Presence, Participation, and Political Text-on-Television: Testing a Converged Technology

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Abstract

Since its implementation for entertainment purposes (primarily in Europe), text-on-television has been a promising platform for broad audience interaction via a mass medium. This study tests a novel text-on-television format and analyzes feelings of presence and participation in an experimental setting. Despite the fact that a vast majority of participants had not experienced text-on-television formats, this study revealed that a sense of presence, assessed via self-report items, helped users positively experience political content in a shared media environment. Notably, participants who were assigned to a passive condition expressed frustration at not being able to actively participate in the discussion, indicating the importance of a participatory component associated with this converged medium. By viewing segments with President Obama's speeches political ideology of the participants resulted in a reversed pattern where conservatives experienced greater feeling of presence in a passive condition, in contrast to democrats who experienced greater presence in an active condition.

Keywords—**Text-on-television, presence, interactivity, participation, civic engagement.**

1. Interactive television

Text-on-television represents the convergence of broadcasting and short messaging service (SMS) made popular via cellular phones and online chat. Although text-on-television formats have been widely introduced in the European context, they have only been indirectly introduced in the United States through online videosharing sites like YouTube. True text-on-television experiences, where users are able to text their comments and have them displayed *on television in real time* (whether over-the-air or cable TV), are still primarily a European phenomenon [1]. Interactive television has long been considered a promising application that has yet to achieve its full potential [2]. The appeal stems in part from the capacity to transform passive viewers into activate participants via interactive technology [3] [4]. However, because this idea has historically been connected to commercial aims, such as pay-per-view movie consumption, it has been slow to catch on in the U.S.

With the rise of pay-per-view programming and shows like *American Idol*, *Who Wants to Be a Millionaire?* and MTV's *Total Request Live*, where audiences can vote for their favorite singer, request a song, or recommend the right answer to game show participants, traditional television is slowly becoming more interactive. But these involvement opportunities are almost exclusively limited to entertainment programming. Moreover, because they occur behind the scenes or are aggregated as a type of pseudo-public opinion (e.g., the number of "voters" for a singer on *American Idol*), they offer a very limited role for audience involvement. This study attempts to overcome the limitations of current media practices by introducing text-on-television as a convergent media experience that merges television content with the ability to send text comments that are visible to other viewers during the "broadcast."

To broaden the possibilities of interactive television as a potential tool for civic engagement, we focus on politics. Since much online discussion (and Twitter messaging) centers on political developments, we use Barack Obama's historic 2008 presidential candidacy, in particular his widely acclaimed campaign infomercial aired on the eve of the election, along with other screenings covering issues such as healthcare, education and economy were used for this investigation. This study, a test of political text-on-television, evaluates the sense of presence and civic participation the medium engenders in users as well as their impressions of this converged technology as a media experience.

1.1. Media and citizenship

Although television is popularly viewed as a passé medium, efforts to enhance civic involvement via television are important for several reasons. In recent decades civic engagement and political interest among young voters has generally declined, with notable exceptions associated with particular types of television programming. For instance, regular viewers of political entertainment shows, particularly *The Daily Show*, report higher levels of political knowledge, interest, and participation than non-viewers. Much is made of Jon Stewart's satirical demeanor and mock news delivery style but his show exemplifies how television remains a

medium still capable of reaching young audiences. Whether conceptualized as "voters" or "audience members," young viewers want to be entertained and want to get involved.

Despite audience engagement with political entertainment formats on the one hand, and innovative efforts by campaigns to remain connected to supporters via text messaging on the other, a converged medium that combines the two—and which incorporates new media for civic knowledge and deliberation—has not been fully realized. Thus far fragmented efforts have been made to use blogs, online message forums, file-sharing video sites, text messaging, and web advertising to reach voters; however, a unified platform and friendly avenue of involvement for mass audiences beyond the computer interface has not caught on.

