

Reading Digital News: Hypertextual Usage Habits and Learning Practices Among U.S. Communication Undergraduates

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ABSTRACT

Hypertext as a nonlinear, computer-based or digital text that is now used along with conventional, linear printed text and can be described as a relatively advanced text type. Moreover, hypertextuality is among the characteristics which differentiate online news from printed news. While digital writing has become more advanced with hypertextuality, its impact on users' reading habits has gained importance as an underlying matter. In this context, the present research aims to provide an analysis of users' experiences of reading digital news in the context of hypertextuality. This study begins by summarizing the studies on hypertextuality and news users. Following this, a case study is presented to analyze newspaper users' reading habits in a digital setting to propose empirical evidence for the theoretical ideas of poststructuralist thinkers on hypertextuality. This part focuses on the hypertext reception practices of UMASS/Amherst Department of Communication undergraduate students through analysis of their news consumption patterns via an online survey. Based on the findings, this study contributes to the literature regarding journalism, technology, and digital writing by identifying the advantages and disadvantages of reading digital news. Although hypertextuality invites both writers and users to think in a nonlinear and cooperative way, it also leads to polarized opinions and newly emerging ethical issues.

Keywords: Digital news, online news, hypertext, users, newspaper reading

EXTENDED ABSTRACT

The Internet is extensively based on hypertext, a nonlinear, computer-based or digital text that is now used along with conventional, linear printed text as a relatively new text type (Voss et al., 2009, p. 62). Moreover, hypertextuality is among the characteristics which differentiate online news from printed news (Heinonen, 1999). While digital writing has become more advanced with hypertextuality, its impact on users' reading habits has gained importance as an underlying matter. In this context, the present research aims to provide an analysis of users' experiences of reading digital news in the context of hypertextuality. This research examines how the department of communication students read, interact with, and learn from digital news in the context of hypertextuality. The students were allowed to identify their digital reading habits with an online questionnaire rather than through experimentation. Users were also questioned about their methods of dealing with fake links while reading online news within the context of hypertext ethics.

This study begins by summarizing the studies on hypertextuality and news users. Following this, a case study is presented analyzing newspaper users' reading habits in a digital setting to propose empirical evidence for the theoretical ideas of poststructuralist thinkers on hypertextuality. This part focuses on the hypertext reception practices of UMASS/Amherst Department of Communication undergraduate students through analysis of their news consumption patterns via an online survey. Interested participants, solicited through an open-call email, were prescreened for the study by completing the questionnaire. The sample of the present study shares similar features with the population of the Department of Communication / UMass (which has 1000 students) in terms of average age, average education, and attendance. A total sample of 152 undergraduate students participated in the study through random sampling in January and February of 2018.

Based on the findings, this study contributes to the literature regarding journalism, technology, and digital writing by identifying the advantages and disadvantages of reading digital news. Although hypertextuality invites both writers and users to think in a nonlinear and cooperative way, it also leads to polarized opinions and newly emerging ethical issues.

Although the students preferred to read news online, their preferred text type was basic linear text. Additionally, students were reluctant to share news by adding their comments. For this reason, it was observed that the students did not practice reading cooperatively. Most of them are neither cowriters or rewriters as poststructuralist thinkers' claimed. Additionally, hypertextuality did not prevent semantic closure as predicted by poststructuralist thinkers. On the contrary, it has become a form of technology that only accelerates the circulation of certain ideas.

Those participants who paid a lot of attention to visual digital news items were not interested in the zoom and color features– features that are especially useful to people with disabilities and senior citizens in helping them access digital news. Since the digital divide is beyond simply having access to technology, it is considered that the topics of critical media literacy may include themes related to the principles of universal design and web accessibility.

Furthermore, even though mainstream media may be mostly unreliable and may even make up facts, it is still seen as reliable by a considerable amount of communication students. In addition, social influence is still influential in the debate on the truth of the news.

Lastly, it was determined that hypertextuality does not cause opinion polarization at the moment of choosing a link to click. Rather, an interesting topic and a reliable source are more important factors in the participant's choice. However, students tend to share links that often support their own views, rather than balanced news that covers all perspectives. This shows the relationship between the echo-chamber effect and hypertextuality that allows the news to be easily disseminated through the sharing of links.

