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Media Coverage of E. Coli Contaminated Spinach:
Sources and Messages Chosen by National and Local Print Media

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Submitted to:

College of Communication and Information
29th Annual Research Symposium
Knoxville, TN
February 16, 2007

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In August, 2006, spinach tainted with E. coli was found responsible for infecting 199 persons in 26 states across the United States. Men, women, children, and seniors were affected with 102 individuals hospitalized and 31 developing some type of kidney failure. The primary dates for the illnesses were reported between August 19 and September 5.

The E. coli outbreak resulted in three confirmed deaths including an elderly woman from Wisconsin, a two-year-old child in Idaho, and another elderly woman in Nebraska. Other deaths are being investigated, including a woman who died in Maryland on September 13 after consuming fresh spinach.

E. coli O157 was isolated from 13 packages of spinach supplied by ill patients living in 10 states. As a result, the Centers for Disease Control and Prevention (CDC) suggested consumers should not eat, retailers should not sell, and restaurants should not serve spinach implicated that was implicated in the E. coli outbreak – primarily those processed by Natural Selection Foods (Centers for Disease Control and Prevention, 2006).

Situations such as these allow crisis communicators and public relations professionals to investigate the messages that are created during a crisis situation, the sources that are utilized, and the messages that are conveyed – through the media – to key stakeholders during the crisis. The purpose of this paper is to extend analysis of the crisis messages framed by the media coverage regarding the sources of information and the message strategies used by these sources during the E. coli spinach crisis.

Crisis Communication

Crisis may be defined differently depending on the source. Guth (1995) stated:

crisis has, in many respects, been subject to the level of same ambiguity as the term *art*. While one person's trash may be viewed as another person's treasure, one person's incident is often viewed as another's crisis (p. 125).

Coombs (1999) addressed different organizations having different ideas about what constitutes a crisis, as he differentiated between less significant incidents, which do not severely threaten organizational values, and crises, which do. Fearn-Banks (2001) incorporated threat in her definition of crisis when she defined it as a "major occurrence with a potentially negative outcome affecting an organization as well as its publics, services, products, and/or good name. It interrupts normal business transactions and can, at its worst, threaten the existence of the organization" (p. 480). Similarly, Pearson and Clair (1998) addressed the frequency and impact of the event as they defined a crisis as "a low-probability, high-impact event that threatens the viability of the organization and is characterized by ambiguity of cause, effect, and means of resolution, as well as by a belief that decisions must be made swiftly" (p. 60).

Coombs (2005) summarized these elements when he stated that while a crisis is unpredictable it can often be expected, has the ability to disrupt an organizations' operations, and can threaten the organization, industry, or stakeholder. As such, when crisis is assessed from an organizational perspective, as with crisis management, the primary goal is to decrease damage inflicted by the crisis.

As such, the *E. coli*-contaminated spinach and its production and distribution to an unknowing public could be considered a crisis. The responsible organization should have expected such a crisis (i.e. possible food contamination) and had crisis communication plans in place. However, the contamination had the ability to and did disrupt their operations as they attempted to locate the source of the contamination. Additionally, the organization's reputation

and the well-being of its stakeholders were threatened. All of which, for the purpose of this study, assist in classifying this incident as a crisis.

Coombs' Crisis Response Strategies

The symbolic approach to crisis communication is based on the assumption that crises are threats to an organization's image (Allen & Caillouet, 1994) and that the elements involved in a crisis influence the communication choices and strategies selected during those crises (Coombs, 1995; Hobbs, 1995). Coombs (1998) posited these communication strategies are, in fact, "symbolic resources crisis managers employ in hope of protecting or repairing the organizational image" (p. 178). He investigated crisis responsibility or the degree to which stakeholders blame an organization for a crisis. As a result, Coombs found that perceived personal control over a crisis (organization has control over crisis) was related to crisis responsibility and organizational image while external control (external agents could control the crisis) was not. Performance history, having been involved in one or more crises, was also found to increase perception of crisis responsibility – meaning that each new accident should be treated as a transgression. It is interesting that crisis damage, or the severity of the crisis, did not intensify the perception of crisis responsibility or damage to image.

Coombs (1998) organized crisis response strategies into seven categories. He then placed them on a scale from defensive to accommodative continuum. Defensive strategies were used to protect the organization while accommodative responses address concerns of the victims. Listed from defensive to accommodative the strategies include:

1. Attack the accuser – aggressively deny claims of crisis and punish the accuser.
2. Denial – claim there is no crisis or that the organization is uninvolved.
3. Excuse – admit there is a crisis but minimize organizational responsibility.

