Journal of the Midwest Association for Information Systems (JMWAIS)

2016

Information Complexity, Presentation Rhetoric and Message Impact: The Case of American Healthcare Reform Debate

Monica Bordoloi
SquareSpace Inc., monica.bordolobi@gmail.com

Anne Powell
Southern Illinois University Edwardsville, apowell@siue.edu

Bijoy Bordoloi
Southern Illinois University Edwardsville, bbordol@siue.edu

Follow this and additional works at: http://aisel.aisnet.org/jmwais

Date: 01-30-2016

Information Complexity, Presentation Rhetoric and Message Impact:
The Case of American Healthcare Reform Debate

Monica Bordoloi

SquareSpace Inc., Portland, Monica.Bordoloi@gmail.com

Anne Powell*

Southern Illinois University, Edwardsville, apowell@siue.edu

Bijoy Bordoloi

Southern Illinois University, Edwardsville, bbordol@siue.edu

* Contact Author

Abstract

This study explores how presentation rhetoric affects message impact on a complex issue that is difficult to comprehend for the general public and becomes a debatable issue at large, such as the current American healthcare reform initiatives. The paper reports the results from an experimental study that compared the differential impact on viewers of two rhetorically contrasting videos on the current American healthcare debate. Both the videos shared almost identical narratives by the same presenter. Video-One simulated realistic, face-to-face communication while Video-Two was 'infotainment'-oriented and presented the discussion using entirely computer-generated multimedia. The data yielded by this study suggests that perceivably objective messages that include a combination of text, imagery and sound tend to arouse and involve its viewers more and, thereby, may garner a greater impact on its viewers and enhance their understanding of a complex issue than presentations that lack these qualities.

Keywords: Information complexity, presentation rhetoric; message impact, audience arousal, involvement, American healthcare reform

1. Introduction

Confronted by an explosive information landscape, today's media consumer wrestles with making vital decisions about enormously complex issues. In having a plethora of data available, consumers are at risk of suffering from chronic "information overload," or the difficulty a person can have comprehending an issue and making decisions that can be caused by too much, and, possibly conflicting information (Yang, Chen, & Hong, 2003).

As with many heated socio-political topics, the greater public is often unaware or under informed by the multi-faceted issues that surround a debate. Invariably, as the issues become larger and more complicated, the general public may find it increasingly difficult to attain a core comprehension of these issues. Such is the case with the debate surrounding the Affordable Care Act (popularly known as the 'Obamacare') – which is a US law aimed at reforming the American health care system.

In a landscape of information overload, it becomes an equally challenging task for the message designer to construct a message that can be digested as knowledge by the receivers. To focus on just the content of a message, or its aesthetic appeal, is insufficient. Designers now must seek a more holistic approach to their art, one that combines behavioral science with salient communication strategy and consider the rhetorical aspects of a message.

In our current media laden environment, the combination of entertainment and education or 'infotainment' has risen as a segue to help make complicated issues comprehensible to the public. As people increasingly turn to alternative, peer-influenced sources of information, it is crucial that we consider how the presentation of these messages impacts an audience. The overarching research question we examine in this study is:

Research Question: Can technology-based presentation rhetoric influence arousal and involvement of the receivers on a complex issue?

Using the current American healthcare reform initiative as an exemplary complex issue, this paper reports the results from a *quasi-experimental* study that compared the differential impact on the viewers of two contrasting videos in terms of presentation rhetoric, but with near-identical contents on the current healthcare debate narrated by the same presenter.

The rest of the paper is organized as follows. Provided first is a brief review of significant literature that this study draws upon, looking particularly at design rhetoric, the elaboration-likelihood model, and entertainment education. Drawing from the literature review, the research model and hypotheses are developed. Following that, the conduct of the experiment and a description of videos viewed is described. Findings and a discussion of the results is then presented, followed by conclusions.

2. Related Literature

Among the breadth of concepts and issues included in this study are design as rhetoric, the elaboration likelihood model, entertainment-education and health care information. In this section, we map their relation to one another by assembling some significant previous research that relates these topics to the context of this study.

