

Lights, Cameras, and Agricultural Documentaries: Influence on Opinion Change

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Abstract

Food documentaries have been analyzed by a variety of scholars, but few agricultural communicators have analyzed the impact food documentaries may have on viewers of this genre of entertainment. This research paper sought to analyze opinion change of participants after exposure to a pro-agriculture based documentary film. Two documentary films were used as the treatment variables for this research, *Cornutopia* and *King Corn*. *Cornutopia* was created by a graduate student to parallel the content of *King Corn*, which shows a year of corn production on a Midwestern farm. *King Corn* was told from the perspective of two Millennial filmmakers with metro backgrounds. In contrast, *Cornutopia* was told from the perspective of a multi-generational, Millennial farmer. Qualtrics administered the questionnaire and randomly assigned participants to one of the treatment variables. Participants were nationally representative of the Millennial generation in the United States. Qualitative data was analyzed using MAXQDA 12 with thematic, inductive coding practices. Findings found that food documentary films do have the potential to change viewer's opinions on agricultural topics. In conjunction with previous research, the findings indicate that participants' previous experiences and background do influence food documentaries' ability to change opinions. The conclusions from this research indicated that food documentaries are a viable area of interest that agricultural communicators should further investigate. The researchers plan further investigation of food documentaries and their impact on Millennials.

Keywords: Opinion change, food documentaries, cultivation theory, source credibility, schema theory, *Cornutopia*, *King Corn*

Measuring the Influence of Twitter-Based Crisis Communications Strategies on Brand Reputation via Experimental Design

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Abstract

Measuring the effects crisis communication strategies have on brand reputation in empirical studies has focused on types of crises and what crisis communications strategies should be used within traditional media. These studies fail to provide similar research for social-media outlets in an experimental design study. Research on crisis communication via social media exists, but it has focused on the information source rather than organization messaging or has used case study approach. This study helps fulfill the gap for unique crisis communications content strategy needs for social media. The study also aimed to define how the crisis communications strategy used on Twitter affects brand reputation. This paper focuses on the methods used to measure the effects of Twitter-based crisis communication strategies on brand reputation. Guided by Coombs' Situational Crisis Communications Theory, this controlled experimental design employed a 2x2 factorial design. The independent variables were (a) type of crisis (whether it was preventable or accidental) and (b) type of response used on Twitter (whether the organization responded to the crisis by attempting to rebuild their reputation or attempting to diminish or downplay the severity of the crisis). The dependent variable was organizational brand reputation. Survey participants, who were millennials living in Midwestern states, were recruited through a paid Qualtrics panel. The goal of this paper is to create a blueprint for future experimental design studies that examines the effectiveness of agricultural-based communications.

Keywords: experimental design; Situational Crisis Communication Strategies; brand reputation

**The Food Factor:
Relating Brand Exposure to Behavior Intention**

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Abstract

Mississippi residents were surveyed to determine how The Food Factor brand impacted their intent to change behavior. The Food Factor is a weekly Extension mass media program that communicates research-based information about food, nutrition, diet, and healthy lifestyles. A researcher-developed survey instrument was used to collect information about household behaviors and perceptions of The Food Factor using Qualtrics. The sample consisted of a representative sample of 404 Mississippi residents over the age of 18. Nonprobability quota sampling was used to look at population segments related to gender, Hispanic vs. non-Hispanic populations, and other racial demographic segments. The respondents were split into viewer and non-viewer categories. Viewers were asked about their viewing frequency and their nutrition-related behaviors. Non-viewers were also asked about their nutrition-related behaviors to see if watching the show was making a difference in behavioral changes. The majority of The Food Factor viewers indicated they were casual viewers. On average, viewers were completing one additional behavior compared to non-viewers. There was no statistically significant correlation between viewing frequency of viewers' behaviors and behavioral intents. Overall, the study found that it was uncertain if the brand was having meaningful effects on its viewers. Recommendations include future studies surrounding the use of branding in social marketing programs, studying other mass media programs in other states, and further evaluation of The Food Factor brand.

Keywords: agricultural communications, mass media, social marketing, Extension, behavioral intent, branding

**What's the Beef about Facebook:
A Content Analysis of Junior Cattle Breed Association Engagement on Facebook**

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Abstract

Increased use and reliance on social media in today's youth has provided a strong medium in which youth organizations can communicate with their audience. Social media platforms allow for two-way communication and an open dialogue between organizations and their audiences helping them foster more successful communicates efforts. Using this type of communication also allows organizations to strengthen the relationships and build trust with their audiences. This study explored how five junior cattle breed associations communicate with their audience through a Facebook content analysis. The Angus, Hereford, Simmental, Brahman, and Shorthorn association's Facebook pages were analyzed to determine the reactions, comments, and shares they were receiving, what types of posts they were making, how their followers were reacting to posts, and how they were using Facebook to respond to their audiences. Results showed that post containing graphics and videos performed better than those with just text, and the associations that used these types of content displayed a greater level of engagement with followers. Results also indicated that the Angus and Hereford associations, the two associations with the highest number of page likes, showed higher levels of overall engagement with followers. Results of this study can be used by other youth organizations to strengthen their Facebook activity to encourage and foster better engagement with their audiences.

