

A Nutty Study: A Framing Analysis of the 2009 *Salmonella* Outbreak in Peanut Products

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Abstract

The purpose of this study was to examine television news coverage of the 2009 Salmonella outbreak in peanut products through the scope of framing theory. The aim of this research was to understand how the television news media frame agricultural, particularly food safety, messages. By employing a qualitative content analysis, researchers analyzed television news transcripts from ABC, CBS, CNN, and NBC that aired during the peanut product recall. The frames found from this research were informational, anti-Peanut Corporation of America, and anti-FDA. The most commonly used sources were victims of Salmonella, politicians, and current and former FDA officials. No agricultural frames were present, and the only agricultural organizations interviewed were one representative of the Georgia Department of Agriculture and Ag Secretary Tom Vilsack. The researchers concluded that sources did not appear to have a large impact on the way the news was covered for this study. The researchers also found a need for more scientific food safety information to be communicated to the national media.

Introduction

In early 2009, approximately 1,800 peanut products were recalled because of a *Salmonella* threat originating from Peanut Corporation of America (PCA), which had processing plants in Blakely, GA and Plainview, TX. Ultimately, 654 people were sickened in 44 states, and nine people died because of the bacteria. The investigation tapered off in late March 2009 (Centers for Disease Control [CDC], 2009). PCA manufactured peanut butter and peanut paste that was distributed to numerous food production companies throughout the United States (United States Food & Drug Administration [FDA], 2009). Because the peanut butter and pastes were distributed on such a large scale, numerous food manufacturing companies voluntarily recalled products such as cookies, crackers, ice cream, trail mixes, pet treats, and other food products. In some instances, the recalls were precautionary, and in other cases they were necessary because certain manufacturers had used PCA products. Jarred peanut butter sold in supermarkets was not part of the recall; however, jarred peanut butter sales plummeted by 22%. The United States peanut industry reported losses of around \$3 billion (L. Kennedy, Texas Peanut Producers Board, personal communication, January 18, 2010).

When the news media cover a food safety issue, it can make the public avoid eating the affected food and have a negative impact on the affected industry (Marks, Kalaitzandonakes, Allison, & Zakharova, 2003). Media coverage of a food recall is not always negative toward the agricultural industry, but by analyzing the frames the media present, agricultural communicators can determine more effective and more important messages when communicating with the public or directly with the media on agricultural or food safety issues.

Conceptual and Theoretical Framework

Salmonella is a naturally occurring bacteria typically found in meat, poultry, raw milk, eggs, and fresh produce (Mideiros, Hillers, Kendall, & Mason, 2001). Plant-based food products can become contaminated with *Salmonella* if fecal matter is near the plants or in the water used to irrigate (CDC, 2005). Symptoms of *Salmonella* poisoning include diarrhea, abdominal cramps, and fever (CDC, 2005). *Salmonella* can be present on raw peanuts, but at the processing facility, the roaster kills the bacteria; therefore, once the nuts are roasted, they should be bacteria free (National Peanut Board, 2009). However, FDA inspectors found evidence at both the Georgia and Texas processing facilities that the bacteria were present in places that could have contaminated the products after roasting (FDA, 2009).

Although the CDC reported that illnesses occurred as early as September, confirmation of the bacteria's location was not confirmed until January 9, 2009, when a Minnesota Department of Health laboratory found *Salmonella* in a five pound container of peanut butter (National Peanut Board, 2009). King Nut was the first company to issue a recall; however, the company announced it was simply the distributor, and the peanut butter was manufactured by PCA (National Peanut Board, 2009). PCA issued a nationwide recall of the peanut butter it manufactured, and on January 17, FDA announced that consumers should avoid all products that may contain peanut butter because the agency was uncertain which manufacturers used PCA products (National Peanut Board, 2009). Days later the FDA announced that product samples from the company's Blakely, GA plant contained *Salmonella*. On February 9, PCA closed its Plainview, TX facility when the Texas Department of Health found a possible presence of *Salmonella* in products (National Peanut Board, 2009). "When PCA took it (the peanuts) out of the roaster—the roaster is your kill step because it's got such high temperatures—somehow after that step, it was contaminated. So it wasn't the farmer, it wasn't even the sheller. It was that one manufacturer" (S. Nutt, Texas Peanut Producers Board, personal communication, February 25, 2009). In early February, an investigation revealed that roaches and rodents, along with a leaking roof, were found in PCA's facilities. PCA filed for Chapter 7 bankruptcy on February 13 and closed its third and final operating plant in Virginia (National Peanut Board, 2009).

