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Each Medium Tells a Different Story: The Effect of Message Channel on Narrative Persuasion

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Abstract

Limited attention has been given to the medium of story presentation in this process of narrative persuasion. The present study (N = 243) fills this gap by directly comparing narrative involvement across print and audiovisual versions of the same cervical cancer-related story. The mediation analysis revealed that exposure to an audiovisual narrative was associated with higher levels of cognitive and emotional involvement, than exposure to the exact same narrative in its printed form. Yet, the higher levels of transportation in the audiovisual condition came at a price of enhancing psychological reactance, eliminating the relative advantage of the film narrative.

Keywords

Narrative Persuasion; Print; Audiovisual; Cervical Cancer; Experiment

Despite the tendency to see popular narratives, particularly those shown on television, as unedifying, audiovisual and print-based narratives have received increasing attention in communication research and theory as vehicles for positive change (Singhal & Rogers, 2002). This research investigates the role played by the channel in which the narrative is presented, or the extent to which a print narrative might be equally effective in changing attitudes as its audiovisual counterpart.

Narrative persuasion can be broadly defined as “any influence on beliefs, attitudes or actions brought about by narrative messages through processes associated with narrative comprehension or engagement” (Bilandzic & Busselle, 2012, p. 205). Though recent meta-analyses identify fictional narrative as effective vehicles for persuasion, they do not find significant differences in persuasive outcomes due to the channel of exposure (for details see Braddock & Dillard, 2016; Tukachinsky & Tokunaga, 2013). It remains unclear, however, whether the failure to find differences in narrative persuasion by channel is because such differences do not exist or because meta-analyses offer an aggregate perspective rather than

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a controlled comparison of exposure to the same narrative through different channels (i.e., print vs. audiovisual). The current study attempts to fill this gap by comparing the relative efficacy of print and audiovisual versions of the same cervical cancer-related story.

Furthermore, even if viewers and readers arrive at similar results in terms of persuasion from different channels, they may not psychologically experience exposure to a written narrative in the same way as exposure to an audiovisual version. At least two psychological processes – transportation and reactance – have emerged as central to narrative engagement with regard to potential differences between print and film.

Transportation

Transportation accounts for the process by which individuals become absorbed in the story world, gradually losing awareness of their physical surrounding (Green & Brock, 2000). Although transportation is usually measured with a uniform scale, engagement with narratives is far from being a monolithic process (Busselle & Bilandzic, 2008). Transportation involves cognitive involvement, emotional involvement, and mental imagery (Green & Brock, 2000). A refined understanding of transportation and its subcomponents raises questions regarding the relationship between the affordances associated with different channels of communication and the unique transportation experiences they might provide.

It makes intuitive sense that cognitive and emotional involvement might differ across print and audiovisual narratives. For example, while a print version of a narrative requires constant comprehension of text, an audiovisual version may place fewer demands on cognitive resources, allowing for richer and more attention-grabbing stimulus (Green et al., 2008; Riddle, 2013). At the same time, Green and Brock (2000, 2002) indicate that the format of print narratives may be explicitly designed to elicit transportation, because their requirement of cognitive effort results in higher levels of involvements. In accordance with these arguments, we propose the following questions:

> *RQ1a:* Will the effect of narrative channel on story-consistent attitudes be mediated by cognitive involvement?
>
> *RQ1b:* Which channel (audiovisual vs. print) exhibits higher levels of cognitive involvement?

Furthermore, the channel of exposure may also affect emotional involvement with a narrative. Though it can be argued that all transported individuals experience emotions to some extent (Igartua, 2010), the type and degree of emotion may vary due to the channel in which a story is presented (Nabi & Green, 2014). Audiovisual narratives may appeal simultaneously to several senses and provide viewers with multiple emotional cues potentially producing stronger emotional reactions than a print narrative. Though well-crafted text-based stories can be equally engaging, this effect is less immediate and requires more effort than viewing a film (Green et al., 2008). Hence, the following questions are proposed:

> *RQ2a:* Will the effect of narrative channel on story-consistent attitudes be mediated by emotional involvement?

RQ2b: Which channel (audiovisual vs. print) exhibits higher levels of emotional involvement?

