Introduction/Literature Review

The Centers for Disease Control (CDC) estimates each year one in six Americans fall ill from eating contaminated food and 3,000 people die (CDC, 2018a). In 2015 alone, *E. coli* from Chipotle sickened 52 people, *Salmonella* from the Boise Co-op deli sickened 290 people, Cyclospora-contaminated cilantro from Mexico sickened 290 people, and *Salmonella* Poona from cucumbers imported from Mexico caused four deaths and sickened 546 people (Zuraw, 2015). Foodborne illnesses also cost the U.S. economy billions of dollars each year. The U.S. Department of Agriculture (USDA) noted foodborne illness costs an estimated $15.6 billion each year for outpatient and inpatient expenditures for medical care and lost income alone (Flynn, 2014). As a comparison, the estimated direct cost of the flu each year is $10.4 billion (Molinari et al., 2007). The reported amount for foodborne illness costs does not include food industry costs, such as loss of consumer confidence in a brand, associated recall expenses, charges stemming from litigation, or costs to taxpayers for local, state, and federal health agencies that respond to outbreaks (Flynn, 2014).

When food products are linked to a foodborne illness outbreak, the food producers will issue a food recall (U.S. Food and Drug Administration, 2018). The Food Marketing Institute and the Grocery Manufacturers' Association conducted a joint industry study on recall execution effectiveness and found the average cost of a recall to a food company is $10 million (Grocery Manufacturers Association, 2010). When a food safety issue is involved in a crisis situation and the news media reports it, it can cause consumers to stop eating the affected food (Marks, Kalaitzandonakes, Allison, & Zakharova, 2003). Because food recalls have significant impacts on consumers, businesses, and the economy, more research is necessary to explore how businesses use effective communication efforts during the crisis to attenuate negative outcomes. The purpose of this study was to determine how Blue Bell Creameries communicated about its first recall in the company's 108-year history. This was accomplished through a content analysis of company press releases and news media coverage to explore Blue Bell's crisis communication efforts and how the media presented that information.

The 2015 Blue Bell Ice Cream Recall

The 2015 Blue Bell ice cream recall was the result of *Listeria* infection cases in four states linked to 10 illnesses that resulted in three deaths (CDC, 2015). *Listeria* causes diarrhea and fever and is more harmful for older adults, people with chronic diseases, and pregnant women (CDC, 2018b). State and local health officials, CDC, and FDA collaborated to investigate this outbreak from February 2015 through May 2015. The joint investigation found certain Blue Bell brand ice cream products were the likely source for most of the illnesses (CDC, 2015). *Listeria* was detected February 12, 2015, during a routine product sampling at a Blue Bell South Carolina distribution center (Food and Drug Administration, 2015). Those strains would later be connected to illnesses in Kansas. The Texas Department of State Health Services then collected product samples from Blue Bell's Brenham facility, which contained *Listeria* from the same products tested in South Carolina, along with another Blue Bell ice cream product (CDC, 2015).

On March 13, 2015, Blue Bell reacted to the previous findings and announced a limited product recall of affected products and closed down that production line at its Brenham, Texas, facility (CDC, 2015). On March 22, the Kansas Department of Health and Environment reported a positive test for *Listeria* in a chocolate institutional/food service cup that was recovered from a hospital in Kansas. The ice cream cup was produced at the Broken Arrow, Oklahoma, facility

(Falkenstein, 2015). On March 23, Blue Bell issued a second recall on the chocolate, strawberry, and vanilla ice cream cups (Food and Drug Administration, 2015). On April 3, Blue Bell suspended operations at its Broken Arrow plant (CDC, 2015). On April 7, Blue Bell expanded the recall of ice cream manufactured in its Broken Arrow plant to include additional products that had the potential to be contaminated with *Listeria* (Blue Bell Creameries, 2015a). Finally, on April 20, 2015, Blue Bell recalled all of its products on the market made at all of its facilities after detecting *Listeria* in additional product samples (Food and Drug Administration, 2015). By this point in time, Blue Bell had suspended operations at all its facilities. Several months later, in August 2015, Blue Bell initiated a five-phase plan for market re-entry, which allowed Blue Bell to enter the market at a slow pace due to the limited production capacity of only producing ice cream in its Alabama facility (Whitworth, 2015). The market re-entry was completed in January 2016 (Food and Drug Administration, 2015).

