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As the distance between lay consumers and food producers and processors increases, the mass media become more important in conveying information about food safety to the general public. This study shows how food safety issues have been marginalized by reporters, as coverage tends to cluster around crisis situations. Data were collected from articles indexed in the Readers' Guide to Periodicals for the twelve years, 1986-1997. In addition to the quantitative analyses, coverage within the most popular magazines of two issues—mad cow disease and Alar—are examined. It is argued that food safety issues are not only marginalized, but are removed from consumer arenas into technical arenas.

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As the distance between lay consumers and food producers and processors increases, the mass media become more important in conveying information about food safety to the general public. This study shows how food safety issues have been marginalized by reporters, as coverage tends to cluster around crisis situations. Data were collected from articles indexed in the *Readers' Guide to Periodicals* for the twelve years, 1986-1997. In addition to the quantitative analyses, coverage within the most popular magazines of two issues – mad cow disease and Alar — are examined. It is argued that food safety issues are not only marginalized, but are removed from consumer arenas into technical arenas.

Current estimates from the Center for Disease Control are that nearly 76 million people are affected by food-borne illnesses each year in the United States, with approximately 5000 of those cases ending in death. In addition, food-borne illnesses have cost United States (U.S.) taxpayers and businesses more than \$40 billion in medical bills and lost productivity in recent years (Bruhn & Schutz, 1999). The causes of food-borne illnesses are various, with some arguing that improper handling of food is the cause for most problems (Kafenstein & Sims, 1987). With this many people adversely affected by their food, and knowing that safe food handling may help prevent a majority of food-borne illnesses, it is important to understand the information we are receiving

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concerning food safety. Some of the most prominent vehicles for information transfer in our modern era are mass media organizations (Thompson, 1995), yet it is an empirical question as to whether these organizations are in the position to develop effective communication in regard to food safety.

The inability of mass media organizations to develop comprehensive campaigns on a topic such as food safety issues is not intrinsic to the issues but stems from current journalistic practices. While part of the development of popular journalism – which refers to such popular newspapers, news magazines, and television network news as *The New York Times*, *Newsweek*, and *ABC Nightly News*, as compared to trade and scholarly journals – stems from business pressures to construct a product that sells (Bagdikian, 1992), another aspect of current journalistic practices is the idea that journalists are an interpretive community. The main goal of this paper is to investigate the degree to which this interpretive community simultaneously covers food safety issues. If it is found that these topics tend to cluster within specific time frames, then an argument can be made that these issues are marginalized in the sense that there is no continuity or connection to some larger agenda.

Mass Media as Interpretative Process

The interpretive process of journalism encompasses a number of different aspects. Zelizer (1993) has argued that journalists should be considered an interpretive community whose work is based largely on interpretations of watershed events such as Edward R. Murrow's attack of Senator Joseph McCarthy and the Watergate investigation. According to Zelizer's (1993) account, when Murrow attacked McCarthy, he was demoted by his network. Later, when it became clear that Murrow was correct in challenging McCarthy, journalists interpreted his work as courageous and a model for future journalists. The fame and fortune of a few journalists that came with the downfall of the Nixon Administration gave impetus for a new type of investigative reporting, even though at the time of the Watergate investigation some of the journalists were punished for their actions.

Zelizer (1993) argues that journalists, in addition to interpreting their own history, are also involved in an interpretive process at the time they and their colleagues are covering

stories. One way this has manifested itself is in the use of the same sources within and across stories. Shepherd (1979), for example, found that once a scientist was willing to grant an interview, that same scientist was often used by reporters even on topics not related to their own research. Dunwoody and Ryan (1987) also found that some scientists were more popular among journalists than others. This tendency to interview the same sources is not relegated to scientists alone, as spokespersons on political issues are treated much the same (Hoynes & Croteau, 1991).

The consequences of using the same sources over time are various. For example, as sources become familiar with their opponents, they begin to attack other sources on a personal level in addition to discussing the topic being covered (Ten Eyck, 1999). This type of news reporting, in turn, leaves the reader with little information to make informed decisions on the topic. Instead, the role of the audience is to be a passive audience of news that is presented in such a way that only experts can handle the problems (Dahlgren, 1980).

