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# Information Complexity, Presentation Rhetoric and Message Impact: A Study on American Healthcare

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## ABSTRACT

Presentation rhetoric of a complex issue can potentially affect the message impact on the receivers. This study reports the results from a quasi-experimental study that compares the differential impact on viewers of two rhetorically contrasting videos on the current American Healthcare Reform debate. Both the videos share almost identical narratives by the same presenter. Video 1 simulates realistic, face-to-face communication while Video 2 presents the discussion using entirely computer-generated multimedia. Using Elaboration Likelihood model and entertainment-education theories, this study suggests 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 more impact and behavioral change on a viewer than presentations which lack these qualities.

## Keywords

Presentation rhetoric, Message Impact, Elaboration Likelihood Model, Entertainment-Education, Involvement, Arousal

## 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 to us, our culture is at risk for 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).

For a democratic society, information overload may be a hypodermic needle towards cultural apathy. 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, the issues become larger and more complicated and many find it increasingly difficult to attain a core comprehension of these issues. Such is the case with the American health care reform debate.

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 receiver. 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 considers the *rhetorical* aspects of a message.

Against the backdrop of the Elaboration Likelihood Model of persuasion and entertainment-education, this study explores how presentation rhetoric affects message impact on its receivers on the American Healthcare Debate.

## LITERATURE REVIEW

### 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).

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 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.

### **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 and 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 model 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 (Earnhardt, 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 et al., 2013).

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.

### **Entertainment education**

One way to capture attention of low-involvement audiences is within an entertainment context. Singhal and Rogers (2002) offer a definition of entertainment-education (EE) as the "intentional placement of education content in entertainment messages" (p. 120). The combination of EE and infotainment (a convergence of entertainment, education, information, art, media, design, and popular culture) has risen 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 impact an audience.

There is evidence that entertainment can lead to behavioral change. Many studies examining EE have investigated how TV shows can alter behavior (e.g. Hether et al., 2008, Murphy et al., 2011). In addition, it has been found that using EE can influence the ability to recall content information from a message by more effectively engaging the viewer (Johnson, Harrison, and Quick, 2013). Using software with avatar-based virtual environment led to enhanced engagement and motivation, and to more valuable education outcomes among middle school children (Falloon, 2010). Similarly, while not specifically examining entertainment-education, Jiang and Benbasat (2007) found that under low to moderate task complexity different presentation formats led to varying levels of product knowledge. Subjects viewing videos or virtual-product experiences had greater product knowledge than subjects who simply viewed static pictures.

### **Message impact**

Impact, the measure of how influential a message is likely to be, is characterized by arousal and involvement (du Pre, 2009). In this context, 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 (du Pre, 2009). While several studies using ELM as a base have investigated involvement, fewer have examined the role of arousal.

## RESEARCH MODEL AND HYPOTHESES

There have been several studies that have examined the impact of involvement and motivation, and to a lesser degree, arousal on belief/behavior/attitude change. In this study, we examine how varying types of presentation rhetoric can impact involvement and arousal. The overarching research question is:

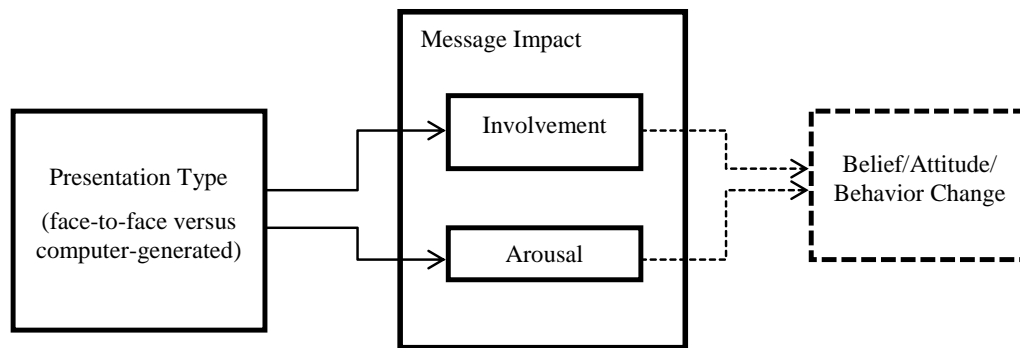
RQ: Can presentation rhetoric influence involvement and arousal?

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.

H1: Subjects viewing video with face-to-face communication style of rhetoric will report lower levels of arousal on the topic than those subjects who view the computer-generated multimedia video.

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 (Petty and Cacioppo, 1986).

H2: Subjects viewing video with face-to-face communication style of rhetoric will report lower levels of involvement on the topic than those subjects who view the computer-generated multimedia video.



**FIGURE 1:** Research Model. Solid lines represent hypotheses tested in this paper. Dashed lines represent aspects of ELM, not tested in this paper.