During the recall, Blue Bell recalled eight million gallons of ice cream (Dinges, 2016), and the recall cost Blue Bell millions of dollars. In 2011, Blue Bell's sales were $520 million, and by 2014 its sales had risen to $680 million, according to PrivCo, which tracks privately held companies (Robinson-Jacobs, 2016). With the recall in 2015, PrivCo found Blue Bell sales fell by nearly 60% to $288 million (Robinson-Jacobs, 2016). During the recall, the company furloughed 1,400 employees, and about 750 full-time and 700 part-time employees were laid off, which was 37% of the total workforce (Blue Bell Creameries, 2015b). In 2016, Blue Bell had about 2,500 workers, down 36% from its previous 3,900 employees. In the aftermath, Blue Bell spent a lot of money cleaning, repairing and replacing manufacturing equipment at its plants. It also faced lawsuits and fines (Dinges, 2016). Despite the recall, in 2016, Blue Bell was the fifth leading manufacturer of ice cream in the U.S. based on sales (Statista, 2017).

Crisis Communication

Crises are unpredictable, bound to happen, and can damage an organization's reputation quickly. A crisis can cause an organization to suspend operations, which creates a forfeiture in sales and consumers' intentions to purchase their products, and it can trigger lawsuits related to the crisis, all of which cause major financial losses (Coombs, 2007b). Furthermore, any crisis is bound to reflect poorly on an organization and threaten its reputation (Barton, 2001); therefore, effective crisis communication is crucial to restoring an organization's reputation, brand, and consumer trust. Crisis communication is the collection, processing, and dissemination of information required to address a crisis situation. Crisis communication also focuses on the crisis response – what an organization says and does when a crisis happens (Coombs, 2012).

Effective crisis communication can greatly affect the agriculture industry because the industry itself is often misunderstood by the public (Palmer, Irlbeck, Meyers, & Chambers, 2013). In Palmer et al.'s (2013) study about the 2008 *Salmonella* outbreak, the researchers found crisis managers involved with the outbreak emphasized the need to get their information out to the public quickly. In another study about this same *Salmonella* outbreak, Irlbeck, Akers, Baker, Burris, and Brashears (2014) conducted a content analysis of television news coverage about the outbreak and collected insight from reporters about the experience of reporting on food safety issues. They found the reporters' attitudes and ideologies occasionally influenced how the recall was framed in the television coverage. Nucci, Cuite, and Hallman (2009) conducted a content analysis of television news coverage about a spinach recall in 2006. They also analyzed press releases about the recall posted on the Food and Drug Administration's website. The results indicated that in all cases except one, when the FDA provided a press release, it was followed

with television news coverage within a day or two (Nucci et al., 2009). "Ultimately, when communicating about food recalls, the potential for widespread illness and death enhances the urgency to create a system for effective and complete information communication" (Nucci et al., 2009, p. 257). In a study about a *Salmonella* outbreak in 2009 linked to peanut products, researchers found public relations practitioners noted the need to effectively communicate with media representatives to reach their audience members (Irlbeck, Jennings, Meyers, Gibson, & Chambers, 2013).

Examining the 2015 Blue Bell ice cream recall provides an opportunity to learn how an organization communicates through various channels to recover from a crisis situation. In a separate study of Blue Bell's communication efforts during this recall, Opat, Magness, and Irlbeck (2018) conducted a content analysis of the Blue Bell Ice Cream Facebook page. The purpose of the study was to evaluate Blue Bell's Facebook content and its followers' public reactions to those posts during the crisis. The results indicated Blue Bell provided updates about the recall and efforts to return products to stores, expressed gratitude for support, and shared details about food safety improvements. The analysis of consumer comments indicated they were overwhelmingly supportive of Blue Bell demonstrating a strong sense of loyalty to the company (Opat et al., 2018). While Opat et al. (2018) evaluated the company's Facebook content regarding the recall, the current manuscript provides insight into how the crisis response was framed through company press releases and related print news coverage.

Theoretical Framework

Framing theory explains how mass media present information by either choosing to cover an issue or choosing not to cover certain facets of an issue (Entman, 1993; Stone, Singletary, & Richmond, 1999). According to Goffman (1974), frames can assist audiences when trying to make sense of the information they are given. The news media can frame a story by choosing what information to include and exclude from a story (Iyengar & Kinder, 1987; Pan & Kosicki, 1993). "Framing is based on the assumption that how an issue is characterized in news reports can have an influence on how it is understood by audiences" (Scheufele & Tewksbury, 2007, p. 11).