A possible third aspect of the interpretive process of journalism could be found in the clustering of stories, or a bandwagon effect. This would be characterized by different media outlets covering the same issues at the same time, and/or an issue being covered only within a specific time period. If this occurs with issues related to food safety, then it can argued that these issues are marginalized. The concept of marginalization is typically reserved for a collection of vulnerable individuals (e.g., Davidson & Schwarzweller 1995; Parkin 1979; Powell & Clarke 1975), but, much like a marginal group, food safety has no specific voice. It is an issue which is dependent on advocacy groups to gain media attention. The mass media, though, are characterized by limited carrying capacities which force advocacy groups to struggle for power amongst themselves (Hilgartner & Bosk, 1988), making it necessary to choose strategies which fit the logic of reporting but may not present the issue in an effectual manner for the consumer (Ten Eyck, 1999). Instead, what is being discussed is the marginalization of a symbol. Shields (1991) has argued that the marginalization of geographical place involves both a spatial separation from important urban areas and popular travel destinations, as well as a cultural separation from mainstream culture. The latter process typically involves

“being the site of illicit or disdained social activities” (Shields, 1991, p.3), and classifying the place as unidimensional. If this definition is used to make sense of media presentations, then stories which deviate from normal reporting *and* are treated as unidimensional in both time and cultural space would be considered marginal. The degree of marginalization of food safety can be investigated by looking at patterns of reporting. It is hypothesized that if a statistically significant majority of articles on an issue are published within a set time period (12 months), then the issue has been marginalized. A related hypothesis to be tested is that most mass media coverage of food safety issues are presented in clusters.

Consumer Perceptions of Food Safety

The focus of this paper is not on consumer attitudes or perceptions concerning food safety, though mention should be made of recent studies that highlight how the media can influence consumer behavior. Bruhn and Schutz (1999) surveyed 605 California consumers and found that 15% felt they were very knowledgeable about food safety, while 19% felt they were not very knowledgeable (65% described themselves as somewhat knowledgeable and 1% said they were not at all knowledgeable). It was found that consumers were most confident with information from *Consumer Reports*, followed by science magazines, and felt that print media were more reliable than television.

Among college students, Unklesbay, Sneed, and Toma (1998) found that only about 50% of respondents knew that the elderly were more vulnerable to foodborne illnesses than teenagers. Mean scores on items such as pesticides used on fruits and vegetables may be potentially harmful, and belief that foodborne illnesses are common showed that college students are not too distressed about their food, though they did tend to say that people should be concerned with food safety. They also felt that raw seafood seldom posed a risk, and that immersing fruits and vegetables in cold water would remove most pesticide residues. The authors came to the conclusion that the low knowledge scores revealed a lack of understanding of food safety, which would affect food handling, food preparation, and perceptions about risks associated with food among this group of respondents.

Finally, Jussaume and Higgins (1998) surveyed consumers in the U.S. and Japan about their concerns toward food safety and the environment. While they did not find support for socioeconomic factors in predicting food safety concerns, they did find that consumers who tended to be health-conscious consumed more vegetables. Lastly, they found a negative relationship between thinking the government is doing a good job on protecting the food supply and food safety concerns. This last piece of information shows that food safety concerns are not wholly constructed at the individual level, but encompass information coming from various groups and organizations.

These perception and attitudes do not develop in some void. They are constructed through personal experience, media discourse, and public wisdom. It is assumed that the personal experience with food systems is becoming more attenuated within the lay public, and so media discourse will play a major role in developing knowledge in this area. For that reason, attention is now directed to patterns of media coverage of food safety issues.

Methods

All articles from 1986 to 1997 in the *Readers' Guide to Periodicals* indexed as either food contamination or food poisoning, as well as all articles related to these topics, were included in this study. This twelve-year period was chosen for two reasons: first, twelve years was felt to be an adequate time frame to look for patterns of journalistic practices; secondly, 1997 was the last complete year of the *Readers' Guide to Periodicals* at the time of data collection, which may be important in considering possible impacts on current consumer concerns and practices.

