

Reporting and reading: surveys on the perception of journalistic coverage of food safety in print and online

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ABSTRACT: The burden of effective communication is carried by journalists whose professionalism and credibility rest on how fairly and accurately topics are conveyed. There are advantages and limitations—in all media—toward these pursuits, and appropriate and constructive feedback is essential to furthering their successes. Bias has no place in good journalism, yet bias is nearly inseparable from the nature of journalism, a profession that draws on the experience, education, and understanding of the reporters and editors who create the content. Journalists are forced into a wedge of appealing to experts in the field, who can easily assess mistakes and find faults on many levels, with appealing to a public that can be undereducated, politically motivated, or simply scared and protective of their loved ones. For this reason, news articles can be looked at uniquely based on the background of the reader, and it is challenging to find a commonality to appeal to everyone. Surveys were distributed to two audiences—fifteen questions to journalists and fourteen questions to food-safety academics—to find where common ground can be reached and where improvements can be made in the quality of food-safety journalism. The questions are aimed at embracing each individual’s bias so as to learn how to journalists can better suppress it in future news coverage. Both groups highlighted the need for better communication and sourcing so as to understand the material and to present accurate and thorough reporting to the public. Closing the knowledge void was a priority for respondents in both surveys.

Introduction

Communication that’s clear, accurate, thorough, and timely is both an important and strategic component of the American food safety network. The public depends on not only being informed about critical issues in food health and technology, but that this information is available in a manner in which

they can access and understand it, so as to be able to apply relevant data to their daily lives. Scientific research, public policy, and recall notices are just a few categories of information that benefit from being skillfully communicated. Shortfalls in effective communication can endanger health on the local level and breed misinformation, partisanship, and confrontation on a broader scale.

Journalists—working in print, online, and television—are the gateways through which vast amounts of information are disseminated to the public. Though newspaper print circulation has been widely reported across the United States to be declining in recent years, many readers are instead choosing Internet-based media—which can deliver news, sports, and features content immediately—as their preferred outlets (Haughney, 2013). In television, CNN reshaped the face of its market more than thirty years ago when it began to bring comprehensive news coverage around the clock to cable and satellite subscribers. Players in that media segment in the United States include Fox News Channel, MSNBC, BBC America, and, more recently, Al Jazeera America, which launched in August 2013. Combined these channels are seen by millions of people each month (Kondolojy, 2014).

Print media suffers from two major disadvantages that directly impact the ability to communicate effectively. Reporters and editors are bound by a specific news cycle when writing for a newspaper or magazine. There is a time when the article needs to be submitted to an editor, as well as a time when it must be placed on a page, have its headline and other relevant feature elements written, and then proofread—all of which are completed before deadline. Then there is time spent printing and delivering the physical product to readers, which in newspapers' case is typically four to six hours. The disadvantage here is that the publication often must sacrifice the timeliness of its content. Furthermore, a physical product is always going to have space limitations. Advertising, editorial manpower, and the costs of paper and ink are the four largest players in determining how much content can go into a particular publication. And when one article must compete for space with another article, sometimes information is stripped from the article to make it fit in the space allotted. The thoroughness of the article could suffer. It is largely an editor's job to determine which information is most vital and which can be removed without damaging the tone or the newsworthiness of the piece.

Online media is not bound by the same two characteristics that hinder the communication success of print media. Web pages essentially have unlimited space, and media content can be disseminated to readers almost as quickly as it can be written by a reporter. However, a long-running complaint in the media industry is that articles posted online, even if on media websites, are not always properly vetted and contain more errors than are typically found in a print product. Newspapers and television station websites use their online outlets to convey information quickly and to follow developing stories through their progression. Information on a breaking-news food recall is often published in this manner, though this format is more commonly applied to ongoing criminal or public-safety events such as shooting investigations, multi-car highway accidents, or missing-persons searches. Accuracy—and by extension the credibility of the media outlet—is critical.

The effectiveness of a journalist's reporting is far more than the number of facts that are squeezed into an article. A journalist has to appreciate the perspective of his or her audience and write in a way that is of interest and that avoids being elitist. Proper word choices and transitions from subject to subject are highly valued for clarity, and the overall skeleton of an article should be able to capture the natural progression of the topic at hand. One of a journalist's best skills is being able to ask the questions about a topic that members of the public would themselves ask.