As Bucy [5] [6] has observed, new media formats make accessible to citizens a political system that otherwise seems highly orchestrated, professionalized, and exclusionary. Political entertainment formats, in particular, foster the perception of face-to-face intimacy with newsmakers and other political personae, signaling that this social intimacy extends to members of the viewing audience. At the same time, interactive media as represented by text messaging or intensive Internet use offer a feeling of participatory empowerment that may produce various social or civic "rewards," including knowledge gain, proximity to important people or events, and a heightened sense of self-efficacy or system satisfaction [6].

Though for the most part incapable of influencing an election or changing policy directly, such forms of media participation are important because they provide a ready avenue of active involvement that transcends "passive" surveillance of the political environment. Media participation works to enhance the perception of political accessibility and openness by, first and foremost, giving citizens the opportunity to act *as* citizens. "Democracy thus benefits from opportunities for civic activity through media, even though citizen involvement by traditional standards is indirect" p. 378[6]. By allowing audience members to enact their civic role and talk amongst themselves in a politically relevant space, new media formats satisfy the need for popular involvement in civic life by delivering a continuous stream of opportunities for engagement without overextending the political system's ability to respond.

Starting from the premise that novelty and the appeal of interactive involvement should elicit favorable evaluations of the political text-on-television experience, we first asked participants about their familiarity and impression of the medium. Thus, our first research question queried:

RQ1. How familiar are participants with the text-on-television medium, and what are their initial impressions of it?

1.2. Presence in mediated environments

Since the first seminal study by Short et al. [7], the concept of social presence has been mentioned as a distinguishing attribute of new media. Social presence has been identified as a feeling of being with or close to another person or social entity [8]. In the context of short-messaging systems, social presence contains both a behavioral and psychological dimension. Behaviorally, social presence arises from communication with others in a mediated space—the more one chats in a mediated space, the more likely a sense of social presence is likely to develop. Psychologically, social presence may refer to a subjective perception of a shared environment, or awareness of another person in a communication interaction [9]. Importantly, the psychological dimension of social presence allows the experience to be noninteractive, that is, as a perceptual state that arises from a viewing experience without physical user involvement [9]. Given these different dimensions of social presence, we asked the following research question:

RQ2. To what extent will users experience a sense of presence experiences in the interactive television space—and which experiences will be the most salient?

Previous studies provide evidence that television viewing even if less immersive than virtual worlds, elicits the sense of presence. Lombard et al. [10] manipulating television screen size found differences between the viewer perceptions in large versus small screen conditions. In the study, controlling for image quality, a higher sense of presence was experienced by increasing the image resolution [11].

Capitalizing on the differences in presence experience in passive television viewing this study aims to investigate the presence experience in active television viewing when viewers become actively engaged via text with respect to passive one:

RQ3. How will perceptions of social presence differ for active (texting and viewing) compared to passive (viewing only) political text-on-television conditions?

1.3. Relevance to mediated experiences

Despite the fact that presence is treated as a pivotal experiential component, relevance was encompassed in new media as a pathway to study mediated experiences. In the context of new media, Sundar [12], in the search for the refined key elements of immersion and interactivity, proposed the agency as a mechanism for constructing an interpersonal component for a mass media context in a form of the degree of relevance to a pertinent experience: "Agency is the degree to which the self feels that he/she is a relevant actor in the CMC situation. This means that it is the extent of manipulability afforded by the interface to assert one's influence over the nature and course of interaction" p. 62. In this study we are propose situating perceptions of relevance as an individual motivation that potentially increases level of engagement. In order to entertain this claim, the following research question was posed:

RQ4. How will the relevance to the media experience influence the media experience?

Emphasizing the concept of relevance reflects generic motives that potentially drive participants towards experiencing higher presence. Within the specific realm of political content where President Obama is featured, the concept of relevance is narrowed down into political affiliation compliance or dissonance. Studies that explored news consumption from a selective exposure point of view, found that people tend to view the news that are compliant with their political ideology, especially if respondents consider themselves as political activists; at the same time, news coverage has been polarizing, especially on cable and the web [13]. Given the growing association between media use and political orientation, this study aimed to find out if the active and passive groups would experience presence differently considering their political ideologies:

RQ5. How does political ideology influence the experience of presence in active and passive conditions?