Keywords: content analysis, social media, Facebook, breed associations, youth organizations, agricultural communications, user engagement

**Creating Relevancy in Scientific Information:
An Analysis of the Impact of Motivational Salience and Involvement on Visual Attention**

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Abstract

Agricultural communications literature has indicated scientists are struggling to make information salient to consumers. Prior studies have examined the efficacy of message frames and types of appeals that increase visual attention and information processing among general consumers. Research suggests that value-oriented frames may connect with consumers through increased personal involvement and motivational salience. To evaluate the effects of competing message frames on visual attention, an eye-tracking experiment was conducted to understand the interaction between pre-existing attitudes and issue involvement on participants' attention to messages about genetic modification and antibiotic use in livestock. For products that are low in issue involvement (i.e., food products and scientific information), the results indicated the reader devoted more time to reading advertisements that were framed to be more motivationally salient (i.e., the value-oriented frame). Because selective attention is the first part in the sequence of how individuals process information and form attitudes, agricultural science communicators should highlight values and motivational salience in their messaging. Recommendations for practitioners and the use of eye tracking as a research tool are described.

Keywords: advertorials, motivation, salience, value-oriented, visual attention allocation

**Case Study Integration in the Undergraduate Classroom:
Can We Enhance Willingness to Communicate?**

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Abstract

The agricultural and natural resources (ANR) industry faces many pressing issues involving animal health, biotechnology, climate change, food safety, food security, invasive species, marketing and trade, and water. Undergraduate students must be prepared and willing to communicate about these issues, which can often be complex and controversial when entering the ANR workforce. This study sought to determine if the integration of case studies influenced students' self-perceived willingness to communicate about ANR issues while taking a communication course that teaches about ANR issues. A pre/posttest, experimental research design assessed students' willingness to communicate about nine key ANR issues identified by the United States Department of Agriculture as challenge areas with case study integration used as the treatment. Using three undergraduate courses at three universities as the sample, a significant positive difference in willingness to communicate about all nine issues was found between the experimental and control groups. Based on these findings, it is recommended that case studies be integrated into classrooms when teaching about ANR issues. Future research should determine if this impact occurs when the case studies are used in undergraduate courses outside of the communication courses used as the foundation in this study, in other science-focused undergraduate and graduate courses, and in non-formal settings such as extension education programs.

Keywords: communication; experiential learning; issues education; case studies; undergraduate education

Piloting Participatory Arts-Based Methods for Exploring Indonesians' Experiences in a U.S. Biotechnology Training Program

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Abstract

Science communicators are often called upon to provide training to introduce scientists to interviewing and new media concepts to effectively engaging public audiences in critical global agricultural and natural resource issues. This qualitative case study was situated in a U.S.-based biotechnology training program funded by the United States Department of Agriculture for connecting Indonesian science fellows with university biotechnology scientists and science communication experts. The researchers piloted a participatory arts-based approach for instructing and researching Indonesian scientists', professionals', and educators' learning and experiences in the program. Participatory and arts-based research has the potential to uncover and bring to light participants' perceptions. Participants used iPad multimedia kits to demonstrate their learning of the training's science communication content, co-constructed and conducted interviews, and captured photos and videos chronicling their experiences throughout the program. Results showed participants' photos predominantly focused on field site and laboratory visits during the training and participants effectively applied digital storytelling techniques presented in the workshops. Themes from the co-constructed interviews included participants' definitions of biotechnology, concerns about regulation, labeling, and public understanding, and expressing a hope that biotechnology may improve food security in Indonesia. This pilot study has implications for future international science communication training via intentional instructional design and arts-based research for a culture-centered communication approach.

Keywords: biotechnology, arts-based, participatory video, international, training, culture-centered

**Survey Says:
What Data Means when it Comes to Perceptions About Agriculture**

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Abstract

Controversial issues, such as GM food, often arise as society works to feed a growing population. Consumers are criticized for their lack of awareness about agricultural production and issues, while agriculturalists are criticized for not considering consumer needs and concerns. Opinion leaders can help to facilitate the conversation between agriculturalists and consumers about complex issues in our food and fiber systems. However, it is not known how consumers and agricultural leaders differ in their perceptions of these issues or where they access information from. This study examined Florida consumers' and agricultural leaders' perceptions of GM food and where they access information. The findings showed that the perceptions of consumers and agricultural leaders did differ; however, the differences were often not extreme or bipolar. Additionally, the two groups were using the same five communication channels to get information about GM food, but their sources were different. Agricultural communicators should work with agricultural opinion leaders to identify the differences in perceptions and how to strategically position and discuss these differences in their communication. Future research should conduct similar comparisons on other agricultural issues and with consumers and agricultural leaders on a national scale or in other states.