4. Justification – admit a crisis exists but downplay its severity.
5. Ingratiation –create positive impressions of the organization by reminding stakeholders of past good works, associate the organization with positive qualities, or both.
6. Corrective action – attempt to repair crisis damage, prevent a repeat of the crisis, or both.
7. Full apology – take responsibility for the crisis

Understanding stakeholder perception of crisis responsibility can assist one in selecting crisis communication strategies. Accommodative strategies are usually preferable when an organization has committed a wrongdoing (Coombs, 1999). Benoit (1997, 2000) argued organizations at fault during a crisis situation are best served by admitting fault, apologizing, and employing corrective action as part of their crisis communication plan. He (1997) posited organizations should communicate their plans to correct or prevent the problems that led to the crisis, thus assisting to avoid future crisis.

While organizations sometimes fear legal ramifications from expressing a full apology, Fitzpatrick (1995) argues it is possible to take responsibility for negative actions without facing litigation. She suggested those responsible for crisis communication work closely with an organization's legal representatives.

Crisis communicators also face challenges during crises situations as, from a legal standpoint, it is often thought an organization should never admit liability or speculate about the cause of what happened. This is in direct conflict with the questions that are usually asked by media representatives immediately following a crisis situation as they attempt to gather information for affected publics (Regester & Larkin, 1997).

Fitzpatrick (1995) suggested being familiar with the legal issues facing the organization when planning and implementing crisis communication strategies. She stated that before making statements an organization should consider the potential for legal liability. However, she acknowledged regret can be expressed without accepting responsibility for causing a crisis. This can allow an organization to exhibit concern for those affected by the crisis while avoiding speculation about the actual cause, consequences, or liability.

Coombs and Holladay (2001) investigated how the relationship between an organization and its various stakeholders and its past crisis history affected a crisis situation by fueling the perceptions of the crisis and the organization involved in the crisis. They found that relationship history does affect how people perceive an organization and the organization involved in the crisis. When no relationship history is given, respondents gave the organization the benefit of the doubt and assumed a positive relationship or history existed. Unfavorable relationships were found to lead to the perception that an organization is responsible for a crisis. A favorable relationship or crisis history was found to be no different than a neutral one.

Framing

Media framing occurs when journalists or editors "select some aspects of a perceived reality and make[it] more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for the item described" (Entman, 1993, p. 52). Entman states that a frame is something that defines a problem, meaning that when a journalist frames an issue, they are, in turn, elevating that bit of information in salience. Salience is defined as making a piece of information more noticeable and meaningful, or memorable to an audience.

According to framing theory, communicators, such as journalists, make judgments about what messages to send. As a result, the messages they send are frames which are manifested by the presence or absence of key words, phrases, images or sources of information (Entman, 1993). Framing researchers have used various methods to document media frames ranging from words used news stories and press releases (Miller, Andsager & Reichert, 1998) to actual message content (Ashley & Olson, 1998).

Einsiedel and Thorne (1999) stated a significant source of public information is mass media. As such, understanding framing can be beneficial to public relations practitioners by helping them as they try to better understand the ways that key stakeholders seek and process information during a crisis situation.

Gamson and Modigliani (1987) further defined the tie between the media and frames as they coined the term "media frames." The researchers claim that as the media create story lines, they organize and provide meaning to an unfolding strip of events. In other words, the researchers argue that the media frame suggests and drives the content of the news story or issue at-hand (Gamson & Modigliani, 1987). While the intent of media framing is questionable, researchers recognize that it may be an unconscious action (Gamson, 1989; Parenti, 1993). It is also necessary to note that media frames could be a necessary part of how news is processed. As Gitlin (1980) notes, the nature of news reporting requires that small portions of each day's larger events must be quickly identified, classified, and packaged on a regular basis for presentation to the media's select audiences.

Entman (1993) identified frames in four locations within the communication process: communicators, text, receivers and culture. "The text contains frames, which are manifested by the presence or absence of certain key words, stock phrases, stereotypical images, source of

information, and sentences that provide thematically reinforcing clusters of facts or judgments” (p. 52). This paper focuses on frames within text while analyzing the selection and salience of issue, sources, and message type in three national newspapers and one local newspaper, postulating the following research questions and hypotheses:

RQ1: Who did print media frame as news sources during the crisis?

It is important for public relations practitioners to know what sources are chosen for publication. During a crisis, it would appear that the organization responsible for the crisis would have the most information available related to the crisis, therefore making them prime candidates as sources. However, Callison (2001) found that company and public relations sources are perceived as less credible than other sources. As a result, the following hypothesis was drawn:

H₁: Articles in the sample contained more government sources than other measured sources.

RQ2: What response strategies did the news sources use?

Natural Selection Foods was found responsible for the E. coli-tainted spinach. Following crisis communication strategies outlined by Benoit (1997, 2000), which stated that the company should therefore follow a corrective action message strategy, it is hypothesized that:

H₂: Articles in the sample contained more corrective action strategy messages than other measured crisis message strategies.

RQ3: Did local or national print media frame news sources differently?