Previous studies have explored dominant frames in news coverage about food safety issues. In a study about how U.S. news magazines framed food safety stories, Whaley and Doerfert (2003) found the majority of the articles they examined used a social frame covering labeling issues, political impacts, health benefits, and unknown risks. They also found more than half of the articles confirmed the media's institutional bias through governmental sources (Whaley & Doerfert, 2003). Ruth, Eubanks, and Telg (2005) completed a framing analysis of United States and Canadian newspaper coverage regarding the discovery of a case of bovine, spongiform encephalopathy, commonly referred to as mad cow disease. They found four major frames – industry crisis, economic calamity, blame/responsibility, and health risk – with the U.S. coverage emphasizing human impacts while the Canadian coverage emphasized impacts to the cattle industry (Ruth et al., 2005).

While framing research has a rich history in exploring media coverage, the framing process is not limited to this communication outlet. Scheufele (1999) developed a process model of framing that divides the important links in framing into inputs, processes, and outcomes. This model displays framing as a continuous process where the outcomes of specific processes serve as inputs for processes that follow. The process begins in the frame building stage where the influence is centered on the journalists because they construct frames to make sense of

information. Journalists' ideology and attitudes can be reflected in the way news coverage is framed. Frame setting is the next step in the process, which is focused on the salience of issue, attributes, meaning, specific values and facts are given greater importance than they might really have (Nelson, Clawson & Oxley, 1997). Individual-level effects of framing are behavioral, attitudinal, and cognitive variables. The final step in the process is journalists as audiences, which indicated that journalists are susceptible to frames (Scheufele, 1999).

The media are an essential aspect to consider during a crisis because they have the ability to influence social behavior and policy agenda (Whaley & Doerfert, 2003). News framing can influence the publics' perception of an organization, which provides crisis managers with valuable insights on what response strategies would be the most effective for crisis communication (Holladay, 2009; Liu & Kim, 2011).

Creating frames for understanding a crisis situation and offering explanatory definitions are hallmarks of effective communication during a crisis (Coombs, 1999). The news release is a common way for an organization to frame a crisis for the media and the public (Caldiero, Taylor, & Ungureanu, 2012). Taylor and Perry (2005) conducted a five-year study of crisis situations and found that over 80% of organizations in a crisis had posted a news release on their website. The study also found internal sources such as organizational leaders were quoted in the press releases (Taylor & Perry, 2005). In news coverage of a crisis, external sources are also often quoted. Some external sources could include industry analysts, leaders, regulators, and academics. All comments made by these sources could help frame the crisis story by explaining the crisis situation through their opinions (Caldiero et al., 2012). To explore how press releases were used in news coverage about the 2009 H1N1 A influenza outbreak, Lee and Basnyat (2013) conducted a content analysis of a Singapore government public health agency's press releases and subsequent news coverage in one national newspaper. The researchers found changes in the dominant frames used from press releases to news coverage with the news coverage having more sources of information and emotional appeals (Lee & Basnyat, 2013). Other studies have explored how topics are framed in press releases and subsequent news coverage such the 2010 BP oil spill crisis (Schultz, Kleinnijenhuis, Utz, van Atteveldt, 2012) and the "obesity epidemic" (Saguy & Almeling, 2008). These types of studies examine the dissemination of information from original sources (i.e. news releases) to final media coverage (i.e. newspapers and television reports). Researching the communication flow identifies similarities and differences in how the information is presented to the ensuing audience.

When responding to a crisis, there have been theoretical approaches to assist crisis managers in understanding how to effectively communicate with the public (Choi & Chung, 2013; Seeger, 2006). Coombs (2006b, 2007c) proposed the Situational Crisis Communication Theory (SCCT), which recommends suitable response strategies that can improve positive behavior intentions toward an organization (Coombs & Holladay, 2007, 2008; Laufer & Jung, 2010) and restore a company's image and reputation (Coombs & Holladay, 2002). Coombs (2015) divided these crisis response strategies into four postures: denial, diminishment, rebuilding, and bolstering. In the current study, these postures served as the dominant frames and are described more in the Methods section in regard to how they were identified.

According to the theory, crisis managers try to choose the right response strategies to frame the crisis type and alter the publics' perceptions of the company in crisis (Boin, Hart, & McConnell, 2009; Ulmer, Sellnow, & Seeger, 2014) while, at the same time, the news media are framing the same crisis in similar or dissimilar ways (Bowen & Zheng, 2015; Coombs, 2007c). The public tends to get their information and perceptions from media coverage of the crisis,

rather than the crisis manager's strategies, which means the organization needs to be actively involved as a source for news media outlets (Cho & Gower, 2006; Holladay, 2009; Liu & Kim, 2011).