Unlike in the years prior to the 20th century, scientists are no longer the primary writers when it comes to sharing scientific topics with the public (Roland, 2009). Journalists are at the forefront of a group of commercial publishers, advocacy groups, and governments, among others, who are prolific communicators and have entrenched themselves in a growing number of fields. With this spread, however, should have come newfound responsibility and an ethical burden to be good stewards of information. It can be argued about how often certain parties meet those exceptional burdens. What has happened is that the availability of digestible information has helped to engage a wider audience (Roland, 2009) and, with an improving communication strategy and understanding, could help to lessen the knowledge gap between scientists and the lay public. Quality and integrity must be part of the equation, though.

While the majority of readers of a newspaper or Internet article are not experts in the field they are reading about, professionals who have dedicated large chunks of their lives working in a particular field are typically drawn to articles about their field—if for nothing else than to see how those in the media interpret the issues at hand and what is specifically being told to the public, right or wrong. These professionals, to include academic professors, researchers, trades people, and businesspeople, bring an overarchingly unique perspective to what is reported in the media. In many instances, these professionals are sought out by members of the media to provide insight and quotes to be used in news articles. And they can be some of the most expert critics of whether the reporting has remained faithful to a clear, accurate, and thorough portrayal of some of the most contentious issues and news events in the United States.

Oftentimes an article becomes a part of permanent record, adding great weight to its need to communicate and represent in the best way possible. This is especially true for print publications, whose pages are digitally enshrined by librarians and archivists across the nation, and to which access is given freely. Even on the World Wide Web, screenshots and page links can ensure that online content is never truly lost. Opening a dialog between those who convey information and those who are leading voices in their fields of expertise will help to create more effective communication in all formats.

Food is such an intimate part of people’s lives that reporting on food and food-safety issues can fall under heavy scrutiny. Many media outlets don’t have full-time food-safety or agriculture reporters, so articles on food-safety topics are typically written by health reporters or by those who primarily cover restaurants and cooking. The gap in media resources dedicated full time to food safety is clear, and it becomes important for everyone involved in the issues to recognize that and to best use the tools at their disposal.

The objective of this project was to glean a better understanding of how journalists approach food-safety and other agricultural reporting and how academic professionals in those fields perceive the results of that reporting.

Methodology

Two separate surveys were given to two different audiences (journalists involved with food safety and agricultural matters and academics with food-safety expertise). Survey questions were drafted by Ryan Tipps and evaluated by an advisory panel consisting of Dr. Renee Boyer, Dr. Robert Williams, and Dr. Monica Ponder. The final survey for journalists consisted of eleven multiple choice questions, three short-answer questions, and an analytical exercise. The final survey for academics consisted of nine multiple choice questions, four short-answer questions, and an analytical exercise. The surveys were administered through the website survey.vt.edu, which was also used to build them. Survey questions and other related information were approved through Virginia Polytechnic Institute and State University's Institutional Review Board before any action was taken to contact potential survey candidates.

The first survey, for professional journalists, was administered to seventeen journalists who all had at least some background in agriculture, health, or food reporting or editing. However, agriculture, health, or food reporting was not necessarily their primary field or the only field that they covered during their careers. The participants work in print or online journalism (or both) and have worked a significant part of their careers in Virginia. Specific survey participants were chosen from the author's personal experience and after researching those reporters and editors covering agricultural and food issues in the state. The survey consisted of fifteen questions. Survey questions covered a variety of topics, such as what source materials they use when they are researching or reporting on a topic, and how well they understand food-safety issues when they encounter them. While the multiple choice responses helped fill in the background and context for people's answers, it was the longer-form responses that elicited the greatest amount of insight.

The second survey, for academics with food-safety expertise, was sent to nineteen academics. Limiting this survey to just Virginia-based academics would have made the pool too small, so this survey was given to academic food-safety experts across the United States. Those solicited had advanced degrees that connect them to food safety, including doctorates in areas such as food science, food microbiology, or nutrition. Specific survey participants were selected at random from a list of nineteen academics that fit the criteria. This list was provided by Dr. Renee Boyer. This survey consisted of fourteen questions.

