

## The Use of Melodramatic Animation in News, Presence and News Credibility

LO, Wai Han; CHENG, Benjamin K L

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**The use of melodramatic animation in news, presence and news credibility: A path model**

**Abstract**

An experiment with 187 college students was conducted to investigate the influence of “melodramatic animation” on the perceived credibility of crime-related news reporting, and the role of “presence” in mediating this influence. The results of a path analysis showed that presence positively predicts the perceived credibility of a news report. However, the effects of melodramatic animation on viewers’ experience of presence were found to vary. Practical and ethical issues relating to the use of melodramatic animation in news reports are discussed.

**Keywords: animated news, presence, credibility, experiment, Apple Action News**

## **The effects of melodramatic animation on the perceived credibility of news reporting, and the mediating role of presence: a path model**

In today's globalized media environment, news-media organizations must compete fiercely to persuade audiences to consume their news content (Aitamurto & Lewis, 2013). The emergence of augmented-reality technologies (Pavlik & Bridges, 2013) and virtual-reality technologies, such as Oculus Rift (Wortham, 2014), has transformed the delivery of media content and increased audiences' engagement with the process of consuming media (Cheng & Lo, in press). One example is "melodramatic animation," an increasingly prominent news format (Cohen, 2009) that has been adopted by various international news organizations (Cheng & Lo, 2011; Lo & Cheng, 2013; Cheng & Lo, in press). However, the use of such rapidly developing technologies may make it difficult for audiences to distinguish between genuine and constructed news images, raising doubts about the validity of news reports (Carlson, 2009; Newton, 2001). In this study, we measure the effects of the use of melodramatic animation on the perceived credibility of news reports, and investigate the role of "presence" in mediating this relationship.

In recent years, the use of animation to narrate news stories has become increasingly common in the world of international news media. For example, the British Broadcasting Corporation has created animated news reports of disasters such as tsunamis. Cable News Network has used animation to reconstruct military operations. Some international news agencies, such as Reuters,<sup>1</sup> have commissioned customized animated news videos from Next Media Limited, a Hong Kong-/Taiwan-based animated news media production company (Kaplan, 2010). Next Media Limited has media outlets in Hong Kong, Taiwan, Japan, and New York

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<sup>1</sup> Reuters commissioned Next Media Limited to produce an animation illustrating the environmental risks of tuna fishing (Kaplan, 2010).

(Cheng & Lo, in press; Kilgannon, 2011), and offers viewers a daily feed of animated international news videos and news stories about international celebrities. These productions have received millions of views, and some videos, such as a report on Tiger Woods' marital difficulties, have even gone viral, eliciting commentary and debate from traditional media organizations and audiences worldwide (Kaplan, 2010).

Animation often plays a supporting role in television journalism. For example, three-dimensional (3D) modeling may be used to illustrate natural disasters and scientific innovations. In recent years, however, more complex forms of animation such as character modeling, as well as the use of background music and sound effects, have transformed the televised presentation of news. Lo and Cheng (2013) categorized these new forms of animation as melodramatic animation. Today, news reports often feature melodramatically animated characters with dynamic facial expressions and speaking roles, sometimes accompanied by music and sound effects. These characters may re-enact whole news stories, providing as much detail as if the journalist/producer had witnessed the events firsthand.

The use of melodramatic animation in news broadcasting has caused controversy among news stakeholders, some of whom have argued that animated news reports provide unverified accounts of events (Coren, 2010). Indeed, animated-news producers have admitted fleshing out animated news stories with fictional details (Wong, 2012). The suitability of melodramatic animation as a news-reporting medium has thus been called into question; animation has even been found to jeopardize journalistic objectivity (Cheng & Lo, 2012).

In this study, we attempt to determine whether the use of melodramatic animation affects the perceived credibility of news reports. Previous scholars have shown that the format in which news stories are reported influences several audience outcomes, such as perceived news credibility (e.g., Cheng & Lo, 2012), news appreciation (e.g.,

Snoeijer, Vreese & Semetko, 2002), and news recall (e.g., Fox et al., 2004). We propose that the use of melodramatic animation may influence viewers' perceptions of the credibility of news reports, and that this relationship is mediated by presence.

### **Research Objectives**

This study is an extension of previous research by Cheng and Lo (in press). The findings of the latter study indicated that the use of melodramatic animation in a certain genre of news affects viewers' experience of presence, which in turn influences their judgment of news stories. Specifically, the use of melodramatic animation in crime-related news was found to intensify viewers' sense of presence, making them more likely to evaluate a suspect negatively; those who experienced a greater sense of presence were more confident that the suspect had actually committed the alleged crime. The aim of the current study is to determine whether the perceived credibility of news reporting is influenced by the use of melodramatic animation, and if so, whether this relationship is mediated by presence.

In this study, we use the transportation-imagery model (TIM) to explore the relationships between the variables under study. The key assumption of the TIM is that a story's ability to "transport" its audience is affected by the medium in which the story is told. Audience members who have been imaginatively transported into a story are less likely to doubt its veracity (Green & Brock, 2000). The model suggests that the degree to which a news medium transports its viewers determines their sense of presence (i.e., the illusion of "being there"; Rizzo et al., 1998), and thus influences their evaluation of the credibility of the news report. We hypothesize that the use of melodramatic animation to vividly depict real-life events enhances viewers' sense of presence, in turn influencing their perceptions of the credibility of a news report. Therefore, the aims of this study are 1) to investigate audience perceptions of the credibility of news delivered in the form of melodramatic animation; and 2) to

determine whether presence mediates the relationship between the use of melodramatic animation in news reporting and the perceived credibility of a news report.

## **Literature Review**

### **Influence of Animation on Perceived Credibility**

To date, researchers have examined several factors that may affect audiences' perceptions of the credibility of news reports, such as media channel (Johnson & Kaye, 1998; Park, 2006), information source (e.g., Engstrom, 1994; Newhagen & Nass, 1989; Kiouisis, 2001), and audience attributes (Bucy, 2003). Some researchers have compared the perceived credibility of televised and online news reports (McCroskey & Jenson, 1981), and others have compared viewers' responses to news reports delivered by different anchors (Markham, 1968). Although these findings provide important insights, the effects of presentation format on the perceived credibility of news items remain unclear (Bracken, 2006; Flanagin & Metzger, 2007). Previous studies have provided some evidence that the news medium significantly affects perceived credibility. For example, Reeves and Nass (1996) found that the use of cuts influences viewers' perceptions of political candidates. Compared with viewers who watched an uncut political advertisement, those who watched the advertisement with cuts regarded the political candidate more positively.