Purpose and Research Questions

The purpose of this study was to determine how the 2015 Blue Bell ice cream recall was presented in company press releases and news media coverage to determine what crisis communication Blue Bell was implementing and how the media presented that information. To accomplish this purpose, the following research questions guided the study:

1. What crisis communication response strategy postures, sources, and topic areas are present in Blue Bell press releases regarding the 2015 Blue Bell ice cream recall?
2. What crisis communication response strategy postures, sources, and topic areas are present in news stories about the 2015 Blue Bell ice cream recall?
3. What is the difference in presence of postures and sources between press releases and news stories regarding the 2015 Blue Bell ice cream recall?

Methods

This study used a quantitative content analysis of Blue Bell Creameries' press releases and United States newspaper coverage of the 2015 Blue Bell ice cream recall. A quantitative content analysis is the "systematic, objective, quantitative analysis of message characteristics" (Neuendorf, 2017, p. 1). The timeframe for the selection of the content started March 13, 2015, when Blue Bell sent out its first press release regarding the initial recall the company made. The timeframe ended January 25, 2016, because this is when Blue Bell finished phase five of its five-phase plan for market re-entry.

To find the official Blue Bell press releases, we used Google to search for the key terms 'blue bell' 'press release' followed by each individual month within the timeframe of this study (March 2015 through January 2016). We could not directly locate the press releases from Blue Bell's website homepage or navigational structure; however, the key term search returned links to the original Blue Bell press release on the company website. This procedure identified 23 press releases.

To identify the news stories that discussed the Blue Bell recall, we searched the LexisNexis Academic Source database using the keywords 'blue bell' and 'listeria' or 'recall' during the time period of March 13, 2015, to January 25, 2016. The news stories were limited to those in the United States. This combination of search terms and geographic area yielded 268 articles; however, 200 were removed due to being duplicates or not relevant to the Blue Bell ice cream recall. The final sample had 68 articles from a variety of news sources across the U.S.

The units of analysis were the paragraphs within each press release and news story. This allowed us to determine both the presence and extent of postures, sources, and topic areas within each type of communication.

Coder Training and Interrater Reliability

To analyze the sample, a researcher-developed codebook was created (Brooks, 2017) that adapted material from previous literature (Worawongs, 2009) to determine the characteristics – posture, sources, and topic area – used for each press release and news story. Prior to data collection, we conducted coder training to familiarize coders with the content being analyzed.

One undergraduate student and one graduate student served as coders. The coders went through a practice training and studied a series of different press releases and news stories that were not part of the research sample (Lombard, Snyder-Duch, & Bracken, 2002). The press releases and news stories were chosen from a more recent Blue Bell recall of cookie dough. The coders were able to talk through their thoughts and concerns about the topic before they were given additional articles to code for the pilot test.

In the pilot testing phase, two coders independently analyzed eight news stories and three press releases using the researcher-developed codebook – 10% of the actual data to be used (Lombard, Snyder-Duch, Bracken, 2010). The press releases and news stories for the pilot test were randomly sampled from the press releases and news stories included in the study (Riffe, Lacy, & Fico, 2005). After coding, data were entered into Microsoft Excel and uploaded to Reliability Calculator for two Coders (ReCal 2). ReCal 2 is a free, web-based service that calculates intercoder reliability for two coders (Freelon, 2010). The intercoder reliability analysis used Cohen's kappa coefficient, κ, to verify coherence among raters. According to Lombard et al. (2002) the "coefficients with .90 or greater are nearly always acceptable, .80 or greater is acceptable in most situations, and .70 may be appropriate" (p. 600). When it comes to Cohen's kappa, a lower criterion is acceptable; however, a reliability level of .80 or higher was chosen to meet the *a priori* reliability standards.

Of the eight news stories, there were 61 variables that had to meet the intercoder reliability agreement (see the list of variables below). Twenty-one did not meet the reliability of $\kappa > 0.80$. Of the 59 total variables in the press releases, 51 variables met the reliability of $\kappa > 0.80$ or higher. The variables that did not meet the set of reliability standard were evaluated and clarified with the coders in another meeting. The coders reached agreement ($\kappa > 0.80$) on the variables that did not originally meet acceptable intercoder reliability standards. All disagreements and concerns were addressed and the codebook was altered to clarify any unclear descriptions. With an acceptable level of intercoder reliability reached, the remaining 60 news stories and 20 press releases were randomly divided between the two coders who proceeded to code them using the codebook.