The surveys were sent out electronically, and participants were given approximately ten weeks to respond. A reminder was sent to each participant approximately two weeks following the initial request. To encourage participation, journalists completing the survey were entered into a drawing for a \$50 Amazon.com gift card. The drawing was completed at the end of the study. The academics who responded were not given an incentive. Responses to both surveys were anonymous.

Results for the survey of journalists

Eleven of the seventeen journalists responded to the survey for a response rate of 65%. Everyone surveyed had at least five years of experience in the media industry, and 64% were between the ages of 25-34, with the remainder being between the ages of 35-54. When reporting, story selection can come from their experience, and two people responded that they come up with their own story ideas.

Meanwhile, two others said that the ideas they report or edit come from a source other than other editors, industry experts, readers, or news releases.

Ten journalists said that the Internet was instinctively the first place they turned to in order to learn more about food safety and to verify facts, as well as to help them find material and experts to quote in news articles. A deep list of government and advocacy websites were cited as reference points for journalists.

Among them were:

- U.S. Centers for Disease Control and Prevention
- U.S. Department of Agriculture
 - USDA's Food Safety and Inspection Service
- U.S. Department of Health and Human Services
 - Food and Drug Administration
 - National Institutes of Health
- Virginia Health Department
- Virginia Department of Health Professions
- Kaiser Family Foundation
- Foodsafety.gov
- Environmental Working Group
- Mayo Clinic

Others included corporate and university websites, and online encyclopedias Britannica and Wikipedia. Amid all of this, though, the point reiterated among many of the respondents was the need for the site to be trustworthy and carry some sort of official designation with it, whether it be a government-run site or one

linked to a higher education institution. Accordingly, 73% in the survey found that government websites are difficult to navigate—so while information may be available, the complex web of links and layers can become barriers to accessing crucial elements.

In judging the difficulty of finding appropriate sources, most respondents (82%) felt it was an easy to moderate task. This is probably largely due to the depth of information on the Internet, which in general has gotten easier over the years as more data has been digitized and Internet search engines have attempted to become more precise in tailoring their results to individual users (Lee, 2011). The network of experts, whether academics or extension agents or company professionals, is extensive and has routinely been open to discussing their fields.

One of the most polarizing questions centered on a journalist's confidence in understanding the material when reporting on, editing, or reading a food-safety article. The split was 55% saying they did feel confident and 45% saying they weren't. It's reasonable to assume that if a journalist doesn't feel confident of their grasp of the material, they're more likely to introduce errors. It's debatable how far outside their comfort zones journalists should reach, and a lack of confidence could point to egregious lapses of reporting or research on the topic at hand. Despite the hesitations that were noted, everyone in the survey said that food-safety coverage is important. It plays out in the form of science, policy, and public perspectives, and journalists validate the value of that communication.

“Being balanced, clear, and understandable” was perhaps the most prolific theme to emerge when journalists were asked what their biggest concerns were when handling food-safety content. Nearly every journalist approaches a topic with baggage, background, skepticism, or opinions, and setting those notions aside allow for the greatest degree of fairness when handing news content. One person, who said that food-safety appears to have more balance in coverage than many other topics, nonetheless noted that food stirs passions and opinions, and said he's “sure it's as hard to divorce yourself from those biases as politics/climate change/social issues. And if you're editing and you agree with those biases, you might automatically pass them by.” One respondent was concerned about an appearance of “adversarial” reporting against the private food industry, even though the respondent said it's natural to believe that it's

counterproductive for a farmer to be intentionally sloppy with his food-handling practices. But even assuming that a farmer wouldn't take a production shortcut, whether for financial gain or any other reason, is in itself a biased perspective.

Other people spoke about looking for a local impact to a food issue or to be sure to frame an article in such a way that the context of the issue is relatable to the audience. Much of it depends on a newsroom's resources or a writer's or editor's available time. Shortages of either can contribute to instances of inaccuracy, especially with so many legal, political, and scientific intricacies that comprise food safety. There can also be, as one person in the survey noted, concern over whether an expert in the field is being completely honest or whether his or her statements are rooted in science or opinion. Sometimes certain perceptions are difficult to verify from a third-party source. For example, one survey question dealt with whether journalists favor organic production over conventional agricultural production, 64% of respondents favored organic production. The science on this topic is argued regularly in media and other outlets, and it's clear that journalists approach it with a built-in bias that caters to the popular vocal and growing organic movement, especially among a professional middle class of which many journalists are a part.