News Coverage of Food Safety/Agricultural Issues

It is more common for framing analyses in agricultural communications research to be conducted using print media. However, a study analyzing the national television news networks' framing of the 2008 *Salmonella* outbreak in jalapenos found anti-government and anti-Mexican produce imports frames, but pro-agricultural producer frames (Irlbeck & Akers, 2009). The study concluded that news coverage of the outbreak was mostly based on the facts that were available at the time; however, certain networks provided opinion and speculation about the source of the bacteria, and one network frequently and blatantly placed blame for the outbreak on the United States government (Irlbeck & Akers, 2009). A similar framing study on the 2008 *Salmonella* outbreak in jalapenos found that national reporters had strong supportive feelings toward the agricultural producers, they hoped for policy changes at the FDA, and they felt the United States' food supply was safe (Irlbeck, 2009). The study concluded that "in some instances, television news frames are influenced by the reporters' attitudes and ideologies, and in other instances, they are not" (Irlbeck, 2009, p. vii).

The Food Policy Institute at Rutgers University also studied public reaction to the 2008 *Salmonella* outbreak and found great awareness of the situation, but great confusion among consumers concluding that although the FDA frequently posted information about newly recalled products,

consumers did not continue checking their kitchens to see if they had the recalled product (Cuite, Schefske, Randolph, Hooker, Nucci, & Hallman, 2009).

Other framing analyses have found mixed attitudes toward agricultural producers. A study on the U.S. mad cow outbreak found that American newspapers framed the story as high risk to humans, while Canadian newspapers focused on the disaster for Canadian agriculture (Ruth, Eubanks, & Telg, 2005). A similar study found that U.S. newspapers presented a negative frame toward the beef industry (Ashlock, Cartmell, & Kelemen, 2006). Another study on the same topic found that news coverage of the mad cow crisis was mostly objective with a few judgment statements that were negative toward agriculture (King, Cartmell, & Sitton, 2006).

During a prominent food safety story, activists groups were quoted in the media five times as often as food scientists (Anderson, 2000). Eyck (2000) argued that activist groups “develop strategies to gain the media limelight around food safety issues for the purpose of gaining public support for their continued existence” (p. 45). However, other studies (Ashlock et al., 2006; Irlbeck & Akers, 2009) found that government or FDA officials were used frequently as interview sources.

Many food scientists may be uncomfortable providing interviews for reporters, as most scientists have not had media spokesperson training (Anderson, 2000). Yet scientists can provide a wealth of scientific information. Eyck (2000) suggested that scientists and the agricultural communicators who frequently work with scientists should seek out the media to become a known and consistent source of information.

Framing Theory

This study was guided by the top half of Scheufele’s (1999) model of framing effects (see Figure 1) and analyzed the outcomes, or media frames, that were presented by national television networks during the 2008 *Salmonella* outbreak. Since sources, or as Scheufele called them, “other elites,” can influence the tone and frames presented in a story (Baran & Davis, 2009), the sources used by the networks were also analyzed in this study.

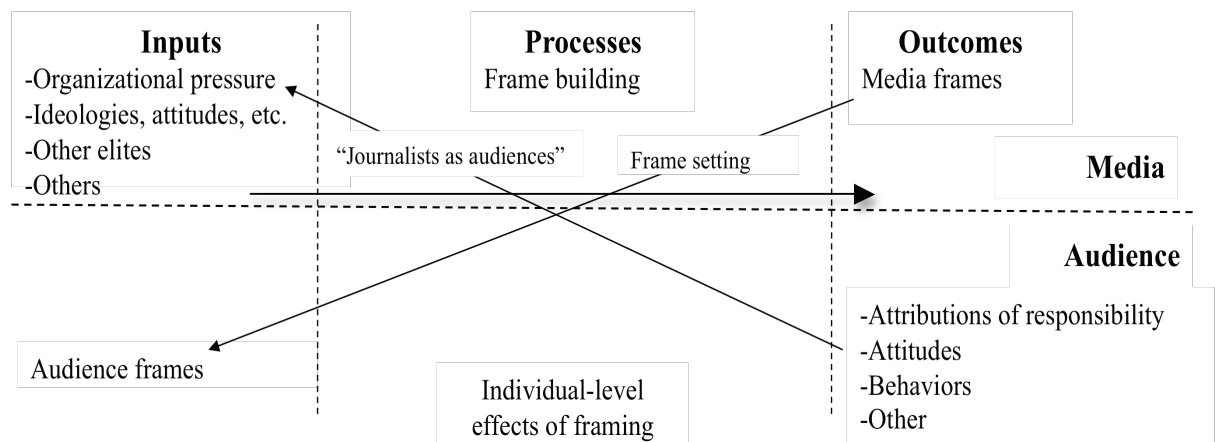


Figure 1. Model of framing effects (Scheufele, 1999).