INTRODUCTION

The journalism sector is one of the areas that is primarily affected by both rapid developments in Internet technologies and widespread Internet usage. The process of transition from paper to the printed screen has also caused a transformation in journalistic practices.

The transformation in journalistic practices has been observed primarily in the digital narrative forms of news presentation rather than in the news content. Some studies support this idea by showing that there is no dramatic difference between the news content of Internet newspapers and that of printed newspapers. However, the publishing formats of news differ considerably when we compare printed newspapers with Internet newspapers (Opgenhaffen, 2009, p. 2). It would seem from this fact that the presence of hypertextuality is among the differentiating characteristics of online news from printed news (Heinonen, 1999). The World Wide Web consists of a hypertext system, which is “a nonsequential and nonlinear method for combining documents like news with hyperlinks” (Li, Tseng & Chen, 2016, p. 318). Therefore, linear reading and writing practices with pen and paper, typewriters, and printing machines have been replaced with hypertextual information pieces that are connected with means of digital writing after the development of digital media (Jones & Hafner, 2012, p. 35).

The Internet is extensively based on hypertext, a nonlinear, computer-based or digital text that is now used along with conventional, linear printed text as a relatively new text (Voss et al., 2009, p. 62). Hypertextuality can be defined essentially as the ability to quickly access alternative texts or any other media formats via links or tags. The other texts on the interface can be easily accessed and the users can move within the text and between the texts with this distinguishing feature of new media (Binark & Löker, 2011, p. 11). While digital writing has become more advanced with hypertextuality, its impact on users’ reading habits has gained importance as an underlying matter. In this context, the present research aims to provide a detailed analysis of users’ experiences of digital news reading in the context of hypertextuality. To put it another way, the present study aims to call into question the period that Bolter (1991 and 2003) dubs as “the late age of print” from the viewpoint of the user. According to Bolter, the power of electronic writing is not related to the reproduction of copies of the original text. On the contrary, reproduction can be defined as a power

of printed text rather than electronic text. The power of electronic text is due to its different fragmentations and divisions. In brief, electronic text presents different meanings in every reading.

A significant portion of traditional newspapers and printed books are designed linearly, in which the direction of reading is determined by the writer. However, a narrative in the form of hypertext refers to a nonlinear writing type that involves links and tags that replace traditionally linear reading patterns. In fact, this definition shows that this narrative form occurs after readers generate it via a sequence of preferences that come out of their desires and interests (Huesca & Dervin, 2003, p. 282). Therefore, it is no coincidence that the term “user” is preferred in the present research instead of “reader.” The reader has changed their passive position in front of the message due to the interactive features in the new media environment. Thus, the reader has transformed into a user who consumes, interprets and creates content on their own by selecting media content according to their interest.

Furthermore, text alone is insufficient without some other text connected to it in hypertext-generated information. Contrary to traditional printed text, hypertext has a nonhierarchical and decentralized structure. Hypertextuality can be accepted as a skeleton of assumptions that poststructuralist thinkers have expressed before. A narrative in hypertext form can be read by the users in multi-centered, multi-comprehensive and multi-level ways, as taught by Bakhtin (1981) and Derrida (1981). Hypertextuality is a technology that reveals the indeterminacy or limitlessness of the text. Unlike the defined structure of any traditional text, hypertext can be constructed in many ways, and every time, it is reconstructed and loaded with entirely new meanings (Derrida, 1999). The user emerges as a co-creator of the text with the author in parallel with these poststructuralist views in the Internet interface. The actions of writing and reading in the interface are absent from the final semantic closure. Thus, hypertextuality is a technological way to show that the meaning and methods of reading texts are not constant.

Although hypertextuality has caused new concepts of authorship, textuality and readership (Schneider, 2005, p. 197), it should be noted that this study has been primarily concerned with online newspaper user practices and reception rather than the meaning and the structure of online news text and its production phase. The limitations of the current study are apparent: the linking strategies and the content

of the hypertextual narrative. The present study focused solely on users since when Ted Nelson presented hypertext in the 1960s, it was primarily described as nonsequential, reader-controlled writing. Thus, according to the historical definition of hypertext, a specific status was attributed to the user. However, there is still a need for studies that focus directly on the usage practices of hypertext users.