1.4. Text-on-television interface

The text-on-television interface used for this study was designed with the Connect@ software program and implemented on a set of personal computers. Our experimental version of text-on-television, based on existing interactive television designs currently popular in Europe, contained video zone comprised of the main screen and a horizontal text chat box occupying the bottom quarter of the screen. These structural components of the screen have been studied from the perspective of visual 'zones' [1]. A screen shot of the experimental interface taken from one of the recorded sessions appears in Figure 1.

Figure 1 Screen capture from the experimental text-on-television interface with the active participatory group texting in real time

In the main screen four videos were featured —the video of President Obama's infomercial that concluded his 2008 electoral campaign and press conference and speeches addressing healthcare, economy and education. At the bottom of the screen participant comments appeared, along with their screen names and a timestamp accompanying each comment. Though available for use with SMS systems, timestamps are not commonly used. Chat streams from European television sessions show that in some interactive programs' text chats are time-stamped in the chat archives that are accessible during the programming or sometimes after programming, but there is no uniform practice. The chat on the Italian text-on-television channel *Allmusic*, analyzed by Zelenkauskaite & Herring [14], does not include time stamps, for instance. Since this lack of information about the timing of exchanges makes it difficult to achieve coherence in conversation, the chats in this study were all time-stamped.

2. Methods

The study was conducted by employing an experimental approach with self-report questionnaire items as well as an informal posttest debriefing. Participants were recruited from communications classes at a large Midwestern university and were given extra credit for their participation in this study. Participants were invited to take part in this study with an announcement that their evaluation of a new interactive television interface was needed.

2.1. Questionnaires

Pretest questionnaires were sent out to participants one to two days prior the experiment taking place. Notices were sent via email and asked participants to complete the questionnaire prior the session. Only one participant arrived to the session without filling out the questionnaire in advance and was asked to complete the items before the session started. When the session ended, participants were asked to fill out the posttest questionnaire.

2.2. Procedure

Participants for this study (N = 67) were seated in front of a personal computer equipped with a 19-inch flat screen. An interactive television interface was devised to simulate existing layouts used in European entertainment programs using the Connect@ software. Video was streamed through the software interface while audio was heard via headphones provided to each participant. The interface featured video in the top two-thirds of the main screen, with the bottom third dedicated to text chat. The chat box was 6 lines high, with the bottom of the screen scrolling from the bottom towards the top off the desktop when older messages were replaced with newer ones. Participants were signed in to the system with preferred nicknames that appeared before each typed message. Before the experiment took place, participants were instructed on how to use the interface and were given the opportunity to pretest it. After completing the session, participants were asked to fill out a posttest questionnaire. Before leaving, they were thanked and informally debriefed to solicit impressions of their new media experience. The television viewing with or without participation took about 35 minutes; other 30 minutes were allotted to complete

posttest questionnaire. The entire procedure took about 1.5 hours.

2.2.1. Experimental design. The study took the form of a 2 (interactivity) × 2 (relevance) between-subjects design. The interactivity factor had two levels: active and passive. The relevance factor was divided into high and low categories. Participants were assigned to either an active or passive condition. In the active condition participants were asked to type comments about the presentation whenever they wanted. The video file log of the session was recorded during the presentation and contained both text comments as well as video.

In the passive condition, participants were also seated at a personal computer and were shown the video file that contained the interactive interface with the pre-recorded chat—but they were not allowed to actively post text messages or communicate with other participants via the chat function.

In addition to active versus passive conditions, the participants' were divided into two groups as it regards their assessment of relevance towards the content. In order to obtain the relevance measurements, participants were asked the following question: *'How personally relevant was the content of this media experience to you?'* Their responses were transformed into a binary scale based on a median split. Also, participants were asked to report their political ideology and party identification. Participants' data were grouped into conservatives, centrists and liberals. As for their political affiliation, they were divided into democrats, republicans and other.