The most in-depth question asked involved an eight-paragraph article by The Associated Press dealing with a foodborne infections report by the Centers for Disease Control and Prevention (<http://bigstory.ap.org/article/food-poisonings-raw-milk-poultry-bacteria>). The article published in April 2013 led off by suggesting a link between the rise in *Campylobacter* cases and raw milk and poultry. Only near the middle of the article did the reporter finally point out that it's not known why *Campylobacter* cases are on the rise or from what food products the cases arrive. Despite the mention that overall foodborne illness cases have been steady in the United States, the article was aggressive in highlighting the negative news of the pathogen that was on the rise. When other pathogens were mentioned (*Salmonella* and *Escherichia coli*), there was no effort to make note of culprit species or to clarify the fact that so many species of *E. coli* are harmless. The article was chosen as a survey question largely because of the obvious lapses in reporting and editing, as well as the brevity of the piece.

Journalists who responded in the survey latched onto several deficiencies in the AP's work. At the forefront was the over-simplicity of the article, which went little beyond the CDC's report and failed to provide any context or scope to the report. Several people pointed out the void between what the headline and lead paragraph said about *Campylobacter*'s connection to raw milk and poultry and what the reality of the report said. No experts or advocates were voiced in the piece ("This is a reporter acting as an unquestioning stenographer for a government agency," a respondent said), and the lack of specific data raises some concern. One person argued that this was a fairly straight-forward and common practice for a typical news article in which the goal is simply to update the reader on the incremental advance of a topic. But the weight of the facts can cause a story such as this to buckle if those facts are unsupported in the writing. Raw milk, for example, is chastised in the leading sentence, but it is never revisited. Whether there is truth to the statement is wholly unclear because relevant facts are not presented. The response that "this story is a mess" sums up most journalists' reaction to reading it.

There are a few reasons why there are gaps in journalists' understanding of food safety and their abilities to cover the issues effectively. Most respondents said that they encountered the topic only every couple of months or less, which could be at least partly attributable to declining staffs at many publications and the paring out of full-time agriculture or food-related reporting beats. Media coverage often occurs only when there is an outbreak or related event, and while it is important to document and convey information during those times, what's missed are the changes to policy, science, and technology in the nation's food-safety system that happen along the way. The current system leaves reporters unfamiliar with the big picture and overly reliant on others to provide context. Additionally, reporting on outbreaks means that timeliness is critical and pressure to spread information is great, both of which are things that can cause an article to miss out on a thorough vetting.

Sixty-seven percent of journalists in the survey indicated that they had little knowledge when it comes to food-safety issues. That corresponds with the fact that only 36% had only a high school biology course, and 64% had a college course, with no advanced degrees or specialization in the field. Instead of specialized courses of study, journalists are trained at information gathering and often aren't expected to

have significant backgrounds in the fields they write about. Journalists often change beats, so even if they have a particular area of interest, there's no guarantee that they will get to cover that field. Still, there's little doubt that educational or professional experience in a topic would help in the accuracy and clarity on how a story is reported or edited. Amid all of this, it was split five to six over how well journalists felt that food-safety issues were covered in their respective publications. Even that perspective, though, could be rooted in subjectivity—one journalist could consider a story every month or two to be sufficient while another could see that as being too infrequent.

Results for the survey of food-safety academics

Eleven of the nineteen academics that were sent the survey responded for a response rate of 58%. The academics who were part of this survey are ones who the media reach out to when expert advice is needed. Ninety-one percent of the academics surveyed have been interviewed at least four times in the past five years, and have been working in the field for at least 15 years. They have a foundation to see firsthand how an interview translates into a written journalistic piece, and they weighed in on how bias, knowledge, and sincerity can come across in reporting. For instance, the academics picked up on favoritism toward organic production over conventional production, with 73% of respondents saying that there appears to be a media bias from a health and safety standpoint.