The findings of an experiment conducted by Bracken, Neuendorf, and Jeffres (2003) indicated that perceived credibility is also influenced by screen size. Viewers who watched a debate between presidential candidates on a larger screen more negatively evaluated the candidates' credibility. Other presentation variables, such as picture quality (Lee, 1978), aesthetic presentation (Slater & Rouner, 1996), writing style (Chartprasert, 1993), and website design (Flanagin & Metzger, 2007), have also been found to significantly influence perceived credibility.

This study contributes to the literature by examining the influence of another presentation feature, animation, on perceived credibility. Cholodenko (1991) argued that animation can enhance perceptions of credibility by creating lifelike illusions, and Stoiber, Segulier, and Breton (2010) agreed that animation can enhance the credibility of virtual characters. Cheng and Lo (2012) were the first researchers to examine the influence of animation on the perceived credibility of news reports. Their student participants perceived news reports with and without animated elements to be equally credible. However, as this was an exploratory study, more research was needed to pinpoint the relationship between animation and perceived credibility. In a later study of crime-related news, Cheng and Lo (in press) identified presence as a crucial link between animation and viewers' assessment of a suspect's guilt. In light of these findings, the current study investigates presence as a mediator of the relationship between animation and perceived news credibility. Evidence is found that a more intense sensation of presence encourages viewers to consider a news story credible.

### **Presence and Formal Features**

Presence has been defined as a sense of immersion in media (Minsky, 1980). This construct has been widely used to examine experiences mediated by technology (Lombard, 2000) and experiences in virtual environments (e.g., Banos et al., 2000). A heightened sense of presence is not caused by a perceptual or psychological malfunction, as individuals remain aware that their sensations are mediated and capable of distinguishing a mediated setting from a real environment (Lombard & Ditton, 1997; Bracken, 2006).

Previous studies have shown that the characteristics of media play important roles in evoking a sense of presence in users. For example, larger and higher-resolution images that more closely resemble the real world have been found to increase realism and thereby enhance users' sense of presence (e.g., Neuman, 1990;



Grabe et al., 1999). Media users' sense of presence is also increased by opportunities for interaction (Biocca & Delaney, 1995), subjective camera techniques (Horton & Wohl, 1956), audio fidelity (Barfield & Weghorst, 1993; Reeves & Nass, 1996), and the provision of stimuli for multiple senses (e.g., Hellig, 1992; Rheingold, 1991).

Melodramatic animation has also been shown to have a vital role in enhancing users' experience of presence (Cheng & Lo, 2014).

This study investigates the effects of animated elements of news reports on users' experience of presence. Presence has six key dimensions (Lombard and Ditton, 1997): immersion; realism; transportation; the illusion of becoming a social actor within the medium; the illusion that the medium is a social actor; and social richness. The last three dimensions are more relevant to virtual environments than to news reports featuring melodramatic animation (Cheng & Lo, in press). The fourth dimension of presence describes the experience of parasocial interaction, and the fifth and sixth dimensions describe perceptions of the medium as a social actor and perceptions of the medium as sociable, respectively (Lombard and Ditton, 1997). Compared with the users of virtual media, the viewers of animated news interact very little with their medium, and seldom regard news animations as either social actors or sociable (Cheung & Lo, 2014). Therefore, we focus on presence as transportation, presence as immersion, and presence as realism. The relationships between these three dimensions of presence and the use of melodramatic animation are explored in the following section.

Animated news has three distinctive elements: sound effects, animated graphics, and the re-enactment of a reported event (Cheng and Lo, 2012). All of these elements help to transport viewers into a narrated world. In the mediated environment of an animated-news video, animated characters, dialogue, and sound effects are used to simulate real-life incidents. The animated characters usually have detailed facial

expressions and realistic physical movements. The sensory richness of the simulated environment makes the story more vivid, which increases viewers' sense of presence.

As argued by Steuer (1992), vividness is the most important determinant of a sense of presence. In this context, "vividness" refers to the audio-visual richness of a technologically constructed virtual environment. It is determined by sensory stimulation and certain technical features of the mediated environment. Steuer (1992) proposed that the number of sensory dimensions and the level of resolution in different perceptual channels are important determinants of vividness.

Higher-resolution images and increased audio-visual fidelity increase vividness and thus enhance an audience's sense of presence (Neuman, 1990; Reeves & Nass, 1996; Rizzo, Wiederhold, & Buckwalter, 1998). The use of melodramatic animation to depict news events in detail, complete with animated characters and background music, increases both sensory breadth and sensory depth. It may thus enhance the vividness of a news video, imaginatively transporting viewers into the story and increasing their sense of "being there" as events unfold (Green & Brock, 2000, p. 201).

Presence as immersion can be experienced both perceptually and psychologically (Lombard & Ditton, 2006). The metaphor derives from the literal experience of being physically submerged in water. It describes one's sensation of being within a completely different environment (Murray, 1997). Individuals who entrust their bodies to reality-manipulating technologies experience perceptual immersion (Biocca & Delaney, 1995, p. 57). Head-mounted displays, headphones, and gloves block out real-world sensory stimuli and redirect users' focus to the virtual reality presented.

Psychological immersion entails feelings of mental involvement, absorption, and engagement (Quarrick, 1989; Fencott, 1999). For instance, individuals may become

immersed in the mediated worlds of television and books (Lombard et al., 2000). The use of animation in news reporting may also create a sense of psychological immersion. As McMahan (2003) noted, animation attracts viewers' attention and enhances their sense of involvement with the mediated environment. Other studies have confirmed that animation increases emotional investment (e.g., Detenber, Simons, and Bennett, 1998; Burford & Blake, 1999), which in turn increases viewers' attentiveness and sense of involvement (Cheng & Lo, 2014).

Presence as realism is determined by the ability of a medium to create representations of the world that appear accurate and real (Lombard, Ditton, & Weinstein, 2009). This dimension of presence can be further categorized as either social realism or perceptual realism. McMahan (2003) argued that social realism is determined by the plausibility of a media representation in a non-mediated environment, and perceptual realism measures the extent to which a media portrayal is perceived as lifelike.