2.2.2. Presence measures. Several dimensions of presence were measured during active and passive conditions.

Social presence. Participants were asked to identify their experience with 7-point Likert-type scales: *impersonal* to *personal*; *unsociable* to *sociable*; *distant* to *near*; *dull* to *lively*; *unresponsive* to *responsive*; *off-putting* to *enjoyable*; and *delayed* to *immediate*. Cronbach's alpha for additive index was .87.

Immersion. The level of immersion was assessed by adopting Lombard and Ditton's [11] 7-point scale asking such questions as *How involving was the media experience you just participated? How much control did you feel that you had over the interaction? How exciting was the media experience that you just participated in? To what extent did you feel immersed in the media experience you just participated in?* Cronbach's alpha for additive index was .81.

Spacial presence. The level of spatial presence was identified by asking the following questions *How much did it seem as if you and the other people who posted messages were together in the same place? During the presentation how often did it feel as if someone was talking directly to you? To what extent did you experience a sense of "being there", as if you were present in the environment?* Cronbach's alpha for additive index was .54.

The item that asked *How often did you lose track of time at some point during the presentation?* Undermined the direction of the scale and thus was not grouped with any of the items above.

2.2.3. Interviews. When the sessions were completed and participants finished filling out the posttest questionnaire, they were briefly asked how they felt about the experience they just had in informal interviews. Notes were taken from these sessions for insights into the immersive quality of the experience and for identifying issues that stood out to participants.

3. Findings

Participants were first asked to report their demographic information. Out of total participants (N = 67) there were 38 female and 29 male participants an age range from 19 to 26 (M, = 21, SD = 1.3). There were 11 international students. 73% (n = 50)participants described themselves as White, 13% (n = 9) as Asian/Pacific Islanders, 6% (n = 4)as Black/African Americans, one as East Indian, and two identified themselves as "Other."

Given that the participants were shown political content, the questionnaire included political views of the participants. 15% (n = 11) reported themselves as conservatives; 33% (n = 23) as centrists; 47% (n = 32) as liberal, and one as having 'none' political views. Participants also were asked about their affiliation to political parties. 27% (n = 19) reported themselves to be Republicans; 12% (n = 8) consider themselves as Independents; 39% (n = 21) identify themselves as Democrats; 12% (n = 13) claimed not to affiliate to any of the political parties.

To address the research question I, *How familiar are participants with the medium, and what are their initial impressions of it?* two participants out of 67 reported they were not familiar with the medium. Therefore, for the vast majority of participants, it was a first-time experience with this convergent medium. During informal interviews participants attempted to draw connections between the interactive television interface they had just experienced with other media experiences. One of the participants pointed out that it was something similar to instant messaging friends while watching television, but not simultaneously on the same screen.

Participants were assigned to a passive or active condition. Active condition comprised 36 participants, passive condition had 31 participants. Participants in the active condition were allowed to post content. Table 1. summarizes the level of activity that was operationalized according to the frequency of messages posted by the participants during the viewing time of a specific session.

	participa	msg/per	Message	Total

	nts	minute/per participant	range/per participant	messages
infomercial 1	4	0.26	1−11	37
infomercial 2	5	1.4	1−122	291
education	9	0.76	1−70	241
economy	10	1.02	1−87	360
healthcare	8	0.1	1−10	27

Table 1. Average message sent by participants per minute and during each session.

Results of Table 1 show varying level of contributions in active groups viewing different content. The largest number of messages was generated by the video on the in economy and President's Obama's infomercial sessions, whereas healthcare was the least active group. These findings indicate the group dynamic differences in terms of posting frequencies that occurred during the viewing time which could vary due to the content and structural features of the media they used. Alternatively, individual differences of the participants could translate into different participation activity.

3.1. Presence

To answer the second and third research questions regarding the experience of presence, and the implications on passive and active groups, the following analysis was employed. First, presence items on the posttest questionnaire were analyzed using 7-point Likert-like scales adopted from Lombard and Ditton [11] presence item scales in combination with Bracken's [9] list of presence items used to study high-definition television. The anchor points ranged from "not at all" to "very much." Results summarizing immersion are presented in the Table 2.