The present study proposes empirical evidence for the theoretical ideas of the poststructuralist thinkers briefly described above. To this end, this paper begins by examining the literature on hypertextuality and news users. The advantages and disadvantages of reading hypertext are discussed in more detail in the following section. In the last part, a case study is presented analyzing newspaper users' reading habits in a digital setting within the context of hypertextuality. This final part focuses on the hypertext reception practices of UMASS/Amherst Department of Communication undergraduate students through the analysis of their news consumption patterns via an online survey. In addition to quantitative information, qualitative data is also provided via two open-ended questions on the future of digital news and the ethics of hypertext. Finally, this study discusses whether hypertextuality increases the variety and abundance of contradictory meanings or causes a semantic closure, echo chamber effect, and polarization with link selections of the users. It also examines the predictions and views of the students on the future of digital text.

Digital Reading Comprehension with Hypertext

A large number of studies on hypertext present this technology as bringing about the end of the traditional "good writing", and they also declare the death of the traditional press (Huesca & Dervin, 2003, p. 281). However, what readers can do with this technological text and how it affects the reading practices of users are still a matter that requires more research. Although the nature and function of hypertext is a topic that has been researched a lot (Huesca & Dervin, 2003, p. 282), there is still a need for studies that focus on transformation in readers' behavior. Besides, whereas computer researchers and literary scholars have examined the impact of hypertext on narratives, comprehension and the part of readers, little of this information was significant to journalism field (Doherty, 2014, p. 124).

The most emphasized topics in hypertext and literacy studies are learning and remembering practices. Researchers anticipate that hyperlinked online news will

cause changes in learning practices (Evaland & Dunwoody, 2001; Fredin, 1997; Opgenhaffen & d’Haenens, 2011; Tremayne, 2004). On the other hand, comparative studies related to learning and remembering from printed text and hypertext lead to different conclusions. For instance, a comparative study has shown that learning from printed news is actually more successful than learning from hypertextual news contents (Evaland & Dunwoody, 2001). Other studies that offer contradictory results reveal that reading web pages gives better results regarding details and remembering than reading printed materials (Fredin, 1997; Tremayne, 2004). In a meta-analysis of the academic studies related to comparing hypertext with printed texts, the results showed that 8 out of 13 studies found hypertext to be superior to printed text (Chen & Rada, 1996). It can clearly be seen that there is no single agreed and definite conclusion about whether hypermedia or printed text is superior for learning and remembering.

Different results have also been obtained from other studies that focus on the advantages and disadvantages of hypertext for readers. Because technology always “contained paradoxical tendencies to freedom and domination simultaneously” (Kroker, 1996, p. 71), the findings of studies on the positive and negative effects of hypertextuality on reading are reviewed under separate subheadings.

Advantages of Reading Hypertext

There is a considerable amount of literature on the advantages of hypertext for users. These studies primarily suggest that hypertextuality indicates a conversion of textuality, but it is not necessarily a danger for traditional literacy (Dahlgren, 1996; Jones & Hafner, 2012; Landow, 1997; Miall, 1997; Patterson, 2000; Rost, 2002). On the contrary, hypertextuality has more efficiently changed the mode of reading for most of the readers (Patterson, 2000, p. 74).

Both the empirical and descriptive studies on positive or favorable features of hypertextuality point to the blurring boundary between reader and writer. The readers determine the direction of reading by clicking the links on the Internet news designed in hypertext. Thus, they have become freer to choose both the materials they read and how to read them (Landow, 1997; Patterson, 2000, p. 76). To put it another way, hypertext negotiates the integrity of authorship as opposed to the narrative structures in which the author works out his authority by setting an

arrangement of occasions (e Silva, 2016, p. 82). The 'author' notion of the traditional printing age has been displaced and shaken by hypertextuality. The readers become more collaborators than consumers (Huesca & Dervin, 2003, p. 283). As soon as the reader transforms into a co-creator or w-reader (Haneef, 2010), the text becomes more meaningful and free. The reading practices even exceed the author's forecast. Hence, every single user obtains an existence area.