Framing is not a negative thing; a frame is simply how a reporter tells a story (Irlbeck & Akers, 2009). Framing theory is “a central organizing idea or story line that provides meaning to an unfolding strip of events” (Gamson & Mogdigliani, 1987, p. 143). Journalists pick certain elements of a story and write them in a manner that places more importance on those portions of the story (Entman, 1993). A frame is not necessarily intentionally written; instead, influences from the news

organization's management, interview sources, personal opinions, and professional judgment lead a reporter to write a story a certain way (Neuman, Just, & Crigler, 1992).

For a food safety story, Irlbeck and Akers (2009) explained that a reporter could present a frame of warning that lets the public know that a health threat has been found and how to avoid it, or the reporter could interview a victim so that the viewers understand how harmful the bacteria can be. Station management may think that viewers want information about keeping children safe; therefore, the organization can influence the frame. Weaver and Wilhoit (1991) argued that reporters do not have time to actively craft and promote frames—most reporters want to get the information out as quickly as possible.

Purpose and Objectives

The purpose of this study was to examine television news coverage of the 2009 *Salmonella* outbreak in peanut products through the scope of framing theory. The aim of this research was to understand how the television news media frame agricultural, particularly food safety, messages. If agricultural communicators have a better understanding of media framing, they can create and promote more efficient and targeted messages to national television news outlets. This study replicated the Irlbeck and Akers (2009) study where news transcripts from the 2008 *Salmonella* outbreak in jalapenos were evaluated; therefore, the research objectives for this study were very similar:

1. Determine how the 2009 *Salmonella* outbreak was framed by ABC, CBS, CNN, and NBC.
2. Determine how the sources used by individual networks played into the framing of the issue.

Since Irlbeck and Akers (2009) examined transcripts from ABC, CBS, CNN, and NBC, this research did the same. A limitation of this study was a lack of video analyzed. The outbreak occurred in early 2009, and the researchers began the study in August 2009. By that time, many news organizations had removed video clips from their Web sites, and obtaining tapes of the broadcasts was cost prohibitive.

Method

This study was a qualitative content analysis and replicated an Irlbeck and Akers (2009) analysis of news transcripts during the 2008 *Salmonella* outbreak in jalapenos. The researchers conducted a search for television news transcripts with the keyword "*Salmonella*" between the dates of December 1, 2008 and April 1, 2009. The stories were aired in January and February, but the researchers added an extra month to both sides of the search in order to catch any stories that may have aired well before or well after the story became a full-fledged news event. Transcripts from ABC, CBS, CNN, and NBC were gathered using the Lexis-Nexis search engine through the university library. At the time of the study, only the aforementioned networks' transcripts were available through Lexis-Nexis. A total of 107 stories were collected; however, five stories were duplicated and one story was a spoof and not necessarily news; therefore, the data set was reduced to 101. Each story was analyzed.

The researchers used the coding sheet and categories from the Irlbeck and Akers (2009) study. Their coding sheet included network name, word count, air date, sources, overall tone (positive, negative, or neutral), and prominent frame(s). Each researcher coded scripts independently then met to reach consensus to work out any discrepancies (Krippendorff, 2004). Accountability was maintained with an audit trail of the news transcripts and coding spreadsheets (Irlbeck & Akers, 2009). The

researchers wrote self-reflexive notes to themselves to further aid in data analysis. ABC News aired 30 stories, CBS aired 31 stories, CNN aired 11 stories, and NBC aired 29 stories.

Findings

ABC, CBS, and NBC typically ran shorter format stories. The majority were readers, a story read by the anchor without video; or a voice over, a story with the anchor reading while corresponding video plays. The networks commonly aired live interviews with a victim or an expert on the story. CNN tended to air longer format stories. The anchors and reporters offered a more conversational report, and speculation and opinions frequently infused the banter.

