tyson Foods Inc.		3
	Cargill		1
	Total		15
Farm	Cargill		3
	Smithfield		3
	Tyson Foods Inc.		1
	Total		7
Housing	Smithfield		3

	Sysco	2
	Cargill	1
	Total	6
Processing facilities	Smithfield	3
	Sysco	2
	Cargill	1
	Total	6
Ethical	Cargill	2
	JBS	1
	Tyson Foods Inc	1
	Total	4
Gestation crates	Sysco	3
	Cargill	1
	Total	4
Transport	JBS	2
	Smithfield	2
	Total	4
Nutrition	Tyson Foods Inc.	2
	Cargill	1
	Total	3
Raising	Cargill	2
	Tyson Foods Inc.	1
	Total	3

Abuse	Cargill	1
	Smithfield	1
	Total	2
Antibiotics	Smithfield	2
	Total	2
Cage-free	Sysco	2
	Total	2
Harvest	Sysco	1
	Tyson Foods Inc.	1
	Total	2
Slaughter	JBS	2
	Total	2
Growers	Cargill	1
	Total	1
Sustainable	Tyson Foods Inc.	1
	Total	1
Transparency	JBS	1
	Total	1

Across the companies, *animal handling* and *humane* were the two most used terms with 20 and 15 references respectively. *Growers*, *sustainable*, and *transparency*, though present, were used the least, only mentioned one time by only one company each. Cargill used 11 of the 18 terminologies that emerged across all the pages, while JBS used seven. Sysco placed an emphasis on *animal handling*, mentioning the term 10 times. These findings indicate a moderate level of consistency among common terms used in narratives about animal handling.

Conclusions and Discussion

Overall, the findings of the study illustrated that, across the five companies' webpages, there was no singular thematic approach to how companies officially communicated their key messages about animal welfare, yet there were commonalities among topics. Additionally, there were common frames used by companies to encourage consumers to perceive their businesses as industry leaders in animal welfare. Finally, there were key terms present throughout each of the company webpages.

Diverse Approaches to Communicating Position

The results in Table 1 indicated that each company used unique communication presentations and terminology regarding corporate messages about animal welfare (e.g., pledge, view, mission statement, etc.). While the information in this table fell outside of the original study objectives, it is worth noting that there were no definitive themes present regarding companies' general approach to communicating its animal welfare positions, other than the presence of a devoted web page on its web site. Each company had a totally different approach from the others.

Common Topics in Each Company's Animal Welfare Content

The common topics identified the subjects companies were willing to discuss related to their animal welfare positions. It is reasonable to state that each of the companies took a general approach to the topics, most commonly discussing *policy* and a *commitment to animal welfare*. Less used, however, were the more specific topics such as *antibiotic use* and *cage-free poultry*. While each company used a unique combination of topics, for the most part, companies avoided mentioning the more controversial specific topics such as *housing* and chose to focus on big-picture topics such as *a commitment to sound animal welfare practices*.

The majority of consumers form their opinions about animal welfare practices with little to no practical agriculture experience (American Humane Association, 2013); therefore, providing the public with a comprehensive and accurate portrayal of animal production practices is critical to their understanding of these practices.

Persuasive Frames Used by Each Company

Persuasive frames shape the way readers access and understand a message (Valkenburg, Semetko & De Vreese, 2003). Each company used a particular set of frames to mold individual animal welfare messages for consumers. It appears to have been important to the companies that they lead consumers to the conclusion that their company is an *industry leader in animal welfare*, as this was easily the most cited frame across all the webpages. Being recognized as an authority in the animal welfare conversation reinforces the idea that each company prioritizes animal welfare advances. Supporting this idea were the *animal care is prioritized over profit* and *animal welfare is an established responsibility*. These two frames, along with being *recognized as an industry leader*, were the frames that each of the five companies mentioned. Thematic framing, as described by Pan and Kosicki (1993) is in play in the collective narrative across several of the companies' web pages. Whether purposeful or not on the part of the protein companies, the presence of themes is an indicator that some level of consistent messaging about animal welfare does exist in corporate communications.