Lombard et al. (2000) proposed that a science-fiction program exhibits low social realism but high perceptual realism; although the fiction is unlikely to seem plausible in the real world, the characters and objects depicted in the program look and sound like real people and real things. Similarly, an animated news report with carefully designed 3D graphics and sound effects may have a high level of perceptual

realism and a low level of social realism (McMahan, 2003; Lombard, Ditton, & Weinstein, 2009)

### **Influence of Presence on Perceived Credibility**

Several researchers have sought to identify the connection between the experience of presence and the perceived credibility of a message. A correlation has been found between source credibility and involvement (Gunther, 1992), suggesting that viewers' sense of presence may influence source credibility according to the level of immersion they experience while using media (Bracken, 2006). Bracken (2006) found that viewers exposed to news with a higher image quality through high-definition television transmission reported greater levels of immersion and were more likely to regard newscasts as credible. Bracken, Neuedorf, and Jeffres (2003) investigated the relationship between screen size and audience perceptions of the source credibility of presidential candidates. They found that perceived source credibility was affected by viewers' sense of presence, specifically their experience of immersion. Couture (2004) argued that the credibility of a simulation is largely dependent on its realism. If the simulation looks lifelike or seems plausible in a real-world setting, it is likely to be assessed as convincing and credible.

The TIM offers a useful explanation of the relationships between animation, presence, and credibility (Green & Brock, 2000). The key assumption of the TIM is that a detailed and vivid description can lift individuals out of reality and transport them into a narrated world (Green & Brock, 2002). For example, Green and Brock (2000) found that viewers' attitudes to a news story depicting a murder changed after witnessing an explosion scene. The viewers' absorption with the story was found to increase, and they became more willing to accept the news content. As argued by Bracken (2005), the TIM and theories of presence are based on similar assumptions.

Both posit that audiences are transported into a mediated world, and that this transportation may suspend their existing beliefs about the real world. The TIM provides a particularly useful framework for the analysis of viewers' perceptions of news stories (Bracken, 2006). It explains how the use of melodramatic animation to vividly depict real-life crime news can give viewers the sense of witnessing the crime firsthand (Cheng and Lo, in press). Therefore, we argue that the use of animated characters, dialogue, and sound effects in news reporting enhances viewers' sense of presence and thus their assessment of the credibility of a news report.

Our model is developed in line with the above findings and the evidence presented earlier in the paper. Presence is modeled as a mediator of the relationship between the use of melodramatic animation in news reporting and the perceived credibility of news reports. Specifically, we hypothesize that the use of melodramatic animation in a news report increases viewers' experience of presence and thus makes them more likely to regard the news as credible.

### **Method**

The participants comprised 187 students from the same medium-sized university in Hong Kong. They were randomly assigned to either condition 1 or condition 2. The participants assigned to condition 1 were asked to watch two videos featuring melodramatic animation. Those assigned to condition 2 watched two videos without melodramatic animation. With the exception of their animated content, the videos used in condition 1 were identical to those used in condition 2.

### **Stimuli**

Two news videos were chosen from the website of Apple Daily. The first news video featured a case of sexual assault on a university campus, and lasted for 1 minute and 12 seconds. It contained 28 seconds of animated content, surrounded by real-life footage of the alleged crime scene—a university swimming pool—and the suspects

leaving court. The animation re-enacted the news story. First, a man swam toward a female student and touched her breast under the water. The assault caused the victim to lose her balance and sink beneath the water. She then looked around the swimming pool to identify the suspect, and a verbal altercation ensued. In the fictionalized dialogue between the victim and the suspect, the victim asserted that she had been sexually assaulted, and the suspect denied the allegation. The animation also showed the same suspect approaching another female and touching her thigh.

The first video was edited by replacing the animated content with real-life content such as video clips of other swimmers. As a result, the video resembled a conventional news presentation. A professional news-broadcast presenter narrated the news story according to the original transcript of the video. As the manipulated version of the video was the same length as the original version, the participants received the same amount of information through narration.

The second video showed a maid attacking and robbing her employer.<sup>2</sup> The video lasted for 1 minute and 22 seconds. It contained 40 seconds of animated content, surrounded by real-life footage of an interview with the victim and images of the building in which the event took place. In the animated re-enactment of the crime, the suspect struggled with the victim on a bed and forcibly removed the victim's gold necklace and several of her teeth. The suspect then disposed of the weapons used in the crime.

Like the first video, the original video was edited<sup>3</sup> by replacing the animated content with relevant real-life images, such as shots of a police station and the building in which the crime was committed (see Fig. 4 for a sample non-animated frame). Again, the original script of the video was narrated by a news-broadcast

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<sup>2</sup> The stimulus is available at <http://www.youtube.com/v/2-FQDyWZDeo>.

<sup>3</sup> The manipulated videos are available at [http://www.youtube.com/v/i5GSzdW\\_Rk0](http://www.youtube.com/v/i5GSzdW_Rk0) and <http://www.youtube.com/v/jSM253fuuyw>.

presenter. As the original and edited versions of the video were the same length, the same amount of information was received by both sets of participants. To ensure that the manipulated videos resembled the original videos streamed online by Apple Daily, the logo of the media organization was added to both the original video and the edited version. A screening was held to ensure that the production quality of the four videos was identical to that of real online videos. Four college students were asked to watch and comment on the quality and authenticity of the edited videos. The videos were then edited further according to the students' recommendations. The two videos used in the study were selected as stimuli because real animated news videos often involve sex and violence (Kaplan, 2010). The choice of videos thus increased the representativeness of the stimuli.

## **Measurement**

After exposure to the stimuli, the students were asked to answer a questionnaire with three parts, as follows. In the first part, the intensity of the presence experienced by the students was measured. In the second part, the students' perceptions of credibility were evaluated. Demographic data were collected in the last part of the questionnaire. One researcher translated the questions from English to Chinese, followed by back-translation into English by another researcher. The questions were written in Chinese, because Chinese was the first language of all of the students.

*Presence.* This construct was measured by asking the participants to rate five statements, such as "I felt involved with the viewing experience," on a scale from 1 to 5 (1 = strongly disagree, 5 = strongly disagree). The questions were adapted from Nowak and Biocca's (2003) study.