2.1 Design as Rhetoric

Rhetoric is the art of written or spoken communication that aims to improve the facility of speakers or writers who attempt to inform, persuade, or motivate particular audiences in specific situations (Corbett, 1990). In Design as Rhetoric, Joost & Scheurmann (2007) advocate that rhetoric is an interdisciplinary field that is present in all stages of message design. As designers, they acknowledge the value of communication research and rhetorical inquiry in multimedia production and analysis, as it "offers information based on experience about the very special relationship between theory and practice-know-how which is of immediate use to design research" (page 7). In order to draw upon practice from theory, they posit that the "designer must put him/herself into the place of the public in order to improve the performance of his/her methods and analyze the media impact from that point of view" (page 6). Thus, one purpose of this paper is to encourage research that works to enhance the information design process when conveying healthcare messages.

2.2 Elaboration Likelihood Model

In theorizing how the presentation of a message may affect its viewers, we consider the implications of the Elaboration Likelihood Model (ELM) by Petty & Cacioppo (1986). A classic theory of persuasion and attitude change, the model suggests that variations in a message, and its ability to illicit involvement, indicate the extent to which an individual thinks about the arguments projected in a message. Issue involvement is a moderator of *central processing* (attention to message arguments signifying potential for lasting attitude change) versus *peripheral processing* (attention to source cues, number of messages). Central processing, which involves systemic thinking,

is activated when the receiver's level of involvement, motivation level or processing capacity is relatively high. Upon this route, the receiver evaluates the message through critical thinking and careful examination. On the opposite end of the continuum is the peripheral route, which represents the persuasion process when the receiver's level of involvement, motivation, or processing capacity is relatively low. Here, an individual is persuaded by the contextual cues present in a message and opinion is formed based on heuristic evaluation. The ELM further indicates that attitude change can be produced without the exhaustive processing of a message's arguments because an individual will use simple decision-making tools, such as relying on a messengers' perceived credibility, or repeated stimuli in a message.

Various studies have used the ELM to study how users' involvement in an issue impacts some outcome. For example, involvement predicted greater political activity (Earnheardt, 2013) and influenced attitude change (Angst and Agarwal, 2009). As a moderator, involvement has been found to moderate the relationship between time spent viewing merchandise online and the likelihood to buy (Behe, Zhao, Sage, Huddleson, & Minahan, 2013).

To summarize, the ELM posits that the involvement level of an individual can influence some outcome. The more highly involved in the message the individuals are, the more likely they will change their behavior. Even in low involvement situations, some contextual cues in the message may influence behavior change in the individuals. Thus, if a behavior change is the goal, attention should be focused on how best to present the message in a way to increase involvement of the viewer.

In this study, rather than looking at how involvement is related to some outcome, we explore what rhetorical devices in a message's presentation contribute to eliciting high levels of involvement from a viewer.

2.3 Entertainment-Education ('Infotainment')

The concept of hedonic entertainment (happiness derived from pleasure) has a long history; the core of hedonic motivation in entertainment consumption is that emotional affect (i.e., mood, arousal) can be regulated through media use (Bartsch & Schneider, 2014; Zillmann, 1988). Arousal, or emotional stimulation, allows viewers to be so swept up in the narrative that viewers are not motivated to counter-argue story points. In the hedonic view, entertainment is intrinsically appealing because of its ability to alter and regulate mood and arousal, making an individual feel better. Media, through entertainment, can regulate boredom and stress by inducing a pleasant state of arousal (Zillmann, 1988).

One way to capture attention of low-involvement audiences and increase arousal is within an entertainment context. Singhal & Rogers (2002) offer a definition of entertainment-education (EE) as the "intentional placement of education content in entertainment messages" (p. 117). They emphasize that EE is not a theory by itself but a strategy to facilitate social change and discuss various theories, including the ELM, which the strategies of EE are or can be associated with.

While Singal & Rogers list associated theories of entertainment-education, they provide limited insight with regard to how these theories exist in practice. Some insight is offered by Slater & Rouner (2002), who note the ELM is useful in predicting how persuasive narrative content is processed when presented in an EE format. They suggest that "absorption in a narrative, and response to characters in a narrative, should enhance persuasive effects…." (page 173). Their observations, combined with the insights provided by Parrott (1995), indicate that message presentation should be given strategic consideration when designing health advocacy campaigns.

There is evidence that entertainment can lead to behavioral change. For example, using EE can influence the ability to recall content information from a message by more effectively engaging the viewer (Johnson, Harrison, & Quick, 2013). Using software with an avatar-based virtual environment led to enhanced engagement and motivation and to more valuable education outcomes among middle school children (Falloon, 2010). Finally, many studies have investigated how TV shows can alter behavior (e.g. Hether, Huang, Beck, Murphy, & Valente, 2008; Murphy, Frank, Moran, & Patnoe-Woodley, 2011).