Table 2 Presence in Passive vs Active conditions

question	condition	N	mean	t	p
involving	active	34	4.471	.388	.699
	passive	30	4.300		
lose track	active	34	5.529	2.300	.025*
	passive	30	4.617		
"being there"	active	34	3.353	-.727	.470
	passive	30	3.633		
together	active	34	3.882	.333	.740
	passive	30	3.733		
talking directly	active	34	3.618	.811	.420
	passive	30	3.233		
control	active	34	3.309	2.087	.041*
	passive	30	2.400		
immersion	active	8	5.063	1.621	.132
	passive	29	4.069		
exciting	active	34	4.015	1.655	.103
	passive	30	3.367		
personal	active	34	4.06	.073	.942
	passive	30	4.03		
sociable	active	34	4.68	.959	.341
	passive	30	4.27		
near	active	23	4.565	2.466	.018*
	passive	19	3.447		
lively	active	34	4.71	1.529	.131
	passive	30	4.07		
responsive	active	33	5.09	1.509	.137
	passive	30	4.47		
enjoyable	active	32	4.66	-.541	.590
	passive	30	4.87		
immediate	active	34	4.65	-.154	.878
	passive	30	4.70		

**equals significance level p<.05*

The results of the study regarding presence in the active and passive conditions indicate that participants in the active group experienced significantly higher feelings of presence as losing track of time, while active group perceived more control, as well as sense of being near.

In order to refine the analysis regarding the experience of presence, the fourth research question included relevance as a potential moderator for the feeling of presence. The results the presence by relevance interaction are summarized below. A complete item-based analysis can be found in the Appendices 1, 2, 3, 4.

Table 2 ANOVA for presence: interactivy by relevance

	SS	*df*	*MS*	*F*	*p*
Social presence					
Main effects					
Condition	5.487	1	5.487	5.790	.021*
relevance	12.950	1	12.950	13.666	.001*
Two-way interaction					
condition*relevance	1.114	1	1.114	1.175	.285
Immersion					
Main effects					
Condition	6.955	1	6.955	4.954	.033*
relevance	5.939	1	5.939	4.230	.048*
Two-way interaction					
condition*relevance	.271	1	.271	.193	.664
Spatial presence					
Main effects					
Condition	.116	1	.116	.078	.781
relevance	5.941	1	5.941	4.005	.050*
Two-way interaction					
condition*relevance	1.837	1	1.837	1.238	.270

The results in Table 2 indicate that the passive and active conditions differed significantly with regards to social

presence and immersion. There were main effects for relevance on social presence, immersion, and for spatial presence. However, no interaction effects between interactivity level and relevance were observed.

To address research question 5 that aims to better understand the underlying factors present during the viewing experience, political ideology was included in analysis as a second potential moderator. Table 3 summarizes the results.

Table 3 ANOVA for presence: interactivity by ideology

	SS	*df*	*MS*	*F*	*p*
Social presence					
Main effects					
Condition	.149	1	.149	.127	.724
Political orientation	3.340	2	1.670	1.421	.255
Two-way interaction condition* Political ideology	7.540	2	3.770	3.208	.053*
Immersion					
Main effects					
Condition	15.553	1	15.553	10.256	.003*
Political orientation	4.989	2	2.494	1.645	.209
Two-way interaction condition*political ideology	3.322	2	1.661	1.095	.347
Spatial presence					
Main effects					
Condition	1.498	1	1.498	1.007	.320
Political orientation	.825	2	.412	.277	.759
Two-way interaction condition*political ideology	11.035	2	5.518	3.708	.031*

Results for the interactivity level by political ideology yielded significant results for social and spatial presence. In both cases, liberals in active condition were experiencing greater social and spatial presence. Reverse patterns were observed in the passive condition, where conservatives experienced greater social and spatial presence. Mean differences are summarized in Table 4 and Table 5.