Abrams and Meyers (2012) identified common animal welfare-related frames, and *guaranteeing animal healthiness* was a prominent frame in their study. However, in this study *guaranteeing animal healthiness* was one of the least cited frames. This could be a result of the

companies focusing on establishing themselves as an industry leader instead of communicating specific details such as animal healthiness. This raises the question of whether the companies made a conscious effort to avoid guarantees and to keep public dialogue focused on general ideas rather than specific issues.

Key Terminology Related to Animal Production Practices

Eighteen key terms related to animal production practices were identified. Of those, *animal handling* and *humane* were the most cited terms, supporting the idea that companies place an emphasis on the ethical portrayal of their animal practices. Literature suggests instead of consumers basing their animal protein purchase decisions on facts, alone, they feel a need to justify their choices ethically (Knight et. al, 2004). One aid in this process is choice of words. JBS chose to describe the animal processing practice with terms such as *slaughter*, while Sysco and Tyson Foods Inc. chose *harvest*. Similar comparisons exist among the terms *farm* and *processing facilities*, and *farmers* and *growers*. Word choices such as these, through denotation and connotation can affect framing and potentially affect tone positively or negatively. It is reasonable to assume that companies communicating a broader message were careful to choose words that were not specific or controversial. The purposeful use of metaphorical terms is also a framing technique, as identified by Pan and Kosicki (1993) and could be a starting point for more consistent consumer messaging across the industry, which was alluded to by McKendree et al. (2014) and Verbeke (2009). For example, it is possible that consumers justifying their animal protein purchases may not be offended by terms such as *harvesting*, while *slaughter* could be more abrasive, though more research on the effects of specific terminology on consumer perceptions is warranted.

Recommendations for Practice

Communications professionals at each company should use the results of this analysis as an evaluative tool to determine if the web content related to animal welfare actually communicates the company's animal welfare messages as they were intended to be communicated. Repetition of key frames, focus on key topics, and use of advantageous terminology are all important strategies that protein companies could incorporate based on the results of this content analysis in agricultural media (Provencher, 2016).

The comparative nature of this study may guide industry communicators on how to be more consistent in industry-wide messaging about animal welfare. As consumers report not having a reliable source of information regarding animal welfare practices (McKendree et al., 2014), a united message across the animal protein industry would provide consumers with consistent sources of information. Kubitz et al. (2013) pointed out that fact-based reporting is essential to successful agricultural media practices. When communicating an animal welfare idea directly to consumers and through news journalists to consumers, employing consistent frames, purposeful terminology, and intentionally selected topics will create a more fluid and consistent message as it is conveyed from the industry web site.

Recommendations for Further Research

Further research should include conducting in-depth interviews with communications representatives within protein companies to better understand how they create online messages addressing companies' animal welfare practices and how companies define particular animal welfare-related terms, topics, and themes.

Testing messages with consumers in focus groups may help agricultural communicators and protein companies better understand consumer perceptions of various frames, topics, and terminology.

More content analysis studies should be conducted on animal protein companies' other media outlets, such as social media. Social media are a product of rapidly evolving, technology driven communication efforts to build and maintain relationships between organizations and the public (Kim & Rader, 2010; Symonenko, 2007). Thus, further research regarding these media outlets could help communication professionals and animal protein companies contribute to a more transparent animal welfare conversation, even as new social media platforms emerge.

Also, further studies should be conducted to compare the presence of frames, topics, and terminology in news coverage to determine the effectiveness of web-based communication on media relations and on information that has been mediated through journalism. Looking for consistency between the online messages of these companies and news coverage of animal welfare issues could guide communication professionals to the more streamlined coverage of animal welfare issues that consumers demand (Hansen et al., 2003).

Finally, studies should be conducted to identify the presence of frames, topics, and terminology in protein companies' press releases to determine consistency between press releases and webpage messages related to animal welfare.

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