The proximity of the local paper to Natural Selection Foods results in the following hypothesis:

H₃: Local articles in the sample utilized company sources more often than national articles.

Similarly, because it is hypothesized that there will be an increased use of company spokespersons by the local newspaper, the following is hypothesized:

H₄: Local articles in the sample utilized corrective action message strategies more often than national articles.

Methodology

This paper examines media framing of a crisis event – to describe what frames were used and what frames dominated news coverage. This study utilizes content analysis as public relations practitioners can use content analysis based on research questions related to any number of attributes of coverage, such as the presence or absence of particular themes (Lindenmann, 1983). Similarly, framing research, utilizes some aspects of content analysis but differs by also counting textual elements as equally salient and influential. In addition, it focuses on the most salient clusters of messages – the frames – and their relationship and influence on audience's schemata (Entman, 1993).

Three national and one local print media were selected for the study. The time period included six months prior to the date the data was collected (November 17, 2006). This included the date of the original E. coli report in September 2006.

This study utilized LexisNexis and Factiva databases to search for stories related to the health crisis. National newspapers included the *New York Times*, *USA Today*, and *Wall Street Journal*. These newspapers were chosen because of their national reach and readership. The local newspaper was the *San Jose Mercury News*. This newspaper was chosen because of its close proximity to the company, Natural Selection Foods, where the E. coli-tainted spinach was produced.

Key terms used to search the database included spinach and E. coli. The database search resulted in 26 local articles and 85 national articles. Unrelated articles were eliminated (one from the local articles and 16 from the national articles). Each article was coded for five variables. The variables included news source, type of news article, main topic of article, source, and Coombs' response strategy.

Coding was conducted by one coder. Ten percent of the sample was randomly selected, using SPSS, and re-coded by a second coder. Inter-coder reliability test did not include all the variables. For example, attack the accuser was not included. However, for the variables that were coded, all showed sufficient reliability. McNemar's test was run to test the reliability and all p-values were equal to 1.000 which indicates to a high degree that the two coders were statistically in agreement.

News sources were analyzed in seven categories: (1) *government*, including local, state and federal; (2) *company*, including management or spokespersons and contracting companies' management or spokespersons; (3) *employees/families*, including present or previous company or contracted employees and their families; (4) *legal*, such as attorneys representing specific companies, employees and residents; (5) *medical*, such as doctors, emergency technicians or hospital spokespersons; (6) *industry*, such as associations, near-neighbor facilities and unions; and (7) *community*, including activists, formal and informal community leaders and residents (Palenchar, 2001). There were 75 sources used in the national print media articles and 57 sources used in local print media articles resulting in a total of 132 sources used in the sampled 94 articles.

Coombs (1998) aforementioned crisis response strategies (attack the accuser, denial, excuse, justification, ingratiation, corrective action, and full apology) were also coded. An

additional category, other, was added to cover responses that did not fit into Coombs responses strategies.

Results

RQ1: Who did print media frame as news sources during the crisis?

 Insert Figure 1 About Here

Seventeen of the sampled articles used company sources. Those that used company sourced did so a minimum of one time and a maximum of two times, using company sources on average 1.29 times. Community sources were used in eight articles. In those articles they appeared between one and six times, averaging 2.25 times.

H₁ was supported. Articles in the sample contained more government sources than other measured sources. Government sources were the most used sources, appearing in 56.4% of the articles. These sources were present in 53 articles a minimum of one time and a maximum of five times, averaging 1.6 times per article. The next source category, employees/families, were not used as sources in any of the articles.

Industry sources were the second most used source and were found in 43 articles. They were used between one and seven times in the articles in which they appeared, averaging 2.16 times per article.

Legal sources were used in nine articles. They were referenced a minimum of one time and a maximum of two times with an average of 1.11 uses per article. Medical sources were found twice in the sample and were used a minimum of once and a maximum of twice in the articles in which they appeared, resulting in an average use of 1.5.

RQ2: What response strategies did the news sources use?

 Insert Figure 2 About Here

There were too few cases of medical sources, so the variable was removed and the data was re-run. Attack the accuser, justification, ingratiation, and full apology had small numbers and were not included in the results.

There was a significant difference among sources and the use of denial with company sources using this strategy 27.3% of the time followed by government with 2.4%. However, there were no significant differences found in the use of sources and excuse strategy.

H₂ was supported as corrective action strategy was used 36.4% of the time by company sources which was significantly higher than other sources. Industry used this strategy 21.5% of the time with government sources following at 16.5%.

There was also a significant difference in the use of “other” messages. These were primarily used by community sources (94.4%), legal (90%), and government (80%). Company sources were least likely to use this as a message strategy with only 22% of their messages falling into this category.

RQ3: Did local or national print media frame news sources differently?