Reactance

There are some reasons to assume that cognitive and emotional involvement can differ across audiovisual and print narratives. Yet, when measuring persuasive outcomes, audiovisual and print narratives often produce similar results. It can be argued that the lack of differences in outcomes across channels may be due to the fact that the same affordances that promote transportation, simultaneously encourage psychological reactance. Brehm's concept of reactance suggests that external threats to one's freedom of choice can result in opposition to persuasion (1966). In the context of narrative persuasion, Moyer-Gusé (2008) argues that narratives may be particularly well suited to reduce potential reactance, as people are motivated to focus on the story, rather than on the persuasive intent of the message. By definition, then, reactance should be considerably lower for persuasive messages embedded in engaging narratives since the persuasive intent is less pronounced and the message is highly immersive. However, if psychological reactance is directly linked to the individual's ability to maintain his or her control over exposure to a persuasive message, then the channel associated with the narrative might have direct implications for the potential level of reactance. In particular, though audiovisual media can offer a richer experience, they also inhibit the ability to control the engagement with the narrative, by dictating the pace of exposure (Dal Cin, Zanna, & Fong, 2004; Green et al., 2008). With that in mind, an alternative logic should also be examined. If audiovisual narratives are associated with higher levels of attention, then one can easily argue that being immersed in the story can disable resistance mechanisms more effectively, compared to print narratives. In addition, the self-pacing of print narratives may even encourage readers to pause and think, allowing an increase in counterarguments and message derogation. Based on this, the following questions are proposed:

RQ3a: Will the effect of narrative channel on story-consistent attitudes be mediated by reactance?

RQ3b: Which channel (audiovisual vs. print) exhibits higher levels of reactance?

Method

Participants and Procedure

Eligible participants were Mexican American females between the ages of 25 to 45 from the greater Los Angeles metropolitan area, who were fluent in English and did not have a previous diagnosis of cervical cancer ($N = 243$). Although there have been recent advances in cervical cancer prevention through early vaccination against the Human Papillomavirus (HPV), as well as in DNA screening, the most widely available screening test continues to be the Pap test. Unfortunately, not all populations and regions enjoy the same access and acceptance of the Pap test. In the United States. In Los Angeles County, the location of the current study, incidence of cervical cancer among Latinas are as high as 14.3 per 100,000, compared to 7.5 per 100,000 among non-Hispanic White women. Participants were recruited by phone into a randomized control trial, making up to six call attempts to reach each

number from the sampling frame which included random digit dial (RDD) and geographic-targeted lists. All participants were compensated for their time with $25 gift cards.

After consenting to take part in the study of women's health, participants were interviewed to assess their baseline level of cervical cancer-related knowledge, attitudes and behavior and to collect background demographics. Participants were sent either the audiovisual/film (n = 117) or print version (n= 126) of *Tamale Lesson* in the mail. Participants were recontacted within two weeks of having received the narrative. After successfully answering three simple questions (e.g. "What color was Rosita's dress?") to confirm they had watched or read *Tamale Lesson*, their cervical cancer-related knowledge, attitudes and behavior were reassessed as well as their narrative engagement.

Materials

A professional playwright worked with the authors to produce a screenplay that served as the basis for the print and film versions of our study narrative. That narrative, *The Tamale Lesson*, tells the story of a social gathering at the Romero's. In the beginning of the story, we are introduced to Lupita (the oldest daughter) who is talking on the phone with her boyfriend about her recent abnormal Pap test. Connie (the middle daughter) overhears the conversation and, completely oblivious to the infection, approaches her older sister with questions. Soon, their mother, Blanca, and her best friend, Petra (who has never had a Pap test) join the discussion, which emphasizes key facts and misconceptions regarding Pap tests. At the conclusion of the narrative, Connie, Petra, and Blanca are screened with Pap tests in a free clinic. Two versions of the narrative were created – an 11-minute film version and a four-page glossy print version that was written at an 8th grade reading level. In order to make sure that both versions of the narrative contained the same facts and were equivalent in all elements other than the channel of exposure, we conducted 12 focus groups throughout various stages of the story writing and the film production. Details of the stimulus development can be found in Baezconde-Garbanati et al. (2014).

Measures

Attitudes—Attitudes toward Pap tests were assessed with six items each using a 10-point Likert-type scale, ranging from "not at all" to "extremely". Participants were asked to what extent they thought Pap tests were embarrassing, physically painful, important, expensive, time-consuming, and scary. We averaged participants' responses with higher scores indicating more supportive attitudes toward Pap tests (α = .71[1]).

Cognitive Involvement—The cognitive subcomponent was measured with the three specific items outlined as relating to the cognitive facet of transportation (for a discussion regarding the subcomponents of transportation see Appel et al., 2015) on a 10-point Likert scale from "strongly disagree" to "strongly agree" (α = .76). The items included "I was mentally involved in the [film while watching it/narrative while reading it]" and "I could easily picture myself in the scene of the events described in the [film/story]."

[1]Given the low alpha, we conducted an Exploratory Factor Analysis (Varimax rotation) for attitudes. Individual items were considered to load on the same factor if their primary loading was > .60. The analysis yielded a single factor with 57.98% total explained variance (lowest loading = .61).

Emotional Involvement—Two emotional involvement items were adopted from the Green and Brock (2000) scale ("The events in the story have changed my life;" "I found it easy to put the film out of my mind"). Additionally, participants were asked to indicate the extent they felt surprised, afraid, and reassured on separate 10-point Likert-type scales (α = .72).