Eveland & Dunwoody (2001) indicate that user control has also had a positive effect on learning. Websites allow users to navigate and control information via hyperlinks. In other words, one of the reasons for the satisfaction of the readers who read news designed in hypertext is the opportunity to avoid information inconsistent with their demands and expectations. The readers do not have to read the information which is just based on the editorial choices. In this way, they can use their own time in a more efficient way (Barnet, 2000, p. 4). Besides, Rowlands et al. (2008) concluded that, especially when users have limited time, being exposed to hypertextual narratives in early ages has developed parallel logic building skills that can be useful in transitioning from one document to another.

In another study, the participants read a news story which was redesigned as a hypertext and then they expressed some positive reactions. According to these participants, reading a hypertext can be described as an enjoyable, more controllable, dynamic, quick, and satisfying reading activity. Importantly, if the readers have limited time, they have a chance to see the flow of the information and a map of the story while reading a news story designed in hypertext. The interest related choice opportunity, cognitive potential, noticeability, a chance to easily learn about the next section, seeing a summary of fundamental information, getting the up to date information, and a chance of accessing the details were also mentioned as favorable features of reading hypertextual news stories (Huesca & Dervin, 2003).

The correlation between hypertextuality and interactivity is also an advantage for users and a chance for a more critical reading activity. It may materialize in two ways; through an extreme form of collaborative authorship which is a process where readers make a contribution to a text by virtually writing pieces of their own ideas, or the weak but more widespread form of the reader choosing from the links presented by a text (Schneider, 2005, p. 198). The links guarantee a frame of interactivity, improved by Web 2.0, and have been viewed as the essential basic component of the global network

architecture (e Silva, 2016, p. 84). Thus, discourses on the Internet have become more collaborative, various, dynamic and open: "The ability to insert text within a larger domain places the reader and the writer in a kind of dialogue that cannot happen as easily in the world of paper and ink" (Patterson, 2000, p. 78). A research on blogs shows that the interactivity enhanced by the links causes an element of attraction, satisfaction, and greater attention by users (Williams et al., 2005).

Although these studies emphasize that reading a hypertextual story is a reader-focused, self-determined, freer, flexible, and critical reading practice, there are also some critical studies that present conflicting results against the advantages of reading a hypertext. The results of some skeptical studies are summarized in the next section.

Difficulties with Reading Hypertext

Contrary to the hypertext enthusiasts, the views of skeptics on hypertext extend back to 1989 when the World Wide Web had not become prevalent. Meyrowitz (1991, p. 287) openly expressed his doubts about this electronic utopia at a computer conference entitled "Hypertext-Does It Reduce Cholesterol Too?" (Landow, 2006, p. 321).

The critics of electronic text, particularly hypertext, indicate that reading hypertextual documents is more difficult than reading traditional linear texts (Birkerts, 1994; Li, Tseng, & Chen, 2016, p. 318). First of all, reading on the Internet is a complicated process. Hypertext stories require readers to make an extra effort to understand a topic. Since hypertext does not have a certain starting point, body, or conclusion; users cannot access traditional writing order and comfortable zone of linearity (Patterson, 2000, pp. 74–77). Throughout this reading practice, readers are obliged to follow links, and they skip from one text to another. Such a reading practice is sometimes regarded as a barrier (Canavilhas, 2008, p. 1). Moreover, when readers encounter a news story generated by a lot of hyperlinks, they have to spend a compelling mental effort to comprehend the way this piece of information is formed in the source.

Conklin (1987, p. 38) claims that readers often confuse where they are while tracking hypertext stories. He dubs this situation as "lost in cyberspace". Users become unaware of where they are in cyberspace and how they have arrived at the

current web page. In particular, external hyperlinks that provide a connection to another web page from the current website, create a vast cognitive load (De Stefano & LeFevre, 2005). Although hypertext offers users freedom of choice, it also causes some side effects such as blurring of the navigation chart and distancing from meaning (Bucy, 2004; Eveland & Dunwoody, 2000; Lee, 2005). While reading online news, users expose themselves to an insurmountable cognitive load. Consequently, it becomes more difficult for them to find their integrated reading way.