Errors can exist at all levels of media, and the academics did not note in the survey that there's a more egregious culprit when comparing local news outlets with larger national wire services (such as The Associated Press). This background and understanding of the journalists, as well as the availability of manpower and the writer's ability to clearly convey a topic, are sure to play a role in how accurate and balanced particular media outlets present themselves. When asked where the primary deficiencies lie, the respondents touched on a wide array of issues, whether it's again mentioning organic production ("I think the media sometimes gives the impression that in order to have a safe and nutritious diet, we need to be eating organic foods and locally grown foods instead of conventionally produced foods or foods from the grocery stores") or targeting a food rather than the storage or handling of the product as being the source of concern ("The important issue is that the handling/storage/preparation of the food is the important

reason that people may get sick from foods. Therefore, consumers overly focus on a food product rather than on food processing and preparation as a problem”).

The academics noted that reporting is often driven by a recent outbreak, and at least one person argued that reporters make a genuine effort to be fair in reflecting the uncertainty of such situations and the science behind them. And there may not always be a black-and-white answer to the complexity of an outbreak. While misusing virus versus bacteria is a clear-cut error, the level of background detail to include while delving into the food-supply chain and the associated food-safety pitfalls that live at every stage of it puts forth a more subjective appreciation for the accuracy and appropriateness of the topic at hand. The media has an opportunity to educate people whenever an article is written, and respondents often pointed to that fact as a major reason that journalists should communicate accurately and fairly.

In the survey, academics cited many of the same government websites that journalists mentioned as preferred reference places. Among them:

- Centers for Disease Control and Prevention
 - Morbidity and Mortality Weekly Report
- Food and Drug Administration
 - Center for Food Safety and Applied Nutrition
- United States Department of Agriculture
 - Food Safety and Inspection Service
- Foodsafety.gov

Building upon those were a host of other sources, some vague (academia, peer-reviewed scientific reports, and extension services) and some more specific (Clemson Home and Garden Information Center and the University of Georgia's National Center for Home Food Preservation). They all share a connection of established credibility and accountability, and as one person noted, those options are “better than the nutritionists that the media often uses.” However, one respondent warned about even government sites, accusing them of not being grounded in science and pushing recommendations that can be impractical.

With journalists trying to reach a public audience that may not have college or even high school degrees, there must be a balance between technical accuracy and oversimplification. Academics, for example, largely felt that the descriptions of problem microbials are too vague and that stereotypical

assumptions are among the handful of concerns that are transmitted through reporting. When asked how omissions of data and other inaccuracies fit in, the responses varied strongly. The length of an article was cited by one respondent as a contributing factor to the omission of data, and that can lead to other data points being taken out of context. The relationship of cause and effect can be unduly influenced and simply characterized incorrectly. This is best avoided by journalists who are approaching topics objectively and without a preconceived notion of trying to steer the reporting toward what he or she “believes”. Adding a layer to the academics’ perception is whether the news piece portrays food safety in a positive or negative light. Six of the eleven respondents said they are more critical of a piece if it’s negative toward their field of study.

The academics were asked to provide feedback on the same Associated Press article that the journalists looked at, helping to provide comparisons on a level playing field between journalists and academics. Only three academics spoke positively of The AP’s piece, calling it well-written and “reasonably well balanced.” Others had a more scathing tone, finding it not just poorly written and too brief, but also excessively vague, sensationalizing, and falsely drawing a link to raw milk that isn’t mentioned in the original Morbidity and Mortality Weekly Report. Factual errors about *Campylobacter* were mentioned, as were the “silly” terms such as “bugs” and “germs.” One person summed up by saying: “I do feel that the issue of foodborne pathogens is completely mishandled in this article and worst of all, the readership will not learn anything beneficial or factual from this.” A final major criticism was the writer’s subtle use of “only” in saying that the CDC report looked at “only 10 states.” One academic’s reply was: “The CDC has been reporting this way for 15 years and 15% of the population is a large and sufficient subsample.”

When asked if food-safety reports typically fail in reaching balance and fairness, more than half of the academics agreed. Despite that, a majority (64%) also said they felt reporters make a genuine attempt to learn about the topic and convey his/her understanding of the issue honestly.