Reactance—Adopted from Lindsey (2005), reactance items included, "I am uncomfortable being told how to feel about health issues," "I do not like that I am being told how to feel about health issues," and "it irritates me that the story told me how to feel about health issues" (α = .76).

Results

All research questions were examined with PROCESS (Hayes, 2013; Model 4 set at 10,000 bootstrapped samples). As indicated in Table 1, we found no significant differences between the conditions at baseline. The mediation model included attitudes toward Pap tests as an outcome, channel of exposure (audiovisual/print) as an independent variable and cognitive involvement, emotional involvement, and reactance as potential mediators. Figure 1 outlines the unstandardized estimates for the direct effects of narrative exposure, cognitive involvement, emotional involvement, reactance, and attitudes. With regard to *RQ1a*, the mediated effect of the manipulation on attitudes through cognitive involvement was significant (b = .18, SE = .09, p < .05, CI [.03, .39]). In fact, participants in the audiovisual condition experienced higher levels of cognitive involvement than participants in the print condition (M = 8.28, SD = 1.69; M = 7.72, SD = 2.14; respectively). The mediation analysis also suggested that the direct effect of exposure to a narrative on attitudes was mediated by emotional involvement (b = .07, SE = .05, p < .05, CI [.01, .23]). Participants in the audiovisual condition tended to experience more emotional involvement than those exposed to the print version (M = 4.31, SD = 1.44; M = 3.87, SD = 1.70; respectively).

Finally, the estimate for the mediated effect of the manipulation on attitudes through reactance was significant as well; b = −.21 (SE = .10, p < .05, CI [−.44, −.06]). Specifically, reactance was considerably higher for the film narrative than the print version (M = 3.55, SD = 3.15; M = 2.69, SD = 1.95; respectively). Overall, the mediation model accounted for 26% of the variance in the attitudes toward Pap tests ($F_{(4,238)}$ = 21.38, p < .05) In terms of the partial R^2, the largest portion of the variance was accounted for by reactance (R^2 = .11, p = .005) followed by cognitive involvement (R^2 = .09, p = .005), emotional involvement (R^2 = .02, p = .04), and narrative exposure (R^2 = .001, p = .57).

Discussion

By using the same narrative and controlling for confounding variables, the empirical design of this study provides an initial explanation for a major point of contention in the narrative persuasion literature. Indeed, a persuasive narrative increased the cognitive and emotional subcomponents of transportation, while also encouraging higher levels of psychological reactance to the content when presented in an audiovisual compared to a print format. Films may exhibit a richer and a more vivid version of the written narrative that is not contingent

on the audience's imaginative capacities (Green et al, 2008). Additionally, the aspect of audio constitutes a substantial part of the experience as voices, sounds, and music capture the audience's attention as well as provide additional emotional cues not present in print narratives.

This is not to suggest that print narratives are inferior with respect to narrative persuasion. Our results using the same narrative in print and film, found the audiovisual narrative more likely to induce reactance. Compared to Latinas exposed to the print version of *Tamale Lesson*, those who were exposed to the audiovisual version tended to consider the story not merely educational or entertaining, but as a persuasive attempt. One plausible explanation is rooted in the control associated with the pacing of the message. Specifically, print narratives may be more persuasive, since they offer readers more control over rate of exposure than audiovisual narratives, which place the audience member in the more passive role of viewer. However, as perceived control was not directly assessed in this study, additional research is necessary for this explanation.

The results of this study have practical implications for narrative persuasion and health promotion. Print narratives could gain from embedding more emotional cues that increase emotional involvement and vivid descriptions to produce increased levels of cognitive attention. For instance, Riddle's (2013) findings revealed that vividness elicited stronger emotional reactions and higher attention levels. Thus, increasing the vividness of print narratives may enhance their overall impact. Likewise, audiovisual narratives might be more persuasive if they would offer more freedom to control and manipulate the content. From this aspect, Green and Jenkins's (2014) work on the potential of interactivity to facilitate transportation, leading to an immersive and enjoyable narrative experience, may provide an important step in the right direction.

Although a great deal of effort was invested to ensure that our experimental design established control over various intervening variables, this study is not free of limitations. For instance, the current study did not account for individual differences that may cause some audience members to be more susceptible to certain channels of exposure. As an example, if people differ in their ability to spontaneously transport themselves into narratives (Mazzocco et al., 2010), this capacity might compensate for the fact that print narratives have fewer emotional cues and require more imagination. Even more importantly, need for cognition and need for affect may likewise be relevant factors that moderate the effects associated with the channel of exposure. Specifically, audience members who enjoy effortful cognitive activity (Cacioppo & Petty, 1982) may be more amenable to the task of reading and imagining a written text. In contrast, because individuals who score higher on the need for affect scale are more motivated to approach emotion-inducing situations (Maio & Esses, 2001), they may be drawn to audiovisual media that provides a plethora of emotional cues. Therefore, future research should explore not only the different mediating processes that are associated with the mode of exposure to narratives but also the potential interactions between individual level differences and the media channel that presents the information. Overall, all these limitations point in the same direction, calling for additional inquiries that could replicate the current results by comparing diverse messages across different channels of communication.