The potential for entertainment to be a health information source gained significant currency after the study conducted by Brodie, Foeher, Rideout & Bear (2001) with 3500 participants. Depending on the health topic surveyed, 20-32% reported having learned about the issue from the TV drama ER (Emergency Room). In addition, 51% of viewers took action after the show by discussing the episode related health issues with family and friends, 33% made health decisions based on the information they got from ER, 25% reported researching additional information on health issues brought up by episodes and 14% confirmed they contacted a health care provider based on something they saw on ER (Brodie et. el, 2001).

The statistics provided by this study speak to the potential of entertainment as a forum to disseminate health information, but is limited to long-form television, which inherently demands longer attention and audience involvement. It is our hope that this research will shed some light on how short-form media can be designed to disseminate information effectively.

3. Health Care Information

As of 2014, an estimated 44 million Americans were without health insurance, about 16% of the population (http://obamacarefacts.com). According to another report, as of 2014, an estimated 31 million were considered "underinsured" (Commonwealth Fund, 2015). With lack of coverage or scope of coverage, 50% of all bankruptcies are caused by medical bills where 75% of the people were without health insurance (Himmelstein, Warren, Thorne, & Woolhandler, 2005). Furthermore, nearly 64 million Americans do not have adequate access to health practitioners and can therefore be considered to have inadequate health care (Kaiser Health News, 2014). These statistics alone can illustrate why the state of the American healthcare system has been an issue of enormous debate in recent years.

Despite the number of uninsured or underinsured Americans, the greater public is often inadequately informed of the issues surrounding healthcare. With numerous issues, viewpoints, and alternatives to healthcare insurance options, information overload occurs. With information overload, issues become more complicated and it becomes increasingly difficult for the general public to attain a grasp of the core issues - as is the case with the current health care reform debate. Whereas 93% of Americans consider the issue of healthcare important, the Pew Research Center notes that "Despite consistently high interest and the large percentage of Americans who say the issue affects them personally, the public continues to find the health care debate difficult to grasp....69% say the issue is hard to understand" (Pew, 2009, paragraph 5).

4. Research Model

As illustrated in Figure 1, Impact, the measure of how influential a message is likely to be, is characterized by arousal and involvement (DuPre, 2009). In this context, as discussed earlier, *arousal* refers to how emotionally stimulating and exciting a message is whereas *involvement* refers to the amount of mental effort required to understand a message. While several studies using ELM as a base have investigated involvement, fewer have examined the role of arousal. In this study, we examine how varying types of presentation rhetoric can impact both arousal and involvement.
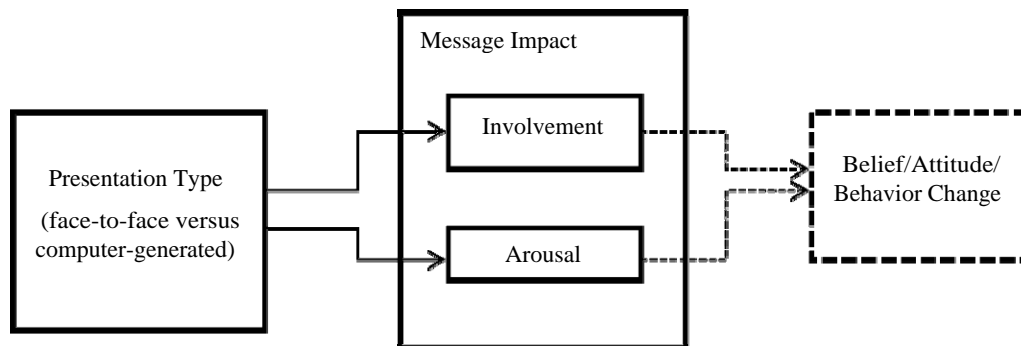

Figure 1: Research Model, solid lines represent hypotheses tested in this paper. Dashed lines represent aspects of ELM, not tested in this paper.

We approach rhetoric from a multi-media perspective, that of an audio-visual communication. As described in the Methodology section, type of presentation rhetoric was treated as a dichotomous variable operationalized by two contrasting videos on the same topic by the same presenter. In terms of presentation rhetoric, Video-One simulated realistic, face-to-face communication while Video-Two was 'infotainment' oriented and presented the discussion using entirely computer-generated multimedia.