This twelve-year period resulted in 664 articles. Not surprisingly *FDA Consumer* carried the most articles ($n = 134$; 20.18%), followed by *Consumers' Research Magazine* with 58 articles (8.73%). In terms of the most popular magazines, *Readers' Guide to Periodicals* includes 32 of the top 52 magazines in terms of 1997 paid subscriptions. These magazines ran 159 articles on food safety, accounting for 23.95% of all articles. Separate analyses will be conducted for all magazines and those ranked to be most popular.

Quantitative Findings

Among all magazines, articles on food safety ran in 136 of the 144 months under study (94.44%), while the most popular magazines published articles in 87 of the months (60.42%) — which is an average of 1.65 articles per month when at least one article appeared. In other words, on average it was more likely for two articles from the most popular magazines to appear in any month than just one article appearing. In fact, 114 articles (71.70%) ran within the same month (less than 31 days) as another article, while 153 (96.23%) of the articles appeared within one month (less than 62 days) of another article. This general pattern of coverage does point to potential clustering of articles.

If clustering does exist, it would involve more than just time alignments between magazines and/or articles. The issues covered would also have to coincide across magazines. A striking example of this can be found in the coverage of a *Primetime Live* expose concerning meat processing at Food Lion grocery stores. One magazine covered the story when it first aired in 1992. When Food Lion took ABC to court in 1996-97, 11 stories were published between December 1996 and March 1997. While this may seem somewhat extreme — a clustering of media stories around a media story — it does highlight the possibility of a more generalized trend. Table 1 shows how the issues were covered across all magazines.

It should be noted when reading Table 1 that there was a change in the way some food-borne diseases were covered. For example, *E. coli O157:H7* in hamburgers were a major news story in 1993 when a number of individuals consumed undercooked hamburgers from Jack in the Box restaurants in the Seattle-Tacoma area. By the mid-1990s, many stories began grouping *E. coli* with campylobacter, listeria, salmonella, and staphylococcus. No longer was the focus on a specific bacterium, but on the risks associated with this group of pathogens. For this reason, these articles are grouped together in one category, which should actually weaken any clustering effects. In addition, diseases linked specifically to seafood, such as scombroid, ciguatera, and red tides, have also been grouped together under fish/seafood.

The second column in Table 1 shows how often an article was accompanied by an article on the same topic within the

Table 1 <i>Topic Clusters for All Magazines</i>				
Issue (# of articles)	Number of months with at least 1 article	Number of months with at least 2 articles	Number of months with article appearing in adjacent month	Twelve month period with most articles appearing
Bacteria* (136)	83	33 (45.21%)	73 (87.95%)	21 (15.44%) [8/87 - 7/88]
Pesticides (118)	67	30 (44.78%)	59 (88.06%)	32 (27.12%) [1/89 - 12/89]
Pollution (72)	42	17 (40.48%)	33 (78.57%)	13 (18.06%) [2/89 - 1/90]
Industry Prep (48)	42	5 (11.90%)	26 (61.90%)	8 (16.67%) [2/92 - 1/93]
Home (42)	40	2 (5.00%)	24 (60%)	8 (19.48%) [1/97 - 12/97]
Pests (32)	27	4 (14.81%)	15 (55.56%)	7 (21.88%) [7/88 - 6/89]
Mad Cow (29)	15	5 (33.33%)	9 (60.00%)	21 (72.41%) [3/96 - 2/97]
Other Problems (29)	28	1 (3.57%)	8 (28.57%)	6 (20.69%) [9/93 - 8/94]
Fish/Seafood** (25)	22	3 (13.64%)	13 (59.09%)	5 (20.00%) [2/92 - 1/93]
Animal Drugs (25)	21	3 (14.29%)	10 (47.62%)	7 (28.00%) [4/88 - 3/89]
Botulism (22)	18	4 (22.22%)	6 (33.33%)	7 (31.82%) [1/86 - 12/86]
Alar (20)	16	2 (12.50%)	4 (25.00%)	11 (55.00%) [2/89 - 1/90]
Law/Regulation (20)	18	2 (11.11%)	3 (16.67%)	7 (35.00%) [8/93 - 7/94]
Media (13)	6	3 (50.00%)	4 (66.67%)	12 (92.31%) [12/96 - 11/97]
Dioxin (12)	12	0	2 (16.67%)	5 (41.67%) [9/88 - 8/89]
Cyclospora (8)	4	1 (25.00%)	2 (50.00%)	7 (87.50%) [7/96 - 6/97]
Cholera (5)	5	0	0	3 (60.00%) [12/91 - 11/92]
Hepatitis (5)	5	0	2 (40.00%)	3 (60.00%) [7/87 - 6/88]
Glycoalkoid (3)	3	0	0	3 (100.00%) [7/87 - 6/88]
*Includes articles covering E. coli, campylobacter, listeria, salmonella, and staphylococcus **Includes articles covering scombroid, ciguatera, and red tides.				