*Perceived credibility of news.* Following Meyer (1988), the participants were asked to rate five statements, such as “The news report is believable,” on a scale from 1 (= strongly disagree) to 5 (= strongly agree).

*Demographic data.* The participants provided information on their gender, age, and year of study. They were also asked whether they had previously been exposed to the stimuli, because repeated exposure may influence viewers’ perceptions of the credibility of a news report (Zaragoza & Mitchell, 1996).

### **Procedure, Measurement Scoring, and Reliability Tests**

We used Qualtrics, a tool for creating online surveys, to construct a survey comprising both pairs of stimuli and a set of questions. A computer was assigned to each participant. The participants were briefed about the purpose of the study, then randomly assigned to one of two conditions (condition 1: exposed to two videos containing animation; condition 2: exposed to two non-animated videos). The order of the two videos was randomized within each condition. After watching the two videos, the participants answered the questionnaire. The experiment lasted for about 20 minutes, after which the participants were debriefed.

A reliability test was conducted to examine the items measuring presence ( $\alpha = 0.93$ ) and the perceived credibility of the news story ( $\alpha = 0.89$ ). The results were considered satisfactory. We calculated the mean scores for news credibility and presence by averaging the scores for the related answers.

### **Results**

In the experiments, 103 participants (55.1%) were assigned to condition 1 (watching videos containing melodramatic animation) while 84 participants (44.9%) were assigned to condition 2 (watching videos without melodramatic animation). Approximately 41% of the participants were male, and 59% were female. Their ages



ranged from 16 to 23. Approximately 58% were second-year students and 42% were first-year students.

Linear-regression analysis was performed to evaluate the relationship between the control variable (prior exposure to a video reporting the same story) and perceived credibility. No significant relationships were found between the two variables for either the sex-related news video (beta = 0.09,  $p > 0.05$ ) or the violence-related news video (beta = 0.07,  $p > 0.05$ ).

We first hypothesized that a path links the use of melodramatic animation in news with presence, which in turn is linked to the perceived credibility of a news report. Specifically, we predicted that viewers watching a news report containing melodramatic animation would experience a greater sense of presence, and thus perceive the news to be more credible. To test this hypothesis, we used AMOS to conduct path analysis using the maximum-likelihood method. This technique involved estimating the hypothesized causal relationships between the observed variables (Kline, 2005). The path analysis was conducted separately for the two news types: sex crime and violent crime. The statistical software was used to create a bootstrap distribution of 5,000 samples.

For the news involving violence (a maid attacking her employer), the hypothesized model (Model 1) was found to fit the data ( $X^2 = 1.28$ , d.f. = 1,  $P = 0.26$ , NFI = 0.94). The root mean square error of approximation (RMSEA) was 0.04, which confirmed the suitability of the model. The path modeled between the use of melodramatic animation in news and presence was found to be significant (beta = 0.38,  $p = 0.002$ ), as was the path between presence and the perceived credibility of the news (beta = 0.22,  $p = 0.000$ ) (see Fig. 5).

For the news involving sex (sexual assault at a university swimming pool), the hypothesized model (Model 2) was also found to fit the data ( $X^2 = 0.75$ , d.f. = 1,  $P =$

0.39, NFI = 0.96). The RMSEA was 0.00, which confirmed the fit of the model. However, the path between the use of melodramatic animation in news and presence was not found to be significant ( $\beta = 0.20$ ,  $p = 0.13$ ), whereas the path between presence and perceived credibility was significant ( $\beta = 0.22$ ,  $p = 0.00$ ) (see Fig. 6).

### **Discussion**

This study contributes to the existing literature by showing how presence mediates the connection between melodramatic animation and perceived credibility. However, the study has a few limitations. First, only college students were recruited by conventional sampling, and the stimuli investigated were limited to news videos with the themes of sex and violence. Therefore, the generalizability of the results is limited. To increase the generalizability, future researchers could use random sampling to recruit participants, and conduct similar experiments with other genres of news.

Second, the experiment was conducted in an artificial setting. Real-world audiences may have different viewing practices, such as using smartphones to watch news videos. Third, the stimuli used were edited versions of news videos from Apple Action News, and the logo of the media organization was not removed. Therefore, the results of the study do not rule out the possibility that viewers' attitudes toward news organizations affect their perceptions of the credibility of news reports (Cheng & Lo, 2012).

The study nevertheless offers insights into the interaction of news format (melodramatic animation) with presence and perceived news credibility. The findings indicate that presence mediates the relationship between the use of melodramatic animation in news and perceived news credibility. The use of melodramatic animation was found to enhance perceptions of news credibility if the participants experienced a heightened sense of presence. The TIM explains the influence of presence on

audiences' perceptions of news credibility. The assumption of the TIM is that mediation can transport viewers into a narrated story, making them more likely to believe the news content (Green & Brock, 2002). The findings also indicate that viewers who experience a greater sense of presence are more likely to evaluate the news as credible and believable.

However, we also found that melodramatic animation does not necessarily affect participants' sense of presence. The proposed path model only partially fits the results. The use of melodramatic animation in violence-related news was found to enhance viewers' sense of presence. The sensory richness of the simulated environment, with its 3D images and detailed depiction of an act of violence, made the news story more vivid, increasing viewers' experience of presence. However, the use of melodramatic animation in sex-related news was not found to enhance viewers' sense of presence.

These results suggest that the way in which animation is used is more important than whether animation is used at all. Animation has various dimensions, each of which contributes to the audio-visual breadth and depth of a news story. Each dimension uniquely affects viewers' sense of presence (e.g., Steuer, 1992; Anderson, 1993; Kramer, 1995; Lang, Dhillon, & Dong, 1995). The effectiveness of melodramatic animation in heightening viewers' experience of presence differs between crime-related stimuli and sex-related stimuli. The crime-related news story used in this study featured intense animated violence: a fight between the victim and the suspect that included a shot of splashing blood. The sex-related news story featured relatively mild animated violence: the suspect was shown touching the victim's body. Future researchers should examine the influence of each dimension of animation on the experience of presence. As argued by Lombard and Ditton (1997), individual characteristics of media forms should be examined in detail.