Conclusion

The published surveys indicate that in almost all circumstances, there is a disconnect between the institutional knowledge a journalist has about food-safety issues and the expectations that those in food and agricultural professions will have about the quality of published news reports. Education is crucial to filling that gap, and there needs to be a mutual effort toward increasing the level of understanding in the media on food-safety topics. That means getting reporters more comfortable with the topic, and having experts who are more patient and willing to be thorough in how they approach these discussions. Both sides show the need to balance oversimplicity with hyper-technicality in conveying information, and realize that the middle ground is where the average person is going to learn the most. Good journalists have a responsibility to teach their audience something valuable, and doing that effectively and correctly helps to define the credibility of individual news outlets.

Most journalists state that they want to be accurate and timely in their reports, and that they are eager to receive correct information on the front-end of their reporting. To help achieve this, there needs to be a high degree of trust and respect between journalists and the people they interview, and for those in the survey who didn't feel that journalists made a genuine attempt to convey their issues honestly, that is an acute problem that needs attention. Oftentimes, the respondents accused brevity of obstructing accuracy, highlighting a need for journalists to be better guided toward what elements of a news report are most relevant. Better gauging what is important will help journalists write and edit more accurately and succinctly, filtering out erroneous inferences and possibly reducing the opportunity for bias.

While journalists have a wealth of information available on the Internet and from local and national experts and spokespeople, people in the survey reinforced the importance of being guarded in what sources are consulted. Government websites tended to be favored because of their accountability and level of research, but even there it was noted that partisanship and other influences can cloud data. Finding the right channels to consult for news articles gains further significance because almost everyone surveyed said that food safety is an important issue to be covered and that reporters and editors should continue making every effort to be clear, accurate, thorough, and timely in their work.

Appendix

Questions asked of journalists

A link to the results can be found here:

<https://survey.vt.edu/survey/viewResults.jsp?id=1370039814099>

1. What sources do you use for statistical and informational research? (please list all websites, publications, and other reference materials)
2. How would you rate the difficulty in finding sources?
3. Do you find government websites and publications easy to navigate?
4. If you are a reporter, where do your story ideas usually come from?
5. Do you tend to favor organic production over conventional production from a health and safety standpoint?
6. When working with a food or food-safety story, do you feel confident in your understanding of the topic to convey it fully in your medium?
7. Do you feel that food-safety coverage is important for the public?
8. What is your biggest concern when reporting, editing or reading a food-safety story?
9. Do you feel that the news outlets for which you have worked do a sufficient job in covering food-safety issues?
10. In this Associated Press article on foodborne pathogens, is the issue fairly portrayed?
<http://bigstory.ap.org/article/food-poisonings-raw-milk-poultry-bacteria>
11. How would you rate the quantity of food-safety content you've reported on or edited over the past year?
12. How knowledgeable would you rate yourself about food-safety issues?
13. What's the highest level biology education you've experienced?
14. What age range best describes you?
15. How many years have you worked in journalism?

Questions asked of food-safety academics

A link to the results can be found here:

<https://survey.vt.edu/survey/viewResults.jsp?id=1372976437799>

1. Is there one aspect of food-safety reporting that you feel is more misrepresented than others? Please explain.
2. What reference sources do you recommend that journalists use when covering food-safety issues?

3. If you have noticed a trend, are food-safety-related errors or omissions most often generated by local publications (such as local TV and newspapers) or by wire/national services (such as The Associated Press or CNN)?
4. Are descriptions/species of problem microbials in a news reports too vague?
5. Do journalists appear to favor organic production over conventional production from a health and safety standpoint?
6. If applicable, can you describe one or more instances when a news story you've seen or read failed to reflect both sides of a food-safety issue?
7. When you do have concerns about reporting, can you describe whether those concerns most often center around omissions of data, stereotypical assumptions, inaccuracies, or some combination of those factors?
8. In this Associated Press article on foodborne pathogens, is the issue fairly portrayed? Please explain. <http://bigstory.ap.org/article/food-poisonings-raw-milk-poultry-bacteria>
9. Do you judge the way a news story was handled more critically if it's negative rather than positive toward your field of study
10. How often do you feel that food-safety reports fail in reaching balance and fairness?
11. How often in the past five years have you been interviewed about food safety?
12. When you have been interviewed, do you feel that the reporter, whether right or wrong about facts, has made a genuine attempt to learn about the topic and convey his/her understanding of the issue honestly?
13. What age range best describes you?
14. How many years have you been involved with food-safety issues?

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