same month. While only one topic — media coverage of the Food Lion expose — reaches the 50% mark (i.e., in one half of the months in which one article appeared, at least one other article appeared), six other topics reached 20%, and six under 10%. Since many of the magazines indexed in *The Readers' Guide to Periodicals* are monthlies, the number of articles appearing on the same topics in adjacent months was examined. When magazines are given time to catch up with each other, a much greater likelihood is found that magazines would publish articles on the same issues within this time frame. Of the 19 topics listed, 10 are over 50%, another five are over 20%, and only two — cholera and glycoalkoid — fall below 10%.

Table 1 also shows a strong tendency for articles covering most topics to cluster within a one-year time period. Since 12 years of coverage have been included in this study, it would be expected that one-twelfth (8.33%) of the articles concerning any topic would appear within any 12-month time frame. No topic falls under the 10% mark, and only four of the 19 topics fail to reach the 20% mark, with seven over 50%. In other words, every issue was statistically significantly clustered within some 12-month time period¹, though total coverage of the issue was likely to fall within a few years. Only four issues — pesticides, bacteria, industry preparation, and pollution — were covered in at least one article all twelve years.

Articles appearing in the most popular magazines show only a few changes. Table 2 shows that fewer topics were pursued by the most popular magazines, and the clustering within a one-month time period is not as pronounced. Six of the 12 topics in which at least two articles appeared had no clustering within a month, and only one topic — cyclospora — reaches 50%. When adjacent months are taken into account, more clustering is seen. Only three topics fall below the 10% mark, six topics are over 50%, and only one other topic falls below 20%. A 12-month period expected to show 8.33% of articles on any one topic to appear within an 12-month time frame, shows that only one topic — home preparation — falls below

¹ This is true for coverage across all magazines and those that were more popular. Every chi-square test for issues on which ten or more articles appeared was significant at the .01 level. Chi-square tests for issues with less than 10 articles were not conducted, as statistical tests for sample sizes this small are very tenuous.

Table 2 *Topic Clusters for Most Popular Magazines*

Issue (# of total articles)	Number of months with at least 1 article	Number of months with at least 2 articles	Number of months with article appearing in adjacent month	most article appearing in twelve month period
Bacteria* (47)	35	8 (22.86%)	27 (77.14%)	12 (25.53%) [1/97 - 12/97]
Pesticides (30)	25	4 (16.00%)	16 (64.00%)	10 (33.33%) [1/89 - 12/89]
Home (21)	21	0	12 (57.14%)	4 (19.05%) [10/90 - 9/91]
Pollution (13)	13	0	2 (15.38%)	4 (30.77%) [6/91 - 6/92]
Industry Prep (9)	9	0	0	4 (44.44%) [8/91 - 7/92]
Mad Cow (8)	5	1 (20.00%)	2 (40.00%)	6 (75.00%) [4/96 - 3/97]
Alar (7)	6	1 (16.67%)	2 (33.33%)	5 (71.43%) [2/89 - 1/90]
Botulism (4)	3	1 (33.33%)	2 (66.67%)	3 (75.00%) [3/86 - 2/87]
Cyclospora (4)	2	1 (50.00%)	1 (50.00%)	4 (100.00%) [7/96 - 6/97]
Other Problems (4)	4	0	0	2 (50.00%) [4/94 - 3/95]
Fish/Seafood** (3)	3	0	0	2 (66.67%) [3/86 - 2/87]
Media (3)	3	0	2 (66.67%)	2 (66.67%) [1/97 - 12/97]
*Includes articles covering E. coli, campylobacter, listeria, salmonella, and staphylococcus				
** Includes articles covering scombroid, ciguatera, and red tides.				