This study contributes to the debate among scholars and news practitioners on the use of melodramatic animation in news reporting. Some animated-news journalists have argued that the use of melodramatic animation in news reporting should not be criticized because it does not increase viewers' sense of presence or affect their judgment of the news. Other supporters of animated news have argued that enhancing viewers' sense of presence is not necessarily a negative outcome, and that animated news reporting is an effective means of attracting viewers and immersing them in a news story. In light of today's crisis of journalism, with a significant decline in newspaper circulation and advertising revenue in many countries (PEW Research Center, 2014; Reinardy, 2011), animated news may be an important tool for motivating viewers, especially young people, to consume news (PEW Research Centre, 2011).

However, critics of animated news have argued that melodramatic animation may adversely affect viewers' judgment of news stories by enhancing their sense of presence. According to these critics, viewers are not always aware that the medium of animated news distorts real-life news content. Journalists have admitted that they often add imaginary details to flesh out animated news content (Wong, 2012). Therefore, animation may lead viewers to misinterpret the real events reported in the news.

Moreover, as noted in the introduction, many international news media have begun to use melodramatic animation in their news reports, and some news organizations have set up animated-media outlets in other countries (Zahed, 2013; NMA, 2013). It will be necessary to conduct cross-cultural tests to examine cultural variation in viewers' attitudes toward melodramatic animation in news reports, especially as journalistic norms differ between countries (Schudson, 2001; Hallin & Mancini, 2004).

It will also be necessary to determine how other demographic variables, such as age, affect viewers' perceptions of the use of animation in news reporting. Future researchers are also advised to investigate the influence of this new reporting technique on the effectiveness of news learning at both the information level and the conceptual level. More attention should be paid to whether animation improves viewers' understanding and recall of news events.

### **Conclusion**

Melodramatic animation is an increasingly common component of mainstream news reporting (Cohen, 2009), and has been shown to be especially popular with young consumers (Lo & Cheng, 2012). The findings of this study reveal that the use of melodramatic animation influences viewers' perceptions of the credibility of news reports, with presence as a mediator. Animated news reports have benefits and drawbacks. On the one hand, animation can make a news story more vivid, and thereby increase viewers' consumption of the news content. It may even provide a solution to the modern crisis of journalism by increasing public engagement with the news. On the other hand, melodramatic animation may transform news reporting into a form of entertainment, blurring the boundary between fact and fiction (Boykoff, 2010). The detail and vividness of animated news has raised doubts about the credibility of the reporting and thus the veracity of the events reported. Further research is needed to identify more responsible ways of using melodramatic animation in news reporting.

### **Reference**

Aitamurto, Tanja and Seth C. Lewis. (2013). "Open Innovation in Digital Journalism: Examining the Impact of Open APIs at Four News Organizations." *New Media and Society* 15(2): 314-331.

- Anderson, Joseph. D. (1993). "From Jump Cut to Match Action: An Ecological Approach for Film Editing." Paper presented at the annual conference of the University Film and Video Association, Philadelphia, August.
- Banos, Rosa M., Cristina Botella, Azucena Garcia-Palacios, Villa, H., Conxa Perpina, and Mariano Alcaniz. (2000). "Presence and Reality Judgment in Virtual Environments: A Unitary Construct?" *Cyber Psychology and Behavior* 3(3): 327-335.
- Barfield, Woodrow., and Suzzanne Webhorst. (1993). "The Sense of Presence within Virtual Environment: A Conceptual Framework." *Proceedings of the Fifth International Conference of Human-Computer Interaction, Orlando, 2*: 699-704.
- Biocca, Frank., and Ben Delaney. 1995. "Immersive Virtual Reality Technology". In *Communication in the Age of Virtual Reality*, edited by Biocca, Frank and Mark R. Levy, 57-124, Hillsdale: Lawrence Erlbaum.
- Boykoff, Pamela. 2010. "The Blurry Lines of Animated 'New'". *CNN World*, January 30.  
[http://articles.cnn.com/2010-01-30/world/taiwan.animated.news\\_1\\_jimmy-lai-ho-ng-kong-woods-accident?\\_s=PM:WORLD](http://articles.cnn.com/2010-01-30/world/taiwan.animated.news_1_jimmy-lai-ho-ng-kong-woods-accident?_s=PM:WORLD).
- Bracken, Cheryl C. 2005. "Are We Persuaded by Feeling "Part of the Action"?" Exploring the Similarities between the Transportation Imagery Model and Presence." *Proceedings of the English Annual International Meeting of the Presence Workshop* 8: 125-129.
- Bracken, Cheryl C. 2006. "Perceived Source Credibility of Local Television News: The Impact of Television Form and Presence." *Journal of Broadcasting and Electronic Media* 50(4): 723-741.
- Bracken, Cheryl C., Kimberly A. Neuendorf, and Leo W. Jeffres. 2003. "Screen Size, Source Credibility, and Presence: Audience Reactions to the Televised 2000 Presidential Debates." Paper presented at the Communication Theory and Methodology Division at the annual conference of the Association for Education in Journalism and Mass Communication, Kansas City, July 30 – August 2.

- Bucy, Erik. P. 2003. "Media Credibility Reconsidered: Synergy Effects between On-air and Online News." *Journalism and Mass Communication Quarterly* 80(2): 247-264.
- Burford, Dennis and Edwin Blake. 1999. "Real-time Facial Animation for Avatars in Collaborative Virtual Environment". Paper presented at the South African Telecommunication Networks and Applications conference, September.
- Carlson, Matt. 2009. "The Reality of a Fake Image: News Norms, Photojournalistic Craft and Brian Walski's Fabricated Photograph". *Journalism Practice* 3(2): 125-139.
- Chartprasert, Duangkamol. 1993. "How Bureaucratic Writing Style Affects Source Credibility." *Journalism Quarterly* 70: 150–159.
- Cheng, Benjamin K. L, and Wai Han Lo. 2012. "Can News be Imaginative? An Experiment Testing the Perceived Credibility of Melodramatic Animated News, News Organizations, Media Use, and Media Dependency." *Electronic News* 6(3): 131-150.
- Cheng, Benjamin K. L, and Wai Han Lo. 2015. "The Effects of Melodramatic Animation in Crime-related News". *Journalism and Mass Communication Quarterly*, April. doi: 10.1177/1077699015581799
- Cholodenko, Alan, ed. 1991. *The Illusion of Life: Essays on Animation*. Sydney: Power Publications in association with the Australian Film Commission.
- Cohen, Noam. 2009. "In Animated Videos, News and Guesswork Mix." *The New York Times*, December 6.  
[http://www.nytimes.com/2009/12/06/business/media/06animate.html?\\_r=0](http://www.nytimes.com/2009/12/06/business/media/06animate.html?_r=0).
- Couture, Marc. 2004. "Realism in the Design Process and Credibility of a Simulation-based Virtual Laboratory." *Journal of Computer Assisted Learning* 20: 40-49.
- Coren, Anna. 2010. "CNN Interviews Jimmy Lai on Animation News." *CNN Asia Pacific*. February 2. <http://www.cnnasiapacific.com/press/en/content/523/>