Table 4 ANOVA for spatial presence: interactivity by political ideology

condition*spatial factor	political ideology	*M*	*sd*	N
active	conservative	2.50	.96	4
	centrists	3.42	1.26	12
	liberals	4.00	1.42	18
	Total	3.62	1.38	34
passive	conservative	4.19	1.14	7
	centrists	3.48	1.17	10
	liberals	3.28	.96	12
	Total	3.57	1.10	29

Table 5 ANOVA for social presence: interactivity by political ideology

condition*social factor	political ideology	*M*	*sd*	N
active	conservative	2.86	2.63	2
	center	4.43	1.18	7
	democrat	4.97	.78	13
	Total	4.60	1.21	22
passive	conservative	4.21	1.06	6
	center	3.82	1.70	4
	democrat	3.79	.73	9
	Total	3.93	1.04	19

Political party was also analyzed as a moderator of interactive effects. Respondents' answers were divided into three categories – Republican, Democrat or other. The analysis yielded no significant interaction between political party and interactivity level with regards to experience of presence. Results are summarized in Table 6.

Table 6 ANOVA for presence: interactivity by party ID

	SS	*df*	*MS*	*F*	*p*
Social presence					
Main effects					
Condition	5.602	1	5.602	4.252	.048*
Political party	2.107	2	1.054	.800	.459
Two-way interaction condition* Political party	4.638	2	2.319	1.760	.190
Immersion					
Main effects					
Condition	9.699	1	9.699	6.195	.020*
Political party	.253	2	.127	.081	.923
Two-way interaction condition*political party	1.600	2	.800	.511	.606
Spatial presence					
Main effects					
Condition	1.556	1	1.556	1.045	.312
Political party	.283	2	1.42	0.95	.909
Two-way interaction condition*political party	4.326	2	2.163	1.453	.244

Despite finding main effects for interactivity level, the interaction between condition and political party affiliation did not yield significant results.

3.2. Participant experience comments regarding text on television

In addition to the questionnaire results, participants in the passive condition expressed positive opinions with regard to the anonymous nature of the experience—where they felt that they were actively present but did not know who had typed the text they were reading. Also, they expressed that the candidate seemed much closer than the active group. One of the participants noted that he has chatted and watched television at the same time but had never chatted *in the same screen* as the show he was watching. He found this aspect of the presentation particularly appealing. Some participants enjoyed the process of reading other people's opinions in real time, even if they could not post their own comments.

On the negative side, one participant underlined that it was difficult to concentrate on the presentation due to unfamiliarity with the political nature of the recording. As for the enjoyment regarding the experience that they had via television and text, users' comments were grouped into positive negative and content based comments. As shown in Figure 1, active group participants offered more positive evaluations. Both groups had similar number of negative

comments (as well as critical comments regarding text chat as a distraction).

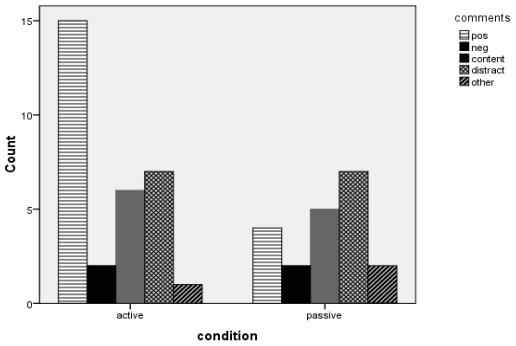

Figure 3 Participant comments by active and passive conditions

Participants in the active condition emphasized the desirability of the anonymous nature of the interface (i.e., the use of screen names) that allowed them to be more frank with their opinions. Here are some of the examples of the comments:

Active positive comments

1) It was interesting to read that people had the same opinions I did about the president and it was nice because it was somewhat anonymous.
2) It was a very cool and interactive experience that helped get ideas and random information generated with my peers.

Passive positive comments
3) The media experience just now was a pleasant one, it was an inspirational one.

Active negative comments
4) I did not really like it, I found it very distracting from the program. I don't think I would ever choose to use this program again.

Passive negative comments:
5) I would have enjoyed this experience more if I had been able to participate in the chat box.