20%, and seven topics are over 50%. Even with home preparation, a type of clustering does appear. Twelve of the 21 articles (57.14%) appear within the same three months each year — July, August, and November. The focus of these articles was typically food, warm weather and holiday meal preparations. Finally, the only topic which appeared in at least one article each year was pesticides — very likely a consequence of the controversial character of pesticide management.

Two Qualitative Examples

While the statistical findings do point out a tendency for news stories concerning food safety to cluster, we can also

investigate the content of the stories. The following two examples are meant to elucidate what readers were given during two food safety crises. The first, mad cow disease, was chosen because a study was done on the coverage of this topic in Europe. The second, Alar, was chosen for the fact that the story contradicted public wisdom.

Mad Cow

According to Poulsen (1996), in the Spring of 1996, popular media reporters declared that a disease which had affected over 100,000 cows in Europe for over a decade could be transferred to humans. The human form of this disease — Bovine Spongiform Encephalopathy (BSE) or mad cow disease — was said to be similar to Creutzfeldt Jacob Disease (CJD), which attacks brain cells, causing neurological problems and eventual death. This possible linkage between a deadly human disease and a food source seemed to make for an ideal media story, since, as Poulsen explained, there was never any scientific proof that BSE was transferable to humans. While mad cow disease was tied mainly to the United Kingdom, it did receive coverage in the U.S. — 29 total articles; eight in the most popular magazines. Among those eight articles, 6 (75%) appeared within a one-year period (April 1996 - March 1997). Poulsen argues that European coverage was based on emotions and sensationalism, but what about the U.S. press?

In reviewing the eight articles appearing in the most popular magazines, the first one appears in July 1990 in *U.S. News and World Report* (July 2) with the headline, “Gloom, Gloom on the Range: Is Britain’s ‘Mad Cow’ Disease Headed Across the Atlantic?” According to this article, the chances of a human infection is practically zero (“nil”), but look at the first and last paragraphs of the article:

Pity the poor beef industry. Bloodied by environmentalists, animal-rights activists and the health establishment, U.S. cattle ranchers are bracing for yet another unkind cut — this time from the land of the Beefeaters.

... Because transmission of the disease among cows remains a mystery, some believe there is a genetic link and are urging ranchers to slaughter entire herds if even one cow develops the disease. Such a step could cost Britain as much as half of its \$3.6 billion market. “How

else can one escape from the cycle?" shudders Catherine Mack, a farmer in Somerset. "The thought of it is too horrific to contemplate." If the virus strikes bovines in the U.S., the beef industry could see even loyal customers stampeding for the salad bar.

While there is no linkage here between mad cow disease and human infestation in these paragraphs, word usage is telling. Words such as "bloodied," "horrific," and "stampede" are being used to frame this story early, though the next article did not appear in a popular journal until April 1996.

On April 1, 1996, both *Newsweek* and *Time* published articles on mad cow disease. According to the *Time* article:

For years British government officials have repeated the message: The "mad-cow disease" that has killed thousands of British cattle over the past decade represents no danger to humans. Just last December Prime Minister John Major insisted that there was "no scientific evidence" that the fatal brain infection, called bovine spongiform encephalopathy (BSE), could be transmitted through beef products.