- Detenber, Benjamin H., Robert F Simons, and Gary G Bennett. 1998. "Roll' Em: The Effects of Picture Motion on Emotional Responses." *Journal of Broadcasting and Electronic Media* 42: 112-126.
- Engstrom, Erika. (1994). "Effects of Nonfluencies on Speaker's Credibility in Newscast Settings." *Perceptual and Motor Skills* 78: 739-743.
- Fencott, Clive. 1999. "Towards a Design Methodology for Virtual Environments, User Centred Design and Implementation of Virtual Environments." Workshop at King's Manor, University of York. September 30.
- Flanagin, Andrew. J., and Miriam J Metzger. 2007. "The Role of Site Features, User Attributes, and Information Verification Behaviors on the Perceived Credibility of Web-based Information." *New Media and Society* 9 (2): 319-342.
- Fox, Julia R, Annie Lang, Yongkuk Chung, Seungwhan Lee, Nancy Schwartz, and Deborah Potter. 2004. "Picture this: Effects of graphics on the Processing of Television News." *Journal of Broadcasting and Electronic Media* 48(4): 646-674.
- Grabe, Maria E, Matthew, Lombard, Reich, Robert D, Cheryl, C Bracken and Theresa, B Ditton. 1999. "Screen Size and Viewer Responses to Television: Research Findings." *Visual Communication Quarterly* 6(2): 4-9.
- Green, Melanie C, and Timothy C Brock. 2000. "The Role of Transportation in the Persuasiveness of Public Narratives." *Journal of Personality and Social Psychology* 79: 701-721.
- Green, Melanie C, and Timothy C Brock. 2002. "In the Mind's Eye: Transportation-imagery Model of Narrative Persuasion." In *Narrative impact: Social and Cognitive Foundations*, edited by Green, Melanie C, Jeffrey J Strange and Timothy C Brock, 315-341. Mahwah: Lawrence Erlbaum Associates Publishers.
- Gunther, Albert C. 1992. "Biased Press or Biased Public: Attitude Toward Media Coverage of Social-groups." *Public Opinion Quarterly*, 56: 147-167.
- Hallin, Daniel C. and Paolo Mancini (2004) *Comparing Media Systems: Three*



*Models of Media and Politics*. Cambridge: Cambridge University Press.

Hellig, Morton L. 1992. "El Cine del Futuro: The Cinema of the future." *Presence* 1(3): 279-294.

Horton, Donald, and Richard Wohl. 1956. "Mass Communication and Para-social Interaction: Observations on Intimacy at a Distance." *Psychiatry* 19: 215-229.

Johnson, Thomas, and Barbara K Kaye. 1998. "Cruising is Believing? Comparing Internet and Traditional Sources on Media Credibility Measures.: *Journalism and Mass Communication Quarterly* 75: 365-386.

Kaplan, Michael. 2010. "Taiwan Tabloid Sensation Next Media Re-creates the News." *Wired.com*, August 30.  
[http://www.wired.com/magazine/2010/08/mf\\_appledaily/all/1?pid=2886](http://www.wired.com/magazine/2010/08/mf_appledaily/all/1?pid=2886).

Kilgannon, Corey. 2011. "Bringing Animation Where the News is." *New York Times*, November 20.  
<http://cityroom.blogs.nytimes.com/2011/11/20/bringing-animation-where-the-news-is/>

Kiousis, Spiro. (2001). "Public Trust or Mistrust? Perceptions of Media Credibility in the Information Age." *Mass Communication and Society* 4: 381-403.

Kline, Rex B. 2005. *Principles and Practice of Structural Equation Modeling*. New York: Guildford.

Kramer, Gregory. 1995. "Sound and Communication in Virtual Reality." In *Communication in the Age of Virtual Reality*, edited by Biocca, Frank and Mark R. Levy, 259-276, Hillsdale: Lawrence Erlbaum.

Lee, Raymond. S. H. 1978. "Credibility of Newspaper and TV News." *Journalism Quarterly*, 55(1): 282-287.

Lo, Wai Han and Benjamin K. L. Cheng. 2013. "Fueling the Debate: Predictive Relationships among Personality Characteristics, Motives and Effects of Animated News Viewing." *Journal of Applied Journalism and Media Studies* 2(1): 135-160

- Lombard, Matthew. 2000. "The Concept of Presence: Explication Statement."  
International Society for Presence Research.  
[http://ispr.info/about-presence-2/about-presence/.](http://ispr.info/about-presence-2/about-presence/)
- Lombard, Matthew and Theresa B Ditton. 1997. "At the Heart of It All: The Concept of Presence." *Journal of Computer-Mediated Communication* 3(2).  
<http://jcmc.indiana.edu/vol3/issue2/lombard.html>
- Lombard, Matthew and Theresa B Ditton. 2007. "Measuring Presence: The Temple Presence Inventory (TPI)." Temple University.  
[http://matthewlombard.com/research/p2\\_ab.html](http://matthewlombard.com/research/p2_ab.html)
- Lombard, Matthew, Theresa B Ditton and Lisa Weinstein. 2009. "Measuring (Tele)presence: The Temple Presence Inventory." *Paper presented at the 12th international workshop on presence. Los Angeles. November 11-13.*
- Lombard, Matthew, Reich, Robert D, Grabe, Mariea. E., Cheryl C Bracken, and Theresa B Ditton. 2000.  
"Presence and Television: The Role of Screen Size." *Human Communication Research* 26: 75–98.
- McCroskey, James C and Thomas A Jenson. 1981. "Image of Mass Media News Sources." *Journal of Broadcasting* 19: 189-180.
- McMahan, Alison. 2003. "Immersion, Engagement, and Presence: A Method for Analyzing 3-D Video Games." In *The Video Game Theory Reader*, edited by Wolf, J.P. Mark and Bernard. Perron , 25-46. New York: Routledge.
- Next Media Animation. (2015). Next Media Animation. Accessed July 20.  
<http://www.multiplejournalism.org/case/next-media-animation>
- Meyer, Philip. 1988. "Defining and Measuring Credibility of Newspapers: Developing an Index." *Journalism Quarterly* 65(3): 567-574.
- Minsky, Marvin. (1980). "Telepresence.: *Omni* 3: 45-51.