Findings in Relation to Research Objective 1

Research Objective 1 sought to determine how ABC, CBS, CNN, and NBC framed the 2009 *Salmonella* outbreak. After analyzing each transcript, the researchers determined that the reporting was fair and unbiased, with a few exceptions. The majority of frames presented were informational or warning with a neutral tone (see Table 1), but some frames had a negative tone, usually toward PCA or the FDA. A keyword that was found in many stories was “avoid”—which was informational to the viewers so they would know which products could possibly contain the tainted peanut product. All four networks, on numerous occasions, reported the number of people who were sick and deceased from the bacteria. There was a noticeable shift in tone on each network in late January. ABC and NBC shifted from a neutral, informational tone to a negative tone on January 24, 2009, CBS shifted to negative on January 20, 2009, while CNN started with a negative tone toward the FDA with the first story which aired on January 8. Then the network switched to a neutral, informational tone and then shifted back to negative on January 28.

Table 1
Frames listed by tone and network

Frames	ABC			CBS			CNN			NBC			Total
	+	-	Nu	+	-	Nu	+	-	Nu	+	-	Nu	
Information/ Warning			16		4	16		2	2		1	20	61
PCA		14			12				6	1	6	2	41
FDA/Gov't/ Regulatory		7			8		1	5			4	1	26
Food manufactures		1		1	1			2					4
GA Dept. of Ag		1						1			1	1	4
Peanuts/peanut butter/industry				2	3								4

Note. + means supportive; - means negative; and Nu means neutral.

Although many of ABC's stories were negative toward PCA, they were fairly straightforward and mostly reported on the findings of the FDA's investigation. The researchers found one opinion-

ated comment when the anchor reported that peanut butter was still considered a safe product, but then added “no parent is going to go near that”—referring to peanut butter.

CBS offered different information that was not reported by other networks. For example, the network twice reported on Peanut Corporation of America’s operations, explaining that the company did not sell jarred peanut butter, rather the company provided bulk peanut butter and peanut paste to other companies to be mixed into various food products. They explained the difference between peanut butter and peanut paste, a source of confusion for many consumers. After analyzing the story, the researcher wrote in her self-reflexive notes, “this was pretty responsible reporting. It was a good way to clear up a lot of confusion over the recall.” When results of FDA’s investigation of the PCA plant were released, CBS provided the most explicit details of the findings. The network also reported that PCA owner Stewart Parnell was on the USDA Peanut Standards Board—information that no other network provided. The researcher’s notes also stated “CBS seems to have done the best job reporting.”

However, CBS also reported the peanut products that were being recalled were “foods you should not be eating anyway.” CBS also reported that PCA used contaminated peanuts, which had not been reported anywhere else and was not true. Several of CBS’s stories were a little confusing with contradictory statements on which products to avoid. For example, in one story they stated that consumers should stay away from anything containing peanuts, whereas another story provided information on which specific products to avoid. There was also an instance during a live interview where the news anchor appeared to be leading and taking the side of the interviewee.

CNN began its coverage with a negative report on the FDA stating that the agency was “wasting money.” On January 9, CNN reported the source of the contamination was “still a mystery,” even though that was the day the Minnesota Departments of Health and Agriculture announced finding *Salmonella* in a container of peanut butter. The next day, however, the network reported accurate, detailed information. In another story, CNN reported that jarred peanut butter was safe, but in the same story warned “just don’t eat it (peanut butter).”

As late as January 18, CBS and NBC were telling viewers to avoid peanut butter, even though other networks were naming the specific products that were recalled. With that exception, NBC’s coverage of the recall was straightforward with no reporter opinions or speculation. NBC presented a frame that was supportive of PCA’s employees, explaining how 50 people were now without jobs. The network was the only network that offered information on the economic impact the recall had on the peanut butter industry. NBC was also the only network to interview a United States Department of Agriculture official. NBC followed the story to the end, telling the viewer the fate of Peanut Corporation of America when the company filed for bankruptcy.

The researchers, who both have agricultural backgrounds, noticed that no network provided a frame about farmers.

Findings in Relation to Research Objective 2

Research Objective 2 sought to determine how the sources used by individual networks played into the framing of the issue. For this story, victims or victims’ family members were the most popular interview source (see Table 2). Politicians were the second most popular.

Jeff Almer, a Minnesota resident, lost his mother to the *Salmonella* poisoning. Of all the victims or family members, he was interviewed the most—eight times between CBS, CNN, and NBC. CNN re-ran some of his same sound bites in different newscasts.