The British public was thus doubly stunned last week when a government-appointed scientific commission indicated just the opposite. The commission had discovered a new strain of a deadly disorder called Creutzfeldt-Jakob disease and suggested that the likely cause for its spread was BSE. The announcement sent a wave of alarm across Europe. By week's end all but two European Union countries had banned British beef, and nations as far away as New Zealand and Singapore had done the same, cutting off trade that earns Britain \$780 million a year. The U.S. has not permitted the import of British beef since 1989, when questions about its safety were first raised.

The colorful language of the 1990 article is missing, at least in these first two paragraphs, though a "suggestion" is taken as proof of a linkage between mad cow disease and CJD. It is not until the last paragraph that we learn that most people who are susceptible to the disease were probably exposed prior to 1990. There is also no mention of an article appearing in *Science* on March 29, 1996, which stated that the evidence used by the government-appointed scientific commission was "scant."

Two other articles appeared in April, and another in May in *Discover*. Here are the first two paragraphs from that article:

Can humans catch a fatal disease by eating infected beef? No one knows for sure, but a few suspicious deaths have shaken the British.

Shepherd's pie, a mashed-potato-and-beef conglomeration foisted upon generations of British children, has been struck off the menu in over a thousand schools throughout the United Kingdom. Gone also are hamburgers, beef stew, beef sausages, and even Yorkshire pudding, that drippings-soaked symbol of British culinary aplomb. Why? Fear of bovine spongiform encephalopathy (BSE), also known as mad cow disease, is sweeping Britain. The disease, thought to be caused by rogue proteins called prions, eats away at cow brains, eventually killing the cows. This nation of beef eaters is worried that mad cow disease may spread to humans.

There does seem to be a fatalistic bent at this point, though the tone does change latter in the article:

But can cow prions infect humans? That is, can a prion from a BSE-infected cow brain alter the normal human Prp protein, converting it into an agent of Creutzfeldt-Jakob? The answer is far from clear. The most direct evidence comes from John Collinge, a neurologist at London's Imperial College School of Medicine at St. Mary's, who has run a series of rather complex experiments to try to answer the question. Since he couldn't experiment on humans, Collinge studied mice genetically engineered to carry only the human gene for PrP and not the mouse one. Unlike normal mice, these can be infected with human CJD: when Collinge injected them with cells from the brain of a patient who had died of the disease, the mice soon developed its characteristic symptoms — hunched posture, a wobbly walk, and a tendency to fall. They died within 200 days. Autopsies revealed the sponginess in the brain typical of CJD.

... Finally, Collinge did the acid test: he injected cow prions into the brains of mice that carried only human PrP genes. That experiment is still going on. The mice are now more than 400 days old and still healthy —

indicating, perhaps, that BSE prions cannot convert human protein. But normal mice in previous experiments have developed symptoms of BSE as much as 700 days after inoculation, so it's still possible that the mice with human genes will get the disease. Collinge will have to wait at least another year before giving them the all clear.

While this does seem to be more technical than the earlier paragraphs, notice how quick the writer is to blame the deaths of the mice on BSE -- 200 days, yet 400 days does not seem to be enough proof that BSE cannot be passed onto humans — the frame of mad cow disease causing CJD seems to have a strong hold over reporters.

The final article appeared in a popular magazine in July 1997. This article appeared in *Consumer Reports*, with the headline “Can it Happen Here? The Puzzle of Mad Cow Disease.” The slant of this article was to point out that mad cow disease was caused by feeding cattle food containing the remains from other animals (for protein), and that U.S. cattlemen should ban the use of such feed. By this time, other popular magazines had taken up the cause of adulterated animal feed (*U.S. News and World Report* — September 1, 1997) and irradiation of beef (both *Newsweek* and *Time* had articles on irradiating beef appear in their December 15, 1997 issue).

The rise and (relative) fall of mad cow disease in the popular press is interesting, as it continues to be a controversial topic in more specialized journals, such as *The Lancet*, *New England Journal of Medicine*, and *Journal of the American Medical Association*, all of which are used by journalists as sources of information, yet journalists seem to be concerned with other topics. One possible explanation is that after the intense coverage in the Spring of 1996, nothing new has appeared. Another possible explanation is that an incubation period of 20-30 years for CJD meant that no epidemic would be forthcoming in the immediate future — the time line most reporters must deal with.