Murray, James. 1997. "The Role of Dissociation in Posttraumatic Stress Disorder." PhD diss., University of Oxford.

Neuman, W. Russell. 1990. "Beyond HDTV: Exploring Subjective Responses to Very High Definition Television." *Research report for GTE Labs and the TVOT consortium*. Cambridge: MIT Press.

Newhagen, John and Clifford Nass. 1989. "Differential Criteria for Evaluating Credibility of Newspapers and TV-news." *Journalism Quarterly* 66: 277-284.

Newton, Julianne H. 2001. *The Burden of Visual Truth: the Role of Photojournalism in Mediating Reality*. Mahwah: Lawrence Erlbaum Associates.

Nowak, Kristine L, and Frank Biocca. 2003. "The Effect of the Agency and Anthropomorphism on Users' Sense of Telepresence." *Presence* 12 (5): 481-494.

Park, Cheong-Yi. 2005. "Decomposing Korean News Credibility in the Internet Age. International Journal of Public Opinion Research." *International Journal of Public Opinion Research* 18 (2): 238-245.

Pavlik, John V and Frank Bridges. 2013. "The Emergence of Augmented Reality (AR) as a Storytelling Medium." *Journalism and Communication Monographs* 15(1): 4-59.

PEW Research Centre. 2014. "The Revenue Picture for American Journalism and How It Is Changing." The Pew Research Centre.  
<http://www.journalism.org/2014/03/26/the-revenue-picture-for-american-journalism-and-how-it-is-changing/>

PEW Research Centre. 2011. "Internet Gains on Television as Public's Main News Source: More Young People Cite Internet than TV." The Pew Research Centre.  
<http://pewresearch.org/pubs/1844/poll-main-source-national-international-news-internet-television-newspapers>.

Quarrick, Gene. 1989. *Our Sweetest Hours: Recreation and the Mental State of Absorption*. Jefferson: McFarland.

Reeves, Byron and Clifford Nass. 1996. "The Media Equation: How People Treat

Computers, Television, and Sources Relate to Beliefs about Media Bias.”

*Newspaper Research Journal* 20(4): 41-51.

Reinardy, Scott. 2011. “Newspaper Journalism in Crisis: Burnout on the Rise, Eroding Young Journalists’ Career.” *Journalism* 12(2): 33-50.

Reuters. 2012. Reuters to distribute next media animation’s news direct 3-D Animated videos. Reuters, July 12.

<http://www.reuters.com/article/2012/07/12/idUS143865+12-Jul-2012+MW20120712>

Rheingold, Howard. 1991. *Virtual Reality*, New York: Summit Books.

Rizzo, Albert A, Mark Wiederhold and J. Galen Buckwalter. 1998. “Basic Issues in the Use of Virtual Environments for Mental Health Applications.” In *Virtual Environments in Clinical Psychology and Neuroscience*, edited by Riva, Giuseppe, Brenda Wiederhold and Enrico Molinari, 22-24). Amsterdam: IOS Press.

Schudson, Michael. 2001. “The Objectivity Norm in American Journalism.”

*Journalism* 2(2): 149–170

Slater, Michael D and Donna Rouner. 1996. How Message Evaluation and Source Attributes May Influence Credibility Assessment and Belief Change.

*Journalism and Mass Communication Quarterly* 73(4): 974–991.

Steuer, Jonathan. (1992). “Defining Virtual Reality: Dimensions Determining Telepresence.” *Journal of Communication* 42(4): 73-93.

Snoeijer, Roland, Claes H. de Vreese and Holli A Semetko. 2002. “Research Note: The Effects of Live Television Reporting on Recall and Appreciation of Political news.” *European Journal of Communication* 17(1): 85-101.

Stoiber, Nicolas, Renaud Segquier and Gaspard Breton. 2010. “Facial Animation Retargeting and Control Based on Human Appearance Space.” *Computer animation and virtual worlds* 21(1): 30-54.

Wong, Albert. (2012). “Animated News is Animating the News.” *The Journalist*, 3,

Hong Kong: HKJA's Publication.

<http://hkthejournalist.blogspot.hk/2010/01/animated-news-is-animating-news.html>

Wortham, Jenna. 2014. "Creator of a Virtual Reality Sensation." *New York Times*, March 16.

<http://www.nytimes.com/2014/03/27/technology/creator-of-a-virtual-reality-sensation.html>

Zaragoza, Maria S and Karen J Mitchell. 1996. "Repeated Exposure to Suggestion and the Creation of False Memories." *Psychological Science* 7(5): 294-300.