Participants' comments about enjoyment of the presentation were then grouped by ideology:

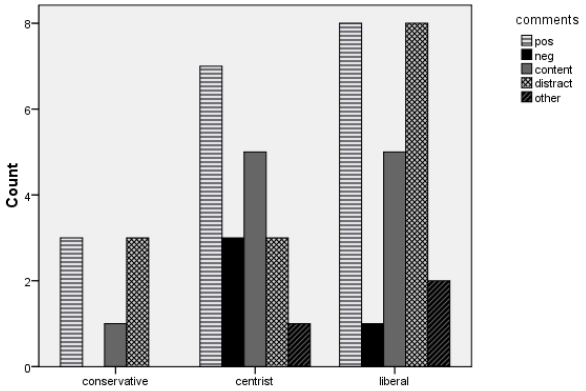

Figure 4 Types of comments by political ideology

The attitudes towards the text on television experience varied among participants by ideology. Despite the fact that liberals expressed the largest number of positive comments, they also identified more frequently that the medium was very distracting. Conservatives also had an equal number of positive comments and comments regarding distraction. However, they did not express any negative comments. The most ambivalent was the group that identifies themselves as centrists. They had a lot of positive comments but they also had a large number of negative comments—as well as comments regarding distraction. This group along with liberals, directed their comments at the content of the presentation rather than commenting on the text on television experience.

The multitasking aspects of this medium as being distracting was a recurring topic among the participants, although multitasking was not a focus of this study. While talking about their experiences during unstructured interviews, as well as in written comments from open-ended questionnaire answers, participants emphasized the complex nature of the split screen technology. In particular, they noted the difficulty of reading a lively chat session while keeping up with the content of the televised video. Interactive television, it seems, requires much task-switching. During the text chat in the active condition, participants questioned *each other* if they could easily follow both text and chat with the same dedicated attention. Some participants expressed confidence in doing both, while others found themselves "in trouble." One of the participants commented:

6) "I wasn't able to concentrate watching the video and reading the texts at the same time. I doubt the fact that others were really focusing on the content when they were chatting through the entire presentation. However, such presentation is highly interactive. I would certainly enjoy using this function if I am watching my favorite programs."

This sample of participants thus expressed ambivalent opinions about the medium. On the one hand, they observed that it was difficult to focus; on the other hand, they felt it

was a pleasant experience. Bucy [5] has labeled the simultaneous feeling of engagement and frustration in mediated environments the "interactivity paradox" and this interface provided another example of this phenomenon.

In contrast, the passive condition underlined the visual aspects of the viewing experience and participants' comments were largely positive, showing their familiarity with watching television while reading scrolling text (as in most cable newscasts). One of the participants explicitly stated that she actually wanted to participate in the forum and express her opinion and she was frustrated because she was not allowed to type in that condition. Another participant in the passive condition revealed during the informal interviews that he was trying to find a way how to type in the chat function even though he was instructed just to watch the video.

Conclusion

This study employed an experimental design to study participation and the sense of presence in an interactive, text-on-television environment. The findings revealed that participants' experience of presence was based on their perceptions of the relevance of the experience that they have, specifically for social presence and immersion. Moreover, political ideology acted as a moderator yielded significant interaction effects, suggesting that evaluations of political experiences depend on political orientation. Future research should address the interaction of other moderators such as internet self-efficacy with respect to presence in other media environments. Also mediation analysis could be employed to test for possible mediators of the presence experience.

In addition to these findings, participants enjoyed the medium because of its lively, responsive, and anonymous nature. At the same time, participants emphasized the challenges and frustrations associated with task switching issues. These findings indicate the conflicting nature of the text-on-television experience where the enjoyment of completing task-based participation clashes with limited processing resources. For some participants, one task becomes more important that the other, and involvement in the secondary tasks suffers. Participants report different strategies in coping with the medium, whether focusing on the video or actively engaging with the text chat.