Variables of interest

Crisis response postures. To determine how the Blue Bell recall was framed, we used Coombs' (2015) four crisis response strategies (i.e. postures): deny, diminishment, rebuild, and bolster. The deny posture involved Blue Bell trying to remove any connections it had with the crisis and included: attacking the accuser (e.g. crisis manager confronting the person or group claiming something is wrong with the organization), denial (e.g. crisis manager asserting that there is no crisis), and scapegoating (e.g. crisis manager blaming some person or group outside the organization for the crisis) (Coombs, 2015). The diminish posture attempts to reduce attributions of organizational control and reduce the negative effects of the crisis and includes excusing (e.g. crisis manager minimizing organizational responsibility by denying intent to do harm and/or claiming inability to control the events that triggered the crisis) and justification (e.g. crisis manager minimizing the perceived damage caused by the crisis). The rebuild posture's goal is to improve the organization's reputation through taking some responsibility and includes compensation (e.g. crisis manager offering money or other gifts to victims) and apology (e.g. crisis manager indicating the organization takes full responsibility for the crisis and asks stakeholders for forgiveness). The bolstering posture aims to build a positive connection between

the organization and their publics by showing support from the organization for its stakeholders and includes reminding (e.g. tell stakeholders about the past good works of the organization), integration (e.g. crisis manager praising stakeholders and/or reminding them of past good works by the organization), and victimage (e.g. crisis managers reminding stakeholders that the organization is a victim of the crisis too) (Coombs, 2015).

The coders coded each paragraph into one of these postures, which served as a way to frame the information. For paragraphs that did not fit one of the four postures, coders had the option to code the variable as general information. General information was identified as any factual, objective, or unbiased information.

Sources. To identify which sources the press releases and news stories relied on for information, the total number of quotes and paragraphs from each source was counted. A Blue Bell Creameries representative, U.S. Government representative, Expert, Ice Cream Consumer source, Ice Cream Retailer source, and Other source were all options available to be coded as sources. The coders were asked to identify who the source was for each direct quote. The sources were adapted and modified to fit into this study from Worawongs (2009).

Topic areas. To identify what the source was explaining in the press releases and news stories, the coders were given potential topic areas: General Comments, Plans and Predictions, Food Safety Regulation, Apologetic Tone, Supportive Tone, General Scientific Finding, Instructions for Ice Cream Consumers, Discussion of Past Food Recalls, Deaths and Injuries (associated with the product recall), and Other. The topic areas were adapted from Worawongs (2009). The coders were asked to assign the topic to one of these topic areas for every paragraph that contained a direct quote from a source. There could only be one topic area for each source quote.

The coding process was completed over a two-week period. The coders recorded their data into Excel files, which were then imported into SPSS v. 22. Descriptive statistics were calculated to answer the research questions.

Results

RQ1: What crisis communication response strategy postures, sources, and topic areas are present in Blue Bell press releases regarding the 2015 Blue Bell ice cream recall?

Table 1 provides a summary of the frequency of postures found in the press releases. An analysis of the postures indicated that out of 23 press releases sampled, the deny posture was present in four (17.4%) press releases. The diminish posture was identified in six (26.1%) of the press releases. The rebuild posture was found in 78% ($n = 18$) of the 23 press releases. The bolster posture was found in 10 (43.5%) press releases.

Table 1
Frequency of Crisis Response Postures in Press Releases (N = 23)

Times Identified	Deny		Diminish		Rebuild		Bolster	
	f	%	f	%	f	%	f	%
0	19	82.6	17	69.6	5	21.7	13	56.5

1	3	13.0	4	17.4	--	--	8	34.8
2	--	--	--	--	6	26.1	1	4.3
3	--	--	2	8.7	6	26.1	1	4.3
4	1	4.3	--	--	4	17.4	--	--
5 or more	--	--	--	--	2	8.6	--	--

Note. Multiple postures could appear in the same press release.

Coders assigned each paragraph in the press releases to one of the four postures or to the "general information" category. Of all the paragraphs in the press releases ($N = 144$), the most predominant posture was rebuild, which was identified in 59 paragraphs (41.0%). Paragraphs that provided general information were the second most common representing 38.2% ($n = 55$) of the paragraphs. The bolster posture was represented in 13 paragraphs (9.0%) and the diminish posture was found in 10 paragraphs (6.9%). The least used posture was deny, found in seven (4.9%) paragraphs.

As the coders read and analyzed each paragraph of the Blue Bell press releases, they identified direct quotes and coded these to identify the source and what topic area the source was talking about. Eight press releases had no quotes. Blue Bell officials were quoted in 15 of the 23 press releases. U.S. government officials, experts, and "other" sources were each quoted in one press release; these also contained an additional quote from a Blue Bell source. Ice cream consumers and ice cream retailers were not quoted in the press releases.