Fig. 1: A snapshot of the animated news distributed by Reuters

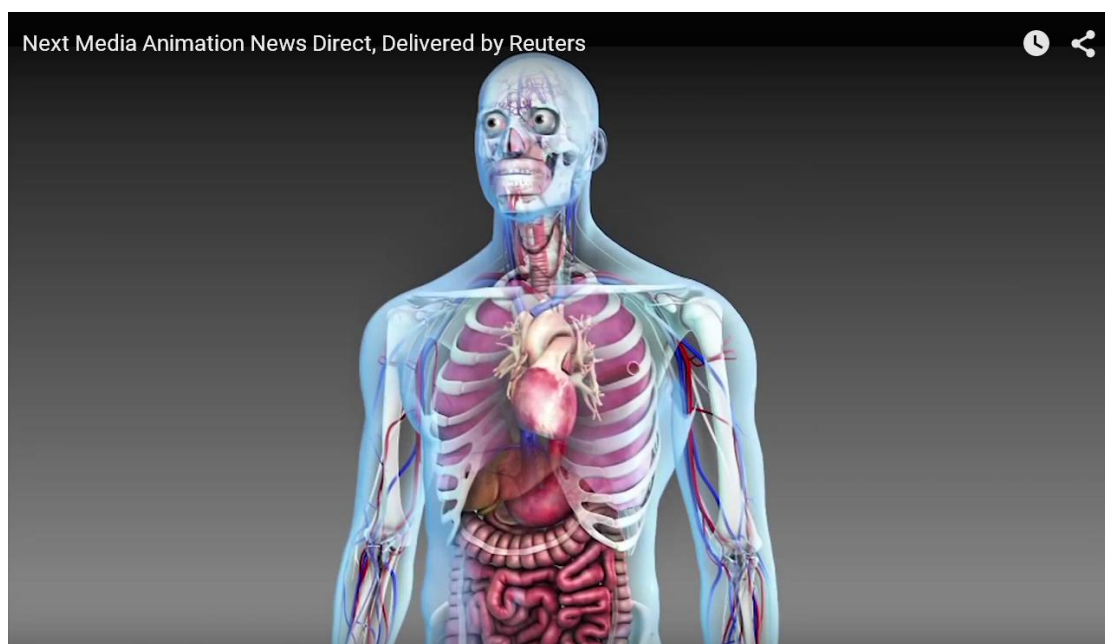


Fig. 2: Snapshot of the animated news about Tiger Woods by Apple Action News



Fig. 3: The hypothesized model of the present study

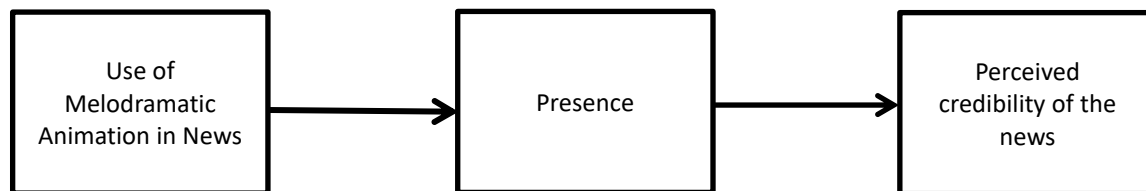




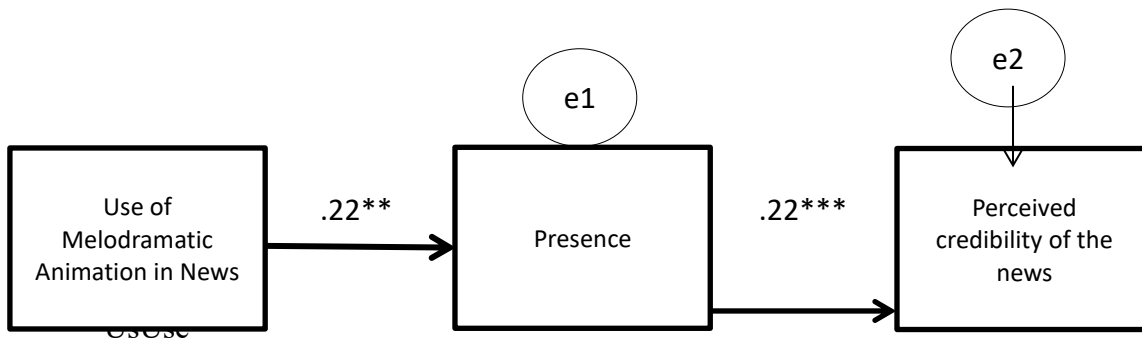
Fig. 4: Sample frame of the stimuli containing animation



Fig. 5: Sample frame of the non-animated stimuli



Fig. 6: Path model of the effect of melodramatic animation in the news in the case of a maid assaulting her employer (Model 1)



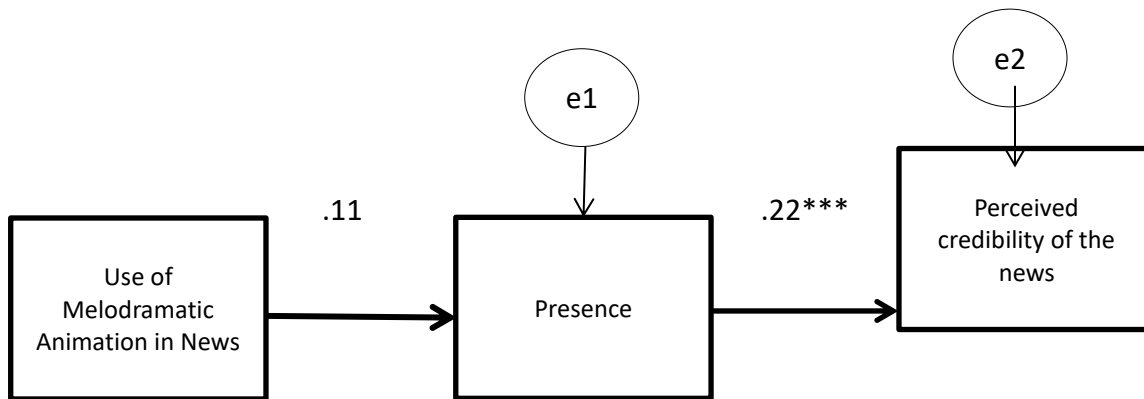
Note 1:  $X^2 = 1.28$ ,  $df = 1$ ,  $p = .26$ , NFI = 0.94, RMSEA = 0.04.

Note 2: To measure melodramatic animation in the news, “news without animation” was coded as 1, and “news with animation” was coded as 2

Note 3: The numbers between the paths from the exogenous variables to the endogenous variables indicate standardized regression weights.

Note 4: \*\* $p \leq .005$ , \*\*\* $p \leq .001$ .

Fig. 7: Path model of the effects of the use of melodramatic animation in the news in the case of the sexual assault at a university swimming pool (Model 2)



Note 1:  $X^2 = .75$ ,  $df = 1$ ,  $p = .39$ , NFI = 0.96, RMSEA = 0.00.

Note 2: To measure melodramatic animation in the news, “news without animation” was coded as 1, and “news with animation” was coded as 2

Note 3: The numbers between the paths from the exogenous variables to the endogenous variables indicate standardized regression weights.

Note 4: \*\*\* $p \leq .001$ .