Alar

In October 1987, *Consumer Reports* issued a warning about the use of Alar, focusing on the threat it posed to infants through apple products. This sets a frame by showing that one

of our most valuable assets is at risk. Still, it was not until the late winter and early spring of 1989 that other popular magazines discussed the possible linkage between Alar and cancer for all consumers. On February 13, *Newsweek* published a story concerning an EPA's crackdown on Alar, which stated:

For almost 3 years the Environmental Protection Agency has vacillated over daminozide, a chemical that makes apples ripen, redden and stay fresh. Daminozide, known by its trade name Alar, has long been a suspected carcinogen, and as a result of public pressure many but not all American growers stopped using it after 1985.

Why did it take so long for the popular press to pick up on this story? After all, the warnings had been given four years earlier, and the article in *Consumers' Reports* had developed a frame nicely suited for media logic (Altheide & Snow, 1991).

What seemed to be missing was a legitimate claimmaker, which did not appear until 1989 in the form of actress Meryl Streep and the Natural Resources Defense Council. The importance of a newsworthy claimmaker becomes clear as both *Time* and *U.S. News and World Report* ran articles the following month (both on March 27). According to the *Time* report:

. . . it was the Government's failure to apply a safe-rather-than-sorry standard to another fruit that set off a . . . fruit frenzy a week earlier. It started with a report from the Natural Resources Defense Council, a nonprofit environmental group, that apples treated with the growth regulator Alar were soaking small children with dangerously high levels of daminozide, a possible carcinogen. *60 Minutes* aired the story, and actress Meryl Streep, now a leading lady in the fight against pesticides, was quickly booked solid on talk shows and Capitol Hill. Soon apples were ordered removed from school cafeterias in New York City, then Los Angeles and Chicago. Said one school official: "It was overreaction and silliness carried to the point of stupidity.

The story carried by *U.S. News and World Report*, does give some advice to consumers on how to handle fresh produce, though the framing is much the same:

First, the Natural Resources Defense Council [NRDC]

warned that pesticides were poisoning our kids, and schools across America yanked apples from their menus. Then, the U.S. government banned produce from Chile after cyanide showed up in two grapes. Is our food supply so tainted that candy is safer than salad?

The answer is no. Food-related horror stories, like tales of razor blades in Halloween apples, make gripping news, but their threat to health is vastly exaggerated. No deaths from the current cyanide scare have been reported. . . . The easiest way to limit produce hazards is to select fruits and vegetables more carefully, not give them up. . . .

The problem boils down to one of risk. The NRDC, which focused attention . . . through ads featuring actress Meryl Streep . . . fingered Alar, used on 5 to 10 percent of the nation's apples, as the chief culprit. But the Environmental Protection Agency says NRDC's data were incomplete and that the Alar risk is 100 times less than the level claimed. . . . Whatever the total risk, it can be minimized. Washing and peeling produce eliminates most [pesticide] residue. That won't work for Alar, which is absorbed. Many supermarkets have signs telling whether their apples, apple juice and applesauce are Alar-treated.

The prominence of Streep is clear, and even though this article questions the facts and figures given by NRDC, as well as the media coverage of Alar, it still gives a warning message — that risks can be minimized and that if someone is using Alar it should be avoided.

In October 1989, *Newsweek* ran another article on Alar, stating that the makers of Alar — the Uniroyal Chemical Company — had halted Alar sales in June and that the first completely Alar-free apple harvest was in, but that it meant picking the apples earlier, greener, and that consumers might still be unwilling to buy the product. The final article appeared in the October 1990 issue of *Reader's Digest*, which attacked the NRDC. According to the article, "once again, it seemed, an environmental watchdog and a vigilant press had protected us. There was only one problem. Not a shred of credible scientific evidence proved that anyone was ever in danger."