4.1 Hypotheses

Two hypotheses were developed to answer the research question: Can technology-based presentation rhetoric influence arousal and involvement of the receivers on a complex issue?

Whether positive or negative, arousing messages are considered more carefully than calm messages (Lang & Yegiyan, 2008). Exposure to content that increases arousal in individuals should increase attention to the message content. For information designers seeking to combat apathy, a main goal is to stimulate an active cognitive process in audiences, who may be passive and uninvolved. In his work on designing health messages, Parrott (1995) states that message presentation can affect both the amount and type of processing that a subject will engage in. He

recommends that a message should (a) present its content in a way that is unfamiliar, unusual and novel, (b) contain characters and stories that are outside viewer expectations, and (c) utilize external and internal appeals to reinforce the viewers' awareness of the message contents. He asserts that upon these principles, motivation and curiosity may be piqued in an audience and systematic processing by the viewer is thus more likely to occur.

High arousal messages, full of graphics, moving images, and sound, are more likely to capture the attention of a viewer than those that lack such characteristics. Hence:

H1: Subjects viewing the computer-generated multimedia video (Video-Two) will report a higher level of *arousal* on the topic than those who viewed Video-One with face-to-face communication style of rhetoric.

Likewise, as theorized by the ELM, presentations that require audiences to watch, read, listen, and/or use their imagination, are more likely to highly involve their viewers. The ELM proposes that when we are highly involved with a message, we pay close attention to the details and evaluate the message thoroughly. Hence:

H2: Subjects viewing the computer-generated multimedia video (Video-Two) will report a higher level of *involvement* on the topic than those who viewed Video-One with face-to-face communication style of rhetoric.

5. Methodology

5.1 Subjects

Subjects were students from six sections of a junior-level class at a Midwestern university in the US. One hundred eighty nine students were enrolled in the six sections. Experiment participation was optional and dependent on the student being in class that day. Sections were assigned randomly to the two videos. Subjects who indicated on the survey they had seen the video previously were eliminated. Altogether, one hundred and sixty six (166) usable surveys were collected; 79 for Video-One and 87 for Video-Two.

5.2 Videos

In this study, rhetoric is approached from a multi-media perspective, that of an audio-visual communication. As mentioned earlier, type of presentation rhetoric was treated as a dichotomous variable operationalized by two YouTube videos which featured nearly identical narratives that discussed the healthcare reform debate, but were presented in a rhetorically contrasting manner. Summarized below are the key characteristics of each of these videos.

5.2.1 Video-One (3:49 minutes)

Title: Health Care Overhaul Summarized via Massive Pig (Green, 2009a)

Video-One was an episode of the vLog Brothers and features a live John Greene. The format of the video was a back-and-forth correspondence between two brothers. Though they appeared to be addressing each other personally, it is clear that this is merely a choice of format and that their intention is to provoke a larger discourse with the channel's viewers.

In this video, Green begins with an anecdote about meeting the world's largest boar at the Indiana State Fair. He then uses the analogy of the pig to describe the American healthcare system and surmise some of the various perspectives and proposals surrounding its debate. The video, styled by quick-cut, shot-to-shot camera techniques, is entirely composed of real-life images and lacks any supplementing text or background noise. Green's voice is the video's single major source of audio and for the majority of its duration he is visually present while he speaks.

5.2.2 Video-Two (3:31 minutes)

Title: John Green's Thought Bubble: Health Care Overhaul Summarized via Massive Pig (Green, 2009b)

Video Two was a motion info-graphic produced by the Canadian non-profit design studio ThoughtBubble. In this video, John Green's narrative from Video One is lifted and applied to a motion graphic animation featuring entirely computer-generated illustrations, images, text, and music. In this adaptation by ThoughtBubble, the narrator is not visually present and no real-life images appear.

The use of John Green's audio narrative is of major significance, for it is almost an exact copy, arranged in the same manner, of his original vLog Brothers post.