Despite the inherent frustrations, one participant expressed this complex duality as an appealing aspect of the experience, precisely *because* it is challenging. Further research is needed to find stronger evidence for these findings, as well as to evaluate these results in light of other individual differences between users. In addition, subsequent research should directly measure the effects of multitasking on the experience of presence.

Finally, text on television could be applied to political opinion investigations since passive and active conditions yielded significant contrastive results. Attitudes towards candidates and issues may well depend on how active the audience is debating public affairs questions through interactive applications that appear in a mass media context.

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Appendix 1 Complete value results for Immersion items.

Cronbach's alpha .81	*SS*	*df*	*MS*	*F*	*p*
involving					
Main effects					
condition	1.059	1	1.059	.410	.524
relevance	26.343	1	26.343	10.195	.002
Two-way interaction					
condition*relevance	.424	1	.242	.164	.687
control					
Main effects					
condition	11.400	1	11.400	3.758	.057
relevance	1.477	1	1.477	.487	.488
Two-way interaction					
condition*relevance	1.136	1	1.136	.374	.543
exciting					
Main effects					
condition	8.414	1	8.414	4.073	.048
relevance	21.563	1	21.563	10.439	.002
Two-way interaction					
condition*relevance	.098	1	.098	.047	.829
immersed					
Main effects					
condition	1.595	1	1.595	.756	.391
relevance	11.274	1	11.274	5.341	.027
Two-way interaction					
condition*relevance	1.595	1	1.595	.756	.391

Appendix 2 Complete item-by-item results for Immersion.

Cronbach's alpha .87	*SS*	*df*	*MS*	*F*	*p*
Impersonal-personal					
Main effects					
condition	.155	1	.155	.087	.770
relevance	11.150	1	11.150	6.236	.015
Two-way interaction					
condition*relevance	.107	1	.107	.060	.808
Unsociable-sociable					
Main effects					
condition	2.604	1	2.604	.923	.341
relevance	7.896	1	7.896	2.797	.100
Two-way interaction					
condition*relevance	2.975	1	2.975	1.054	.309
Distant-near					
Main effects					
condition	14.876	1	14.876	7.606	.009
relevance	9.792	1	9.792	5.007	.031
Two-way interaction					
condition*relevance	.429	1	.429	.219	.642
Dull-lively					
Main effects					
condition	8.476	1	8.476	3.472	.067
relevance	25.080	1	25.080	10.272	.002
Two-way interaction					
condition*relevance	.445	1	.445	.182	.671
Unresponsive-responsive					
Main effects					
condition	7.273	1	7.273	2.856	.096
relevance	13.621	1	13.621	5.349	.024
Two-way interaction					
condition*relevance	.076	1	.076	.030	.864
Off-putting- enjoyable					
Main effects					
condition	.508	1	.508	.239	.627
relevance	16.114	1	16.114	7.592	.008
Two-way interaction					
condition*relevance	.922	1	.922	.434	.512
Delayed-immediate					
Main effects					
condition	.000	1	.000	.000	.991
relevance	6.274	1	6.274	3.321	.073
Two-way interaction					
condition*relevance	.183	1	.183	.097	.757

Appendix 3 Complete item-by-item results for Spatial presence.

Cronbach's alpha .57	*SS*	*df*	*MS*	*F*	*p*
same place					
Main effects					
condition	.108	1	.108	.034	.854
relevance	1.877	1	1.877	.597	.443
Two-way interaction					
condition*relevance	8.059	1	8.059	2.564	.115
talk directly					
Main effects					
condition	1.775	1	1.775	.528	.470
relevance	8.721	1	8.721	2.595	.112
Two-way interaction					
condition*relevance	6.412	1	6.412	1.908	.172
"being there",?					
Main effect					
condition	.408	1	.408	.186	.668
relevance	8.933	1	8.933	4.080	.048
Two-way interaction					
condition*relevance	1.703	1	1.703	.778	.381

	SS	*df*	*MS*	*F*	*p*
lose track					
condition	9.429	1	9.429	4.006	.050
relevance	7.212	1	7.212	3.064	.085
Two-way interaction					
condition*relevance	3.058	1	3.058	1.299	.259