Table 2
Number of interviews listed by company or source type

	ABC	CBS	CNN	NBC	Total
Victim/Victim's family member	3	12	3	3	21
Politicians	10	2	4	0	16
FDA	4	4	3	2	13
Medical professional/doctor/dietician	2	1	3	5	11
PCA	6	3	0	0	9
Former FDA officials	0	4	3	0	7
Special interest/watchdog groups	3	1	1	1	6
Attorney	2	1	0	1	4
PCA customer	1	2	0	0	3
CDC	0	0	2	0	2
Food safety expert	1	0	0	0	1
GA Dept. of Ag.	0	0	0	1	1
Consumer	1	0	0	0	1
Former HHS officials	0	0	1	0	1
Tom Vilsak (USDA)	0	0	0	1	1
Chef	0	1	0	0	1

Democratic Congressman Bart Stupak of Michigan was interviewed five times. Stupak is the Chairman of the Subcommittee on Oversight and Investigation through the House Committee on Energy and Commerce. Representative Henry Waxman (D) of California was interviewed twice; he is the Chairman of the House Committee on Energy and Commerce. Congressman Greg Walden (R) of Oregon was interviewed three times; he is the vice chair of the Subcommittee on Oversight and Investigations. According to the subcommittee's Web site, its responsibility is to oversee agencies and conduct investigations within its jurisdiction. The FDA falls within this subcommittee's jurisdiction (Subcommittee on Oversight and Investigations, 2009).

Since the FDA spearheaded the investigation, its officials were an obvious choice for an interview source. The researchers noticed a strong presence from former FDA officials, who gave seven interviews, William Hubbard four times and David Kessler three times.

Eleven medical doctors or dietitians were used as interview sources. The information they provided was unbiased and accurate, with one exception. A physician that NBC used as a source speculated that the contamination was likely due to raw egg. This was information that was not reported anywhere else, and there is no evidence of this information on the FDA's Web site, so the researchers assumed the source was speculating.

The interviews from PCA came from former employees. Several networks pulled sound bites from PCA owner Stewart Parnell's testimony in front of Congress; however, Parnell's only comment was stating that he declined answering every question under the advice of his lawyer.

The use of consumer watchdog or special interest groups as sources varied by network. The Center for Science in the Public Interest was the most popular group—ABC interviewed a spokesperson three times and NBC once.

NBC was the only network to interview USDA Secretary Tom Vilsak. No network interviewed a peanut producer.

Conclusions and Discussion

Media coverage of a food recall is not always negative toward the agricultural industry, but by analyzing the frames the media present, agricultural communicators can have a better understanding of media framing, and they can create and promote more efficient and targeted messages to national television news outlets. Although the researchers noticed that no one interviewed a peanut grower, nor did any network present the frame of the farmer, peanut producers were not implicated at all by the national television media during the 2009 *Salmonella* outbreak. This was probably because peanut producers were not at fault, and the FDA's investigations clearly indicated that the blame was on the Peanut Corporation of America. However, it was curious that agriculture was not a part of this story when agricultural producers played such a big role in the television coverage of the 2008 *Salmonella* outbreak in jalapenos (Irlbeck & Akers, 2009), and the peanut industry lost as much, if not more, revenue than the tomato industry did in the 2008 *Salmonella* recall.

An objective of this study was to determine how the television news networks framed the 2009 *Salmonella* outbreak. A frame is simply how a reporter tells a story. Certain factors such as personal ideologies, corporate policy, or information sources may influence the way the reporter processes the information to tell the story (Scheufele, 1999), but the objective of this study was not to determine what factors influenced frames, but to simply determine how the networks told the story.

The most common frame was informational. Many stories were brief, telling viewers which products to avoid or how to lower the risk of *Salmonella* poisoning, and many stories referred the viewer to the FDA's Web site for a complete list of recalled products. However, consumer research found that after hearing about a food recall, consumers typically do not continue checking to see if they have a contaminated product (Cuite et al., 2009).

The vast majority of the stories about PCA were negative, but this was no surprise. The FDA found the corporation to be in the wrong, and the media were presenting the information the FDA offered, which was negative toward PCA.

Many stories had a negative tone toward the FDA or the U.S. food regulation system. This corresponds with the findings of Irlbeck and Akers (2009) where the media negatively framed the FDA

during the 2008 *Salmonella* outbreak in jalapenos. Although the FDA seemed to locate the source of the bacteria in 2009 much faster than in the 2008 investigation, several stories were negative about the regulation and self policing system that is currently in place, and other stories were rhetorically asking why the story continues to happen so frequently.

The process of a foodborne illness followed by a food recall is complicated, and during the 2009 recall, several networks explained the process of a recall, and one network explained how PCA operated. CNN provided an especially detailed explanation of an FDA foodborne illness investigation. The researchers concluded since CNN offers news 24 hours a day, the network had more time than non-cable networks to go into detail on such stories. The network also provided a more conversational feel to its stories, and this was likely due to the longer format.