5.3 Data Collection

This study involved both quantitative and qualitative data. Quantitative data were collected using pre-validated instruments. *Arousal* was measured using a 3-item measure (Ashworth, Pyle, and Pancer, 2010) with two additional items added. *Involvement* was measured using a 10-item instrument (Zaichkowsky, 1994). For the *Arousal* measure, a 7-point Likert scale with 1 being strongly disagree and 7 being strongly agree was used.   For the *Involvement*

measure, 7-point bipolar evaluative scales (e.g. interesting/boring) were used. Both measurements for Arousal and Involvement can be found in Appendix 1. Qualitative data were collected using subjects' response to an open-ended question, *"What part(s) of the video stood out to you?"*

6. Results

6.1 Respondent Background

Demographic data collected included age, gender, political views, and awareness of the healthcare debate. Students' ages ranged from 19 to 50; average age was 22.2. Four percent of the students indicated they were Very Conservative, 27% stated Conservative, 48% Moderates, and 21% Liberal. None of the students described themselves as Very Liberal. On the healthcare debate, 48% felt they were moderately aware of the debate. The remainder indicated they were extremely aware (4%), very aware (22%), slightly aware (19%) or not at all aware (7%). Seventy nine subjects viewed the first video; eighty seven subjects viewed the second video. ANOVA test results indicate there is no significant difference between the two samples on demographic data.

6.2 Data Analysis

Confirmatory factor analysis (CFA) and reliability tests using Cronbach's Alpha were conducted. In CFA, items loaded as expected with two anomalies. The adjective 'exciting' appears on both the Zaichowsky *Involvement* scale and the Ashworth et al., *Arousal* measure. In this study, 'exciting' loaded on the Arousal scale. The adjective 'interesting' was part of the Involvement measure, but it loaded with the Arousal adjectives. Therefore, for this study, both 'exciting' and 'interesting' are used on the *Arousal* measure. The adjectives 'appealing' and 'fascinating' loaded on both Arousal and Involvement measures and so were dropped. As shown in Table 1, this resulted in 6-item measures for both Arousal and Involvement. The Cronbach's Alpha reliability test for Arousal was .915 and was .870 for Involvement. Scores above .70 are generally considered acceptable. These scores show high reliability that the items are measuring intended constructs.

Table 1: Factor Analysis of Scale Items

	Arousal	**Involvement**
Important	.257	**.807**
Relevant	.130	**.695**
Means a lot	.239	**.729**
Valuable	.304	**.766**
Involving	.426	**.635**
Needed	.332	**.729**
Interesting	**.613**	.409
Entertaining	**.816**	.221
Stimulating	**.770**	.383
Exciting	**.815**	.292
Enthusiastic	**.856**	.226
Pumped	**.829**	.241

Qualitative data were analyzed using the technique of content analysis. To code the responses to the open-ended question, *"What part(s) of the video stood out to you?"* responses were reviewed twice. After the first read-through, six categories were identified from the responses. Responses were then reviewed again and tallied into one of the categories: Visual, Audio, Pig Analogy, Information, Miscellaneous and Did Not Answer. A tally was made to a 'Did Not Answer' category for anyone who did not respond to this question.

For those who did respond to the question, a tally was given in the category the response represented.   If a

response made reference to any of the *visual* aspects of the video (graphics, design, style, etc.), a tally was marked in that category. Within the category of *audio*, respondents may have referenced the narrative's style, rapport, or musical elements of either video. Because many respondents mentioned in their comments a reference to the *pig analogy*, and because the *pig analogy* is depicted both visually and audibly, it was given its own category, for it cannot be discerned if it was the visual/audio/or combination of its portrayal that caused it to stand out to the viewer. In the category of *Information*, there must have been a specific reference to information or facts provided in the content of the video. Information responses were further subdivided into specific information topics mentioned by at least 5 students (e.g., right versus privilege, money spent on healthcare, three types of insurance providers, three "fixes" to the healthcare system, socialism in the US). 'Miscellaneous' category was comprised of comments that did not fit in any of the other categories or it could not be determined what the respondent was referring to. As such, this category was discarded from any further data analysis.

Respondents could provide more than one answer to what part of the video stood out to them, and a single response could reference more than one category. Eighty comments were recorded for the first video, 108 comments were recorded for the second video. Table 2 summarizes the data on the number of respondents for each of the videos and the number of comments within each category.