Out of 144 paragraphs found in the press releases, 31 paragraphs (21.5%) were quotes from Blue Bell officials. Because these represented the majority of quotes included in the press releases, Table 2 provides a summary the topics these quotes addressed. The topic "Plans and Predictions" was recorded in 20 (64.5%) of the 31 paragraphs that contained quotes from Blue Bell. Quotes that addressed "Apologetic Tone" were found in seven (22.6%) paragraphs, and "Food Safety Regulation" quotes were identified in two (6.5%) paragraphs.

Table 2
Topic Areas Represented in Quotes from Blue Bell Sources in Press Release Paragraphs (N = 31)

	f	%
Plans & Predictions	20	64.5
Apologetic Tone	7	22.6
Food Safety Regulation	2	6.5
Deaths & Injuries	1	3.2
General Comments	1	3.2
Supportive Tone	0	0.0
General Scientific Finding	0	0.0
Instructions for Ice Cream Consumers	0	0.0
Discussion of Past Food Recalls	0	0.0

RQ2: What crisis communication response strategy postures, sources, and topic areas are present in news stories about the 2015 Blue Bell ice cream recall?

Table 3 provides a summary of the frequency of postures found in the news releases. Out of 68 news stories sampled, the deny posture was found in four (5.9%) of the 68 news stories. The diminish posture was identified in 10 (14.7%) of the news stories. The rebuild posture was found in 89.71% (*n* = 61) of the 68 news stories. The bolster posture was identified in 32 (47.06%) news stories.

Table 3
Frequency of Crisis Response Postures in News Stories (N = 68)

	Deny		Diminish		Rebuild		Bolster	
Times Identified	*f*	%	*f*	%	*f*	%	*f*	%
0	64	94.1	58	85.3	7	10.3	36	52.9
1	4	5.9	3	4.4	7	10.3	18	26.5
2	--	--	2	2.9	12	17.6	4	5.9
3	--	--	3	4.4	5	7.4	4	5.9
4	--	--	--	--	10	14.7	2	2.9
5 or more	--	--	2	2.9	27	39.7	4	6.0

Note. Multiple postures could appear in the same news story.

Coders assigned each paragraph in the news stories to one of the four postures or to a "general information" category. Most new stories (n = 65, 95.5%) had at least one paragraph that

contained general information that could not be placed within of the four posture categories. Of all the paragraphs in the news stories (N = 1,064), the most predominant posture was general information, identified in 675 (63.4%) of the news story paragraphs. The rebuild posture was found in 281 paragraphs (26.4%) followed by the bolster posture found in 78 paragraphs (7.3%) and the diminish posture found in 26 paragraphs (2.4%). The least used posture was deny, found in only four of the paragraphs (0.5%).

To identify the sources and topic areas in news stories about the 2015 Blue Bell ice cream recall, the coders read and analyzed each of the 1,064 paragraphs to identify direct quotes then determined who the source was and what topic area the source was quoted talking about. Blue Bell officials were quoted the most, found in 48 (70.6%) of the 68 news stories. U.S. government sources were quoted the second most frequently, found in 21 of the news stories (30.9%). Expert sources were found in 20 of the news stories (29.4%), ice cream retailers were quoted in 17 stories (25.0%), ice cream consumers were quoted in 8 news stories (11.8%). The least common source quoted were those identified as "other" in three (4.4%) of the 68 news stories. These "other" sources were a school district spokesperson, a high school coach, and an executive of a different ice cream company.

Out of 1,064 paragraphs found in the news stories, the majority did not contain a quote (n = 720, 67.7%). Blue Bell officials were the most common source quoted, appearing in 96 paragraphs (9.0%). Experts were quoted in 73 paragraphs (6.9%), followed by U.S. government officials (n = 56, 5.2%), ice cream retailers (n = 52, 4.9%), ice cream consumers (n = 49, 4.6%), and others (n = 18, 1.7%). The topic areas present in quotes from sources in news stories are shown in Table 4. The topic "Plans and Predictions" was found in 34 (35.4%) of the 96 paragraphs where a Blue Bell source was quoted. "Discussion of Past Food Recalls" and "Deaths and Injuries" were not quoted by any Blue Bell sources.