What is interesting in these later articles (March 1989

through October 1990), is the frame had shifted from consumers beware to a battle between industry, government, and environmental groups. Once Meryl Streep entered the picture, the frame seemed to shift in order to take advantage of her notoriety. At the same time, consumers were left to feel that their part to play was diminished, as the problem would be solved within some technical arena in which the lay public has little or no knowledge or power.

Interpretation

If media stories tend to cluster, they will cluster around crisis situations. Interpretations of these events will revolve around disdain, causing the issue to be marginalized. If consumers typically hear about food safety because of a problem, and food is important to their sense of self and/or cultural identity, then it is likely they will treat food safety as something to ignore if possible. If we return to the definition of marginality as something disdainful, illicit, and unidimensional, then we can see why the public might want to distance themselves from the topic. They only hear about the issues when there is a crisis — which means a threat to their food habits; people are getting sick and/or dying — a threat to their health. In addition, much of the coverage of food safety is presented in such a way that audience members may come to believe that the only people who can solve the problems are experts. This gives those attached to the media control over treatment of one of the most power cultural icons — the food supply. This, in turn, is impetus for activist groups to develop strategies to gain the media limelight around food safety issues for the purpose of gaining public support for their continued existence.

A second interpretation is that journalists often turn essentially consumer issues into struggles between major power sources — government, industry, and activist groups — again rendering them beyond the reach of the average consumer. Articles that did focus on what consumers could do to prevent foodborne illnesses (keep food either cool or hot, maintain refrigerators at a certain temperature, etc.) tended to be confined to certain types of magazines, especially female-oriented magazines such as *Redbook* and *Good Housekeeping*. More often, the message was to avoid the food under question until the “right” side won the issue. In addition, it is not sufficient to say that the media always chose to be conservative or

liberal in these matters, as the slant of *Time* was typically different from that of *Reader's Digest*. As noted by Gamson, Croteau, Hoynes, and Sasson (1992), the media is polysemous. What is consistent across the reporting is the level of source information. The typical situation was to quote sources upstream from consumers, highlight one side over the other, but not to give consumers an clear indication of what they should do.

Finally, the importance of issues which fit media logic should not be overlooked. While various issues were covered over the years, it was only those that posed a major threat (death and cancer) or those that had opposing sides (industry vs. government vs. activist) that gained and maintained major coverage, such as pesticides, bacteria, and pollution. Major causes of foodborne illnesses that are rarely fatal, but do cause major discomforts and lost productivity, such as the Norwalk virus, rarely get more than passing mention. In addition, once it is shown that effects might not be known for years, reporters quickly move onto more episodic issues (Iyengar, 1991). This is also true of issues that are not food related, such as political-military affairs (what is the current situation in Haiti or Grenada?), technological issues (what is happening at the Hanford Nuclear site?), and crime (what are the repercussions of white collar crime?) These and other issues are rife for investigating what is being reported as well as what is missing in the coverage.

Conclusion

Food safety was ubiquitous in the mass media between 1986 and 1997, but issues tended to cluster around certain problematic situations. Bruhn and Schutz (1999) found that while consumers may be aware that food safety was a concern, they were often unaware or unsure of their own roles in this area. As the distance between lay consumers and food producers and processors increases, the most likely source of information on food safety for the lay consumer is the mass media (Powell & Leiss, 1997). If journalists continue to cover food safety issues only when problems occur, then we can expect a majority of consumers to continue to treat this as a marginal topic — something that is disdainful. For those with agricultural and food interests, this means weathering the storms of negative press coverage and challenging negative images.

This study is meant to be a critical examination of media practices, but I also feel there are numerous opportunities for improved relations between journalists and those involved in processing and protecting our food. Given that journalists work in the trading of information, one possible solution would be for journalists to build stronger networks with food safety experts. Given the cultural resonance of food, more coverage of food safety concerns should not alienate readers; it needs to be tied into the larger cultural aspects of food. In addition, the various work that is being done in this arena could make for very lively reporting. At the same time, food safety experts need to realize the power of popular media and spend more time cultivation relationships with journalists. While food and food safety are important issues to consider, there are numerous resonate issues that could be constructed in much the same way.

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