Table 2: Open-ended question content categories

Category	Video-One Narrative, face-to-face	Video-Two Multi-Media
Did not answer	16/79(20.25%)	2/87 (2.30%)
Pig analogy	35/80 (43.75%)	24/108 (22.20%)
Audio	9/80 (11.25%)	10/108 (9.26%)
Visual	3/80 (3.75%)	10/108 (9.26%)
Information	25/80 (31.25%)	55/108 (50.93%)
Miscellaneous	8/80(10%)	9/108(8.33%)

6.3 Findings and Discussion

Hypothesis 1 stated that subjects who viewed the computer generated multimedia video (Video-Two) would report a higher level of *arousal* than those who viewed the video with face-to-face communication style of rhetoric (Video-One). ANOVA results support this hypothesis, F=6.473, Significance = .012. Hypothesis 2 stated that subjects who viewed the computer-generated multimedia video (Video-Two) would report a higher level of *involvement* than those who viewed the video with face-to-face communication style of rhetoric (Video-One). ANOVA results support this hypothesis also, F=4.640, Significance = .033. Table 3 provides a summary of the ANOVA results.

Table 3. Hypotheses Results

Hypotheses		F	Significance
H1: computer-generated multimedia video results in higher levels of *arousal* than video with face-to-face communication style of rhetoric.		6.473	.012
H2: computer-generated multimedia video results in higher levels of *involvement* than video with face-to-face communication style of rhetoric.		4.640	.033

These findings support our initial belief that presentation rhetoric can influence both a subject's involvement with, and arousal on, a highly complex subject. If a change in behavior, attitude, and/or beliefs is the goal, the rhetoric used to convey the message is an important component to be considered when designing the message.

The open-ended question also offered some telling insight as to how audiences received each video. The nature of the question *"What part(s) of the video stood out to you?"* enables one to infer the video's perceived impact. As indicated in Table 2, the first suggestive data is the percent of those who chose to answer the question. If they did answer the question, one can infer that the video, in some way, motivated them to respond. The second suggestive data is from the content of the responses – which allowed participants to specify what facets of the video stayed with them. The question was included with consideration to the ELM, which suggests that when we are highly involved with a message, we are more likely to retain its contents.

One-way ANOVA tests determined if there were any significant differences in the number of subjects who did respond and whether there were significant differences in the number of comments made in each category. Table 4 provides the results of the ANOVA.

The findings of this study indicate that presentation rhetoric, the type and format of a presentation, can influence both a person's feelings of *arousal* and *involvement* on a complex topic. Despite similar reported knowledge of the healthcare debate, the group viewing the computer-generated, multimedia video reported *higher* levels of arousal and involvement on the topic than the group viewing the face-to-face conversational style of video. In addition, when asked to recall the video part that stood out most, the group viewing the computer-generated, multimedia video were not only more likely to respond, they were also more likely to respond with an information-based answer.

Table 4: Results of ANOVA on open-ended question

Category	F	significance	Comments
Did not answer	14.877	.000	Viewers of Video-One (narrative, face-to-face) were significantly LESS likely to provide an answer to what most stood out in the video
Pig analogy	10.329	.002	Viewers of Video-One were significantly more likely to comment on the Pig analogy.
Audio	.199	.656	No significant difference in number of comments on the audio aspects of the videos.
Visual	2.169	.143	No significant difference in number of comments on the visual aspects of the videos.
Information	7.491	.007	Viewers of Video-Two were significantly MORE likely to respond with specific information from the video.

The videos opened with a comparison of the healthcare system to a fat pig, and nearly one half of the viewers of the first video listed the fat pig as the part that stood out most to them. It appears the multimedia of Video-Two may have enforced the later topics of the video; thus, those later topics were brought up more often by viewers of Video-Two; the pig was an easy answer for those viewing Video-One. Interestingly, viewers of Video-Two did not comment significantly more often on the visual aspects of the video, yet the visual aspects must have impacted their arousal and involvement because the audio of the two videos was nearly identical.

7. Conclusion

Through studies using ELM, we know that changing levels of involvement can lead to changes in behavior and attitude. Rather than looking at how involvement is related to some behavioral outcome, this study examined whether rhetorical devices in a message's presentation would contribute to higher levels of *involvement* and *arousal* in a viewer when viewing an audio-visual presentation on a complex topic. The data from this study suggest that complex messages which are 'infotainment'-oriented and presented using multimedia technology tend to arouse and involve its viewers more and, thereby, appear to generate a greater impact and knowledge retention on a viewer than the face-to-face conversational style of presentations.