Table 4

Topic Areas Represented in Quotes from Sources in News Stories

Topic Area	Blue Bell official (*n* = 96)		U.S. Government official (*n* = 56)		Experts (*n* = 73)		Ice Cream Consumers (*n* = 30)		Ice Cream Retailers (*n* = 49)		Others (*n* = 18)	
	f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
Plans & Predictions	34	35.4	2	3.6	9	12.3	0	0.0	6	12.2	2	11.1
Supportive Tone	17	17.7	4	7.1	6	8.2	21	70.0	11	22.5	1	5.6
General Comments	16	16.7	8	14.3	28	38.3	9	30.0	28	57.1	11	61.1
General Scientific Finding	11	11.5	18	32.1	4	5.5	0	0.0	1	2.1	0	0.0
Apologetic Tone	10	10.4	0	0.0	1	1.4	0	0.0	0	0.0	0	0.0
Food Safety Regulation	7	7.3	13	23.2	18	24.7	0	0.0	1	2.1	1	5.6
Instructions for Ice Cream Consumers	1	1.0	3	5.4	0	0.0	0	0.0	2	4.0	0	0.0
Discussion of Past Food Recalls	0	0.0	1	1.8	6	8.2	0	0.0	0	0.0	3	16.6
Deaths & Injuries	0	0.0	7	12.5	1	1.4	0	0.0	0	0.0	0	0.0

Note. Multiple topic areas could appear in the same news story.

"General Scientific Finding" was the topic quoted the most from U.S. Government sources with 18 (32.1%) of the 56 paragraphs. "Food Safety and Regulation" was the second most common topic quoted with 13 (23.2%) paragraphs. Quotes from expert sources were typically General Comments (*n* = 28, 38.4%). For Ice Cream Consumers, the most common topic area in quotes was the "Supportive Tone" (*n* = 21, 70.0%), followed by "General Comments" (*n* = 9, 30.0%). All other topic areas were not quoted at all by Ice Cream Consumers. In quotes from Ice Cream Retailers in news stories, "General Comments" was the most common with 28 (57.1%) of the 49 quotes from this source. "Apologetic Tone", "Discussion of Past Food Recalls," and "Deaths and Injuries" were not present in any quotes from Ice Cream Retailer sources in news stories. "Other" sources were quoted 18 times in the news stories and 11 (61.1%) of those included "General Comments".

RQ3: What is the difference in presence of postures and sources between press releases and news stories regarding the 2015 Blue Bell ice cream recall?

Table 5 displays the comparison of postures between press releases and news stories. Rebuild was the most common posture found, present in 18 (78.3%) press releases and 61 (89.7%) news stories. The deny posture was found the fewest times in only four (17.4%) press releases and four (5.9%) news stories.

Table 5
Crisis Response Posture Comparison between Blue Bell Press Releases and News Stories

	PR (N = 23)		NS (N = 68)	
Posture	*f*	%	*f*	%
Rebuild	18	78.3	61	89.7
Bolster	10	43.5	32	47.1
Diminish	6	26.1	10	14.7
Deny	4	17.4	4	5.9

Note. Multiple postures could be identified in each press release and news story. Total does not equal 100%

Table 6 presents the comparison of quoted sources between the press releases and news stories. Within the press releases, a Blue Bell official was quoted 31 (21.5%) times out of 144 paragraphs. A Blue Bell official was also the most commonly quoted source in news stories with 96 (9.0%) paragraphs out of 1,064 total paragraphs. Ice Cream Consumers were not quoted in any press releases; however, they were quoted in 30 (2.8%) news story paragraphs, but this was the most infrequently used source.

Table 6.
Source Comparison by Paragraph between Blue Bell Press Releases and News Stories

	PR (*N* = 144)		NS (*N* = 1,064)	
Source	*n*	%	*n*	%
No Quote	110	76.4	742	69.7
Blue Bell	31	21.5	96	9.0
Experts	1	0.7	73	6.9
U.S. Government	1	0.7	56	5.3
Others	1	0.7	18	1.7
Ice Cream Retailers	0	0.0	49	4.6
Ice Cream Consumers	0	0.0	30	2.8

Conclusions, Discussion, & Recommendations

The CDC estimates nearly 17% of the U.S. population becomes sick each year from eating contaminated food and 3,000 people die (CDC, 2018a). The economic cost of addressing just the medical expenses and lost income for foodborne illnesses tops $15 billion (Flynn, 2014). These costs are not including the financial loss companies face when they must issue a food

recall, which can typically be $10 million (Grocery Manufacturers Association, 2010). Food recalls create a crisis situation for companies, which makes effective communication crucial because of the need for information (Coombs 2012). This study explored how that information was disseminated through company press releases and the subsequent media coverage to identify specific crisis response strategy postures, quoted sources, and topics presented therein.