In conclusion, unpacking the unique affordances and constraints of audiovisual and print narratives, the results suggest that the choice of a channel by which a narrative is delivered or presented is translated into distinct psychological processes. Although these processes are not manifested in a relative superiority for one of the channels, in terms of persuasive outcomes, we are not necessarily dealing with a zero-sum game. Essentially, it would be worthwhile to see whether the constraints of each media channel can be addressed and the affordances can be leveraged, to increase the effectiveness of narrative-based persuasion.

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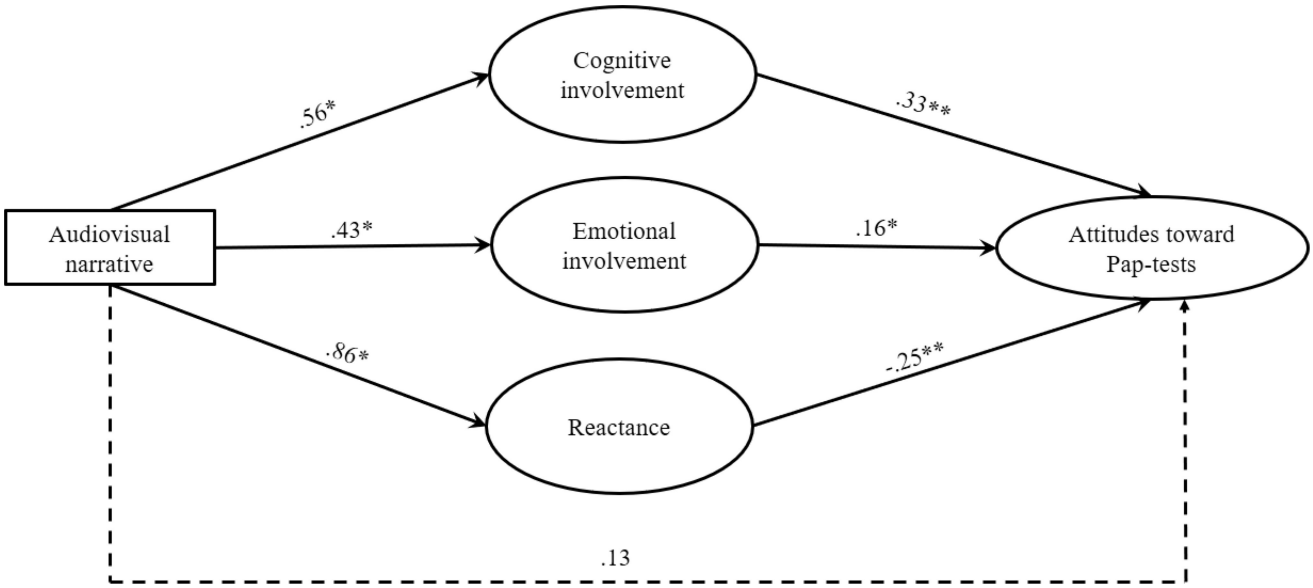

Figure 1.

Beta coefficients for the effect of media channel on attitudes toward Pap-tests, as mediated by cognitive involvement, emotional involvement and reactance.

Note. *$p < .05$, **$p < .001$. The dashed line represents the nonsignificant direct effect of media channel on attitudes toward Pap-tests ($b = .13$, $SE = .23$, $p = .57$, CI [−.33, .60]).

Table 1

Means, Standard Deviations (in Parentheses), and Chi-Square/t tests for research variables

	Condition		
Variables	**Print**	**Audiovisual**	**χ^2/t**
Age	33.57 (6.27)	34.3 (5.92)	1.2
Partner			2.24
Husband	32.51%	31.69%	
Boyfriend	8.64%	7.82%	
Children			
Have daughter	58.7%	59%	0.01
Have son	62.7%	61.5%	0.03
Number of HPV shots	2.43 (0.87)	3.1 (0.91)	1.3
General health	4.53 (0.98)	4.5 (1.01)	0.35
Attitudes toward pap test	6.94 (2.17)	7.4 (1.91)	1.77
Attitudes toward vaccines	3.47 (0.79)	3.49 (0.85)	0.23
Ever diagnosed with cancer			
Yes	1.59%	2.6%	1.51
No	98.41%	97.4%	
Income	59,349k (38,982)	56,609k (32,502)	0.56
Education			8.42
Secondary	29.4%	17.9%	
Undergraduate	56.3%	65%	
Advanced	14.3%	17.1%	