Using the current American healthcare reform initiative as an example of a complex issue, this study involved two videos that shared almost identical narratives by the same presenter, but differed in terms of their presentation rhetoric. The video materials under analysis offered a unique opportunity to find how their contrasting presentation rhetoric impacted viewer attitudes toward the content relayed by the narratives. Where in the presenter's original blog posting, the video's information was relayed in a humanized manner, in the audio-visual version, its information was supported by additional computer-generated communication devices.

Findings of this study suggest that perceivably objective messages which include a combination of text, imagery, and sound tend to arouse and involve its viewers more and, thereby, may garner a greater impact on a viewer than presentations which lack these qualities. When viewers saw the face-to-face conversational style video, the complex issues of the American healthcare issue did not stand out to viewers, rather, the opening discussion about a fat pig was the main take-away for nearly half the viewers. Substantive topics were mentioned less than 1/3 of the time by viewers of video-one. However, those viewing the computer-generated, multimedia video had very different takeaways; substantive, complex topic issues on healthcare were reported as the main takeaways in more than half the responses. Given this, information designers who are looking to influence or change a viewer's attitude or behavior on some controversial or complex topic would be wise to put significant weight on the *design* of their message.

It is our hope that this study will inspire further discourse on how communication theories, message formation and design research can work in tandem to create "viral education" devices that support information literacy on complex issues as often is the case with healthcare management.

References

Angst, C. & Agarwal, R. (2009). Adoption of electronic health records in the presence of privacy concerns: The elaboration likelihood model and individual persuasion. *MIS Quarterly*, 33:2, 339-370.

Ashworth, L., Pyle, M., & Pancer, E. (2010). The role of dominance in the appeal of violent media depictions. *Journal of Advertising*, 39:4, 121-134.

Bartsch, A. & Schneider, F. (2014). Entertainment and politics revisited: How non-escapist forms of entertainment can stimulate political interest and information seeking. *Journal of Communication*, 64, 369-396.

Behe, B., Zhao, J., Sage, L., Huddleston, P., & Minahan, S. (2013). Display signs and involvement: The visual path to purchase intention. *International Review of Retail, Distribution & Consumer Research*, 23:5, 511-522.

Brodie, M., Foeher, U., Rideout, V., & Baer, N. (2001). Communicating health information through the entertainment media. *Health Affairs*, 20, 192-198.

Commonwealth Fund (2015, May 20). *31 million people were underinsured in 2014*. Retrieved June 1, 2015, from http://www.commonwealthfund.org/publications/press-releases/2015/may/underinsurance-brief-release.

Corbett, E. (1990). *Classic Rhetoric for the Modern Student*. New York: Oxford University Press.

DuPre, A. (2009). *Communicating about Health: Current Issues and Perspectives*, New York: Oxford University Press.

Earnhardt, M. (2013). Motivating the U.S. voter: The functions of elaboration and political motives when using TV and the Internet. *Atlantic Journal of Communication*, 21:1, 65-94.

Falloon, G. (2010). Using avatars and virtual environments in learning: What do they have to offer? *British Journal of Educational Technology*, 41:1, 108-122.

Green, J. (2009a). Health care overhaul summarized via massive pig. https://www.youtube.com/watch?v=7Z_RVl-ph3s

Green, J. (2009b). John Green's thought bubble: Health care overhaul (summarized via massive pig). https://www.youtube.com/watch?v=svCQJvP1S8g

Hether, H., Huang, G., Beck, V., Murphy, S., & Valente, T. (2008). Entertainment education in a media-saturated environment: Examining the impact of single and multiple exposures to breast cancer. Storylines on two popular medical dramas. *Journal of Health Communication*, 13:8, 808-823.

Himmelstein, D., Warren, E., Thorne, D., & Woolhandler, S. (2005). Illness and injury as contributors to bankruptcy. *Health Affairs*, 63-75.

Johnson, J., Harrison, K., & Quick, B. (2013). Understanding the effectiveness of the entertainment-education strategy: An investigation of how audience involvement, message processing, and message design influence health information recall. *Journal of Health Communication: International Perspectives*, 18:2, 160-178.

Joost, G., & Scheuermann, A. (2007). Design as rhetoric. Symposium paper presented at Swiss Design Network.

Kaiser Health News. (2014, January 3). *Are there enough doctors for the newly insured?* Retrieved February 4, 2015 from http://khn.org/news/doctor-shortage-primary-care-specialist/.