Although few opinionated comments and errors were detected from reporters, the researchers found the vast majority of the reporting to be responsible and accurate. In all, the story was generally reported either with an informational, anti-PCA, or anti-FDA frame.

This research also sought to determine how the interview sources used by individual networks played into the framing of the issue. Sources can influence the frame of a story (Baran & Davis, 2009). Previous research found that activist groups were quoted far more often than food scientists, and government officials were common sources in a food recall situation (Anderson, 2000; Eyck, 2000; Irlbeck & Akers, 2009). Current and former FDA officials were used on 20 different occasions during the 2009 *Salmonella* outbreak, but that is to be expected since the FDA managed the recall and investigation of PCA. Contradictory to the previous research, special interest or activist groups were only used on six occasions during this story, while medical professionals or dietitians were used on 11 occasions. At the same time, only one food scientist was interviewed. For one live interview, CBS interviewed Bobby Flay, a celebrity chef and contributor to the CBS Early Show. Flay explained how to prevent the spread of *Salmonella*. Although Flay's information was accurate, the researchers found it odd that a celebrity chef was providing information on safe food handling when a food scientist could have been interviewed. If an agricultural communicator works with a food scientist, there is an opportunity to promote the experts they work with to various local and national reporters (Eyck). Irlbeck (2009) found that national and local reporters are receptive to and welcome food scientists, but many reporters simply do not know about or do not have contact information for these experts.

As stated earlier, special interest groups were not used as frequently as they were in the television news coverage of previous food recalls (Irlbeck & Akers, 2009). However, the researchers noticed that Jeff Almer, a Minnesota man whose mother died from the bacteria, was interviewed on eight different occasions. After an Internet search, the researchers found that Almer is now representing Safe Tables Our Priority, an consumer activist group, and spoke on behalf of victims at a Congressional hearing and in several press interviews (U.S. House of Representatives, 2009; Huddleston, 2009). Even though the interest groups were not as commonly interviewed during the 2009 food recall, this victim was speaking for an activist group, but was not described or identified as such. Another finding was that CNN used Almer on three occasions, and once repeated a sound bite; he was the only victim or family member of a victim interviewed on CNN. In an interview for a research study, a network reporter said this about frequently re-using sources: "We try actually not to interview the same players for every story because that's not great reporting" (Irlbeck, 2009, p. 108).

Although many sources spoke out against FDA, PCA, food manufacturers or the Georgia Department of Agriculture, the data do not indicate that the interview sources had a powerful influence

over the frames presented in the 2009 Salmonella outbreak. The majority of the stories were neutral and informational; therefore, in this instance, it did not appear that sources or other elites (Scheufele, 1999) shaped the frames presented.

Recommendations for Practitioners

Only one food scientist was used on four networks during a story that was on the air for two months. Again, the opportunity is present for agricultural communicators to promote food safety experts to both national and local media. Eyck (2000) recommended that agricultural public relations practitioners work with food safety experts to help develop relationships with the media. Often, the media are unaware of an expert source, or they may be too busy to seek out a new source as indicated by a national reporter: "It would be very helpful if someone contacted me and said 'Hi, I'm the media relations person for the agricultural department at (a university), we've got these experts'... (that would be) extremely helpful. Because we're based in D.C., and all news does not happen in D.C., particularly when it comes to food safety" (Irlbeck, 2009, p. 136).

Recommendations for Future Research

An unanswered question from this research is "why were peanut producers not interviewed by network reporters for this story?" Agricultural producers were a major frame in the 2008 *Salmonella* outbreak in jalapenos (Irlbeck & Akers, 2009), but were not present at all in the peanut product recall. An investigation into reporters' choices of sources may yield answers to this question. Studying reporters' attitudes and opinions about the story could also contribute to the "inputs" portion of Scheufele's (1999) framing effects model.

Researching the communications strategy of peanut commodity groups, peanut processors, and food companies that experienced the 2009 recall, both before and after the recall, could lead to guidelines for communications practitioners that are preparing crisis communications plans.

Retail sales for jarred peanut butter have completely recovered from the recall, but the supply of peanuts is still abundant due to a large crop in 2008 (Lepicier, 2009). Researchers have considered a national survey to determine if consumers still trust peanut products other than peanut butter.

About the Authors

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Keywords

framing theory, peanut recall, food safety, television news, agriculture in the media, content analysis.

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