Keywords: opinion leaders, consumers, GM food, two-step flow, perceptions, information sources, GM science

Eye-Tracking: A Biometric Tool for Measuring Baseline Visual Literacy in Agricultural Communications Students

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Abstract

In an increasingly visual world, visual communication skills are more important than ever. Visual literacy is a teachable and learnable skillset that includes abilities to analyze and create visual communication. Visual literacy is important to classrooms and the workforce in multiple disciplines, including agricultural production and agricultural communications. One measure of visual literacy includes eye fixations and fixation duration as measured by eye-tracking technology. This study used a cross-sectional case study design and eye-tracking technology to measure the baseline visual literacy of agricultural communications students, as exhibited by their gaze behavior when viewing images with strong visual messages. We found that frequency of fixations per image ($M = 70.9$), average fixation duration ($M = 625.2$ MS), and image view duration ($M = 39,254.1$ MS) varied among students. We concluded that eye-tracking is a feasible way to measure visual literacy in agricultural communications students, and that these baseline data should be compared to other contexts and populations. Future research should seek to explain demographic or psychographic influences of visual literacy, and develop curriculum to enhance visual literacy in agricultural communications students.

Keywords: eye-tracking, visual literacy, visual communication, agricultural communications

Florida Consumers' Latitudes of Acceptance, Rejection, and Noncommitment of Genetically Modified Food Information

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Abstract

Consumers are concerned about the risks related to genetically modified (GM) food, and there is a need for agricultural communicators and educators to address those concerns. The purpose of this study was to explore Florida residents' latitudes of acceptance, rejection, and noncommitment toward GM food messages. The findings from this study can be used to guide communication and education campaigns for GM food. An online survey was distributed to a non-probability sample of 500 Florida residents to fulfill the purpose of the study. The messages that most aligned with the respondents' views toward GM food discussed how potential risks related to human health had not been adequately investigated and that GM food may be riskier to consume. The messages that most opposed the respondents' views were that GM food was safe for consumption and that it caused cancer in humans. People whose views most aligned with the message that GM food caused cancer in humans had the largest latitude of rejection, likely due to the extreme attitude and confirmation bias. The largest percentage of the respondents accepted messages that aligned with their position but expressed noncommitment to messages that opposed their views. This lack of rejection and indication of alignment with messages related to potential risk and uncertainty indicated that Florida consumers were unsure about the effects of GM food. Communicators and educators should acknowledge these concerns when delivering information about GM food to enhance the effectiveness of communication with consumers.

Keywords: Genetically modified food, social judgement theory, latitudes of acceptance, attitudes

**A Quantitative Assessment of Possession Rituals and Engagement in Pinterest:
An Examination of the Agriculture Industry**

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Abstract

Social media allows communicators in the agricultural industry to directly address the general public to refute negative information and build customer relationships. There is a growing segment of the industry using Pinterest to connect with audiences. However, little is known about the way agricultural communicators Pinterest to engage with customers or the extent of their presence. The purpose of the study was to further describe the agricultural industry on Pinterest determine if there was a relationship between the use of possession rituals and audience engagement. Findings indicate that agricultural based accounts are steadily increasing in number on Pinterest. Researchers also developed a scale to describe the level to which possession rituals were utilized within accounts. A score for engagement was also calculated. Storing and hoarding and sharing were found to be significantly correlated to engagement and explained some amount of the variance in engagement scores. Researchers conclude that Pinterest can be a viable medium for communicators to interact with the public. They also discovered that possession rituals should be considered when utilizing Pinterest as a part of communication strategy.

Keywords: social media, Pinterest, possession rituals, engagement, uses and gratifications

**Framing Agricultural Use of Antibiotics and Antimicrobial
Resistance in the United States**

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Abstract

As the concern of antimicrobial resistance has increased, consumers have become more aware of agricultural practices and have begun to demand products that eliminate antibiotics from production. The agricultural community, especially agricultural communicators, need to know how the issues are being framed in the news media. This study aimed to determine the frames used to convey the issues surrounding antibiotic use in animal agriculture and its connection to antimicrobial resistance by conducting a framing analysis of four national newspapers and one national farming publication. The study found four themes: system failure, public health failure, voluntary action, and regulation. Agricultural communicators should utilize these findings as they craft messages about antibiotic use by highlighting voluntary and regulatory actions used to correct the perceived system failure of agriculture. Additional research should focus on how these frames impact the audiences' perceptions of the issue.

Keywords: antimicrobial resistance (AMR), agriculture, livestock, antibiotics, framing