Overall, Blue Bell's press releases indicated the company followed Coombs' (2006a, 2006b, 2007c, 2015) SCCT crisis communication strategies, which suggest what organizations should do in times of a crisis. Among the four postures, rebuild was dominant, which was used to convey Blue Bell was immediately trying to improve and restore the company's reputation by taking some responsibility of the crisis and by apologizing to consumers for the food safety concerns (Coombs, 2015). Caldiero et al. (2012) noted the press release is a common way for an organization to frame an issue during a crisis. Blue Bell's press releases indicated the company was focusing on pulling through the recall and providing transparency about the process. Deny was the least commonly used posture, identified in only four of the press releases.

In the analysis of quotes present in the Blue Bell press releases, it was not surprising that the sources were predominantly Blue Bell officials. Using company spokespeople allowed Blue Bell to address the "plans and predictions" for the company as it dealt with the recall. Emphasizing this aspect allowed the organization to participate in the framing process as Entman (1993) noted because these quotes were then available for subsequent media coverage.

The content analysis of the news stories about the recall revealed a similar pattern to the prevalence of the postures in the press releases. The rebuild posture was the most dominant posture in the news stories, appearing in all but seven news stories, and deny was the least common. This implies the news media were predominately framing the crisis the same as Blue Bell did in its press releases. If organizations are actively communicating to the public their stories and using their specific frames, then the media can also employ the same frames (Coombs, 2015). At the paragraph level, the majority of paragraphs in news stories were coded as "general information", which is logical given the media's role to provide more objective information about a situation.

The analysis of quoted sources present in the news stories found a wider variety of sources were used in news stories compared to press releases, which is similar to what Lee and Basnyat (2013) found in their comparison of press releases and news coverage. The sources used in news stories fell into six categories compared to three in the press releases. However, Blue Bell sources remained the most common primary source in these news stories and the quotes appeared to be attempting to restore its reputation by emphasizing "plans and predictions". Quotes from Ice Cream Consumer sources indicated a "supportive tone", which is a promising finding for an organization as it works to use crisis communication to restore its reputation, brand, and consumer trust (Coombs, 2015).

As Coombs (1999) noted, creating frames for understanding a crisis is an effective crisis communication strategy. This study conceptualized the frames as crisis response postures and how those postures were presented in company-created materials and subsequent media coverage. Because framing can happen at a variety of stages including an individual, an organization, and the media (Scheufele, 1999), it is important to examine the presentation of crisis communication information from various communication channels. While the organization has the ability to frame the message being shared, how the media presents it is typically how the public will form their perceptions of the crisis (Cho & Gower, 2006; Holladay, 2009; Liu & Kim, 2011). This implies that communicators responsible for sharing information during a crisis

need to be aware of how that message is being disseminated through subsequent communication channels to the targeted audience.

This study provided an examination of crisis communication response strategies related to one specific food recall. Additional studies should use this approach to investigate the flow of communication from organizations to media outlets during other crisis communication efforts. Examining a broader set of situations will help identify patterns in how organizations use the four postures to communicate effectively during these stressful times. Previous studies have explored television coverage during a recall (Irlbeck et al., 2014; Nucci et al., 2009), and including this type of content in future research would provide a better understanding of how information is disseminated via this platform. Additionally, providing information during a crisis is not limited to the traditional media outlets. Online communication and social media platforms provide another way for organizations to share information. Opat et al. (2018) examined Blue Bell's Facebook content related to this crisis, demonstrating the potential of researching an organization's crisis communication efforts across multiple platforms. The current study focused solely on press releases published by Blue Bell Creameries, but other entities (e.g. FDA, CDC, USDA, and ice cream retailers) were providing information during this recall. Future research should explore how the information from various sources may be in agreement or disagreement and what impact that has on consumers' understanding of the issue and influence on attitudes and behaviors. Finally, future research could be conducted from the consumer's viewpoint regarding the crisis situation. Findings from this type of study would benefit companies by providing insight as to what actual consumers are thinking and feeling during a recall and how that could affect an organization's reputation, image, and recovery.

The findings in this study have a few implications for future practice. First, organizations should continue to provide information during a recall. While this study only looked at company press releases, other communication outlets are available (i.e. social media, websites) and should be used to practice effective crisis communication. When appropriate, communicators within the impacted organization should focus on the rebuild posture in communication materials to issue an apology and take responsibility, which can improve the organization's reputation during the crisis (Coombs, 2015). Practitioners should also provide consistent messages in communication materials and include quotes from company representatives that support how the organization wants the issue to be framed. For journalists, this study demonstrates the types of sources typically used in coverage of a recall and the types of information each typically provided. This is a useful resource for those beginning a reporting career or unaccustomed to reporting on these types of issues.

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