Of the variables that were analyzed (those with high enough occurrences), the following results were found in the sampled national and local print media. There were no significant differences in the use of company, community, government, employees, families, or industry sources. Therefore, H₃, stating that local articles in the sample utilized company sources more

often than national articles, was not supported. It should be noted that medical sources was removed because of the small number of cases in the sample.

Insert Figure 3 About Here

When analyzing the messages that were selected for use from each source, there were no significant differences in the use of denial strategy. However, there was a significant difference in the use of excuse as a message strategy with national papers only using the messages in 5.8% of the articles while the local paper utilized it in 24% of the articles.

The largest difference appeared in the use of corrective action messages. A significant difference was found as national papers used these messages in 13% of their articles and it was present in 60% of local articles. Therefore, H₄, stating that local articles in the sample utilized corrective action message strategies more often than national articles, was supported. There was also a significant difference in the other messages used in national and local papers with national papers using the messages in 63.8% of the articles and local articles using them in 96% of the articles.

Analysis

Government and industry sources were the primary sources used by the national and local media sources in the sample. Company sources, the primary source of the crisis, were used third. This is disconcerting for public relations practitioners who work to provide messages to their key stakeholders and publics during a crisis situation. Sturges (1994) stated that the information required and expected by stakeholders provides an opportunity for an organization – when it provides the information – to cultivate the perception that it understands the components of the

crisis and is in control of the situation. When companies and organizations' spokespersons are not utilized as sources this function is hampered.

The large number of government sources is probably attributed to the fact that the E. coli contamination was monitored by the CDC. As such, the CDC issued regular statements about the number of deaths and illnesses related to the E. coli. The CDC also shared information with the media about the safety of spinach in general while the company sources primarily focused on their specific products.

Along those lines, company sources utilized denial strategies by stating that there were no confirmations that the tainted spinach came from their company or that the spinach was safe to consume. Additionally, they were more likely than industry and government sources to use corrective action strategies by discussing actions their organization was taking to make sure spinach was E. coli-free or that it would be free from contamination in the future. Industry and government sources also used corrective action strategies when discussing broad corrective strategies such as implementing regulations or possible public policy changes.

Again, noting Fitzpatrick's (1995) research, it is interesting to observe there were no full apology crisis messages coded from the sample. This may be related to the fear that an apology can be construed as an admission of guilt and therefore used as a basis for litigation.

It is also interesting that community, legal, and government sources were most likely to use message strategies that fell into the broad other category while company sources were least likely to use this message strategy. Messages in the other category most often included general information about spinach, lawsuits, or the safe handling of spinach. It appeared that since this message strategy was used less by company sources, they were attempting to keep messages "on point," i.e. provide corrective action messages.

The fact that excuse and corrective action were used more often in the local newspaper than in the national newspaper is interesting. It appears that the local paper was more likely to carry messages relating that the E. coli contamination was not entirely the fault of the company or that the company was taking actions to make sure that the spinach was safe or that there would not be further contamination. This might be because of the proximity of the paper to the company sources and the relationship the reporters have with these sources. Fink (1984) suggested conducting crisis communication before a crisis – while an organization still has the opportunity to establish good working relationships with various media outlets. These relationships may have affected the messages used in the articles.

Conclusion

Conscientious public relations practitioners must work to understand how media frame issues and the affect these frames have on an organization's key stakeholders and publics. Doing so allows for a better understanding of how journalists process news and provides the opportunity for public relations practitioners to assist in filling the communication and information gaps that are often created during a crisis situation.

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Figure Caption

Figure 1. *Number of sampled articles that used coded sources*

| Source | Number of Articles with Source present | Minimum times source appears in each article | Maximum time source appears in each article | Mean time source appears in each article |
|------------|--|--|---|--|
| Company | 17 | 1 | 2 | 1.29 |
| Community | 8 | 1 | 6 | 2.25 |
| Government | 53 | 1 | 5 | 1.60 |
| Industry | 43 | 1 | 7 | 2.16 |
| Legal | 9 | 1 | 2 | 1.11 |
| Medical | 2 | 1 | 2 | 1.50 |

Figure Caption

Figure 2. *Response strategies utilized by sources*

| Crisis Message Strategy | Source/Percentage used | Pearson Chi-Square Sig. |
|-------------------------|------------------------|-------------------------|
| Denial | Company, 27.3 | .000 |
| Excuse | N/A | .146 |
| Corrective Action | Company, 36.4 | .049 |
| Other | Community, 94.4 | .000 |

Figure Caption

Figure 3. *Crisis message strategies used by local versus nationally sampled papers*

| Crisis message strategy | National articles with strategy | Local articles with strategy | Pearson Chi-Square Sig. |
|-------------------------|---------------------------------|------------------------------|-------------------------|
| Excuse | 5.8% | 24.8% | .011 |
| Corrective Action | 13.0% | 60% | .000 |
| Other | 63.8% | 96.0% | .022 |