Lang, A. & Yegiyan, N. (2008). Understanding the interactive effects of emotional appeal and claim strength in health messages. *Journal of Broadcasting & Electronic Media,* 52, 432-447.

Murphy, S., Frank, L., Moran, M., & Patnoe-Woodley, P. (2011). Involved, transported, or emotional? Exploring the determinants of change in knowledge, attitudes, and behavior in entertainment-education. *Journal of Communication*, 61, 407-431.

ObamaCare Facts. (2014). *Affordable Care Act, Health Insurance Marketplace*. Retrieved October 15, 2014 from http://obamacarefacts.com.

Parrott, R. (1995). Motivation to attend health messages: Presentation of content and linguistic consideration, in *Designing Health Messages*. Thousand Oaks, CA: Sage.

Petty, R. & Cacioppo, J. (1986). *Communication and Persuasion: Central and Peripheral Routes to Attitude Change*. New York: Springer-Verlag.

Pew research center for the people & the press. (2009, December 16). *Public Closely Tracking Health Care Debate: Summary of Findings.* Retrieved April 30, 2012, from http://people-press.org/report/571/healthcare-obama-economy

Singhal, A. & Rogers, E. (2002). A theoretical agenda for entertainment-education. *Communication Theory*, 12(2), 117-135.

Slater, M., & Rouner, D. (2002). Entertainment-education and elaboration likelihood: Understanding the processing of narrative persuasion. *Communication Theory*, 12(2), 173-191

Yang, C., Chen, H., & Hong, K. (2003). Visualization of large category maps for Internet browsing. *Decision Support Systems*, 35:1, 89-102.

Zaichkowsky, J. (1994). The personal involvement inventory: Reduction, revision, and application to advertising. *Journal of Advertising*, 23:4, 59-70.

Zillmann, D. (1988). Mood management through communication choices. *American Behavioral Scientist,* 31, 327-340.

Appendix 1
Survey Questions

To me the video was

1	important	____ ____ ____ ____ ____ ____ ____	unimportant
2	boring	____ ____ ____ ____ ____ ____ ____	interesting
3	relevant	____ ____ ____ ____ ____ ____ ____	irrelevant
4	exciting	____ ____ ____ ____ ____ ____ ____	unexciting
5	means a lot	____ ____ ____ ____ ____ ____ ____	means nothing
6	appealing	____ ____ ____ ____ ____ ____ ____	unappealing
7	fascinating	____ ____ ____ ____ ____ ____ ____	mundane
8	valuable	____ ____ ____ ____ ____ ____ ____	worthless
9	involving	____ ____ ____ ____ ____ ____ ____	uninvolving
10	needed	____ ____ ____ ____ ____ ____ ____	not needed

The video clip was:

	Strongly Agree	Agree	Slightly Agree	Neutral	Slightly Disagree	Disagree	Strongly Disagree
1. Entertaining to me							
2. Stimulating to me							
3. Exciting to me							

The video clip made me feel:

	Strongly Agree	Agree	Slightly Agree	Neutral	Slightly Disagree	Disagree	Strongly Disagree
4. Enthusiastic							
5. Pumped							

Author Biographies

Monica Bordoloi received her BS in Communications from University of Illinois at Chicago and is currently pursuing a Master's degree in Digital Experience Design at Hyper Island, Manchester, UK. Her current academic and professional interests center on human-computer interactions and user experience design in the ever-evolving digital world.

Anne Powell is a Professor of Computer Management and Information Systems at Southern Illinois University Edwardsville. She received her Ph.D. in MIS from Indiana University, Bloomington. Her current research interests include user acceptance of information systems, MIS pedagogy, and virtual teams. Her publications have appeared in several journals including *DATA BASE, Information Technology & People, Journal of Information Systems Education*, and *Journal of Information Technology Theory & Applications.*

Bijoy Bordoloi is a Professor of Computer Management and Information Systems at Southern Illinois University-Edwardsville. He received his Ph.D. in MIS from Indiana University, Bloomington. His current research interests include database systems and data analytics, human-computer interactions, and economics of information technology management. His publications have appeared in several journals including *MIS Quarterly*, *Journal of Management Information Systems*, *Information & Management*, *DATA BASE*, *Journal of Database Management*, *Journal of Information Technology Management, Journal of End-User Computing,* and the *Journal of Information Systems Management.*

Page intentionally left blank