## METHODOLOGY

### Subjects

Two sections of an undergraduate Introduction to MIS class at a mid-sized Midwestern university in the US were surveyed. Fifty seven students were enrolled in the two sections. The two sections represent a pilot group for the study. At the conference, full results from a full study involving a larger sample will be available. Responses to the survey were optional and dependent on the student being in class on time the day of the survey. Students who indicated on the survey they had seen the video previously were eliminated. Fifty five usable surveys were collected.

### Instruments

Constructs were measured using validated instruments. Involvement was measured using a 10-item instrument (Zaichkowsky, 1994). Arousal was measured using a 3-item measure (Ashworth, Pyle, and Pancer, 2010) with two additional items added. For the Involvement measure, 7-point bipolar evaluative scales (e.g. interesting/boring) were used. For the Arousal measure, a 7-point Likert scale with 1 being strongly disagree and 7 being strongly agree was used.

## Videos

Two YouTube videos were evaluated in this study. These two YouTube videos featured nearly identical narratives of the Healthcare Reform debate, yet were presented in a rhetorically contrasting manner.

### Video 1

Title: Health Care Overhaul Summarized via MASSIVE PIG

Time: 3:49

Video 1 is an episode of the vLog Brothers and features a live John Green in front of a web camera. The format of the video is a back-and-forth correspondence between two brothers. Though they appear 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.

### Video 2

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

Time: 3:31

Video 2 is a motion infographic produced by the Canadian non-profit design studio ThoughtBubble. In this video, John Green's narrative from Video 1 is lifted and applied to a motion graphic animation. In this adaptation by ThoughtBubble, the narrator is not visually present and no real-life images appear; the entire video is comprised of computer-generated illustrations, images, text, and music.

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.

## RESULTS

### Respondent background

Demographic data collected included age, gender, ethnicity, political views, and awareness of the healthcare debate. Students ranged in age from 19 to 43; the average age was 22.8. Five per cent of the students indicated they were Very Conservative, 27% stated Conservative, 44% Moderates, and 24% Liberal. None of the students described themselves as Very Liberal. On the healthcare debate, the majority (55%) felt they were moderately aware of the debate. The remainder indicated they were extremely aware (6%), very aware (18%), slightly aware (15%) or not at all aware (7%). Twenty six subjects viewed the first video; twenty nine subjects viewed the second video. ANOVA test results indicate there is no significant difference between the two samples on demographic data.

### Data Analysis

Factor analysis and reliability tests were done. 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 Involvement and Arousal measures and so were dropped. This resulted in a 6-item Involvement measure and a 6-item Arousal measure. Reliability tests for Involvement were .890 and for Arousal were .903. For each individual, responses were averaged to create one score for each construct. Full validity results will be provided at the conference; including a table providing full factor analyses.

### Findings

Preliminary tests have been run for the pilot study. Results indicate hypotheses are supported.

Hypothesis 1 states that subjects who view the video with face-to-face communication style of rhetoric will report lower levels of arousal than those subjects who view the computer-generated multimedia video. ANOVA results support this hypothesis,  $F=6.257$ , Significance = .015.

Hypothesis 2 states that subjects who view the video with face-to-face communication style of rhetoric will report lower levels of involvement than those subjects who view the computer-generated multimedia video. ANOVA results support this hypothesis,  $F=6.933$ , Significance = .011.

Table 1 provides a summary of preliminary findings.

Hypotheses	F	Significance
H1: video with face-to-face communication style of rhetoric results in lower levels of arousal than computer-generated multimedia video	6.257	.015
H2: video with face-to-face communication style of rhetoric results in lower levels of involvement than computer-generated multimedia video.	6.933	.011

**Table 1. Hypotheses Results**

These findings support our initial belief that presentation rhetoric can influence both a subject's involvement with and arousal on a 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.

## DISCUSSION AND CONCLUSION

The findings of this study indicate that presentation rhetoric, the type and format of a presentation, can influence both a person's feelings of involvement and arousal on a topic. Despite similar reported political views and knowledge of the healthcare debate, the pilot study group viewing the computer-generated, multimedia video reported higher levels of involvement and arousal on the topic than the group viewing the face-to-face conversational style of video. Through studies using ELM, we know that changing levels of involvement can lead to changes in behavior and attitude. The data from this study suggests 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 more impact on a viewer than presentation which lack these qualities. Given this information, designers who are looking to influence or change a viewer's attitude or behavior on some topic would be wise to consider the design of their message.

Further analysis and discussion will be presented at the conference on results from an open-ended question asking subjects to comment on the aspect of the video which stood out most to them. If responses from the two groups differ on what aspect stood out, it will further our knowledge on designing messages to better impact the viewer.

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