Past reading habits of users also have a significant effect on reading practices. Traditional users prefer printed material when they decide to read long texts (Patterson, 2000, p. 75). It should be emphasized that users have become accustomed to this form of linear reading that has a history of more than four thousand years (Canavilhas, 2008, p. 4).

Another criticism of hypertext states that readers do not tend to follow different ideas. On the contrary, readers usually use the Internet to support their own ideas (Turow, 2008, p. 4). In this context, the power of hypertextuality is exaggerated. The users even cannot see ideas different to their own. In contrast to traditional printed media, users only choose what they want to read and they are not forced to read different opinions on a subject while reading hypertextual contents. This situation can lead to "opinion polarization" in the long run (Jones, 2002; Sunstein, 2001). Therefore, the idea that polyphonic information flow allows a contextual depth via hypertext is an overestimated argument.

It should be noted that even if the users can choose their own reading direction, they do not have a decisive influence on which links may or may not be added to the text. Users seem to select stories from the limitless digital text universe by appearance. However, users can only choose their reading way from a narrative universe that is determined by the author in the last instance (Jones & Hafner, 2012, pp. 38–39). According to Manovich, who supports this view, the writerly reader does not have a whole space of freedom. The relationship between producer and consumer is more complex and hierarchical than it is supposed. Users who determine the path between the links, do not have to produce something new. They only rebuild the author's thought process by deciding where to go from all possible ways (2001, p. 28). Blurring the difference between the writer and the reader is just an illusion. Indeed, all the reading options are determined by the author.

As mentioned by Huesca and Dervin (2003), online newspaper readers do have some negative opinions about reading hypertext. According to the analysis of the interviews conducted in this study, hypertext is defined as unorganized, fragmented, difficult, haphazard, less complete, disconnected, confusing, distracting, and frustrating by the online news readers. The participants also emphasized that following the links on the news is a hard reading practice to adopt.

To sum up, there is no definite conclusion that hypertext is advantageous or disadvantageous for users. One of the reasons for contrary results in the related literature is that the users are not monolithic. Age, education level, geographical location, etc., have effects on online reading activities.

AIM AND METHODOLOGY

The theoretical framework of hypertext is fundamentally based on post-structuralism and intertextuality. According to these approaches, writing action on the virtual interface is more layered and multi-dimensional, and it does not include a final semantic closure or fixation. Therefore, hypertext is a technological way of showing that both subject and meaning are not constant.

Reading any text in digital media is a rebellion against sequential reading habits and linearity. On the Internet, the text is as clear as Eco predicted years ago: The boundaries of the text are ambiguous and interpretation occurs with the relation between multiple texts (1989). This postmodern perspective of text sees the reader as a creative interpreter and emphasizes the potential of context through the connections of the hypertexts. The reading activity discloses a decentralized movement (Derrida, 1981 and Landow, 2006). In a hypertext-generated piece of information, any text is insufficient alone without any other text attached to it. The text has lost its hierarchical character with a decentralized structure (e Silva, 2016, p. 85):

Considering “the relation each text has to the texts surrounding it” (Bazerman, 2009, p. 84), intertextuality is deeply rooted in Roland Barthes and in his theory of the text in which meaning does not rely only on its immediate visual materialization. Barthes (1968/1984) argues that a text is made of multiple writings, a multiplicity that only meets in one space, the reader, who summons his experiences and culture to give meaning to what he has read and is therefore the origin of the textual unity.

Hence, hypertextuality refers to a new form of nonlinear literacy that displaces traditional reading forms. Consequently, the current study calls into question the effects of digital text on reading practices.

Aim

The present research aims to provide an analysis of users' experiences of digital news reading in the context of hypertextuality. In this context, this research was carried out to determine the hypertextual usage habits and learning practices among U.S. communication undergraduates.

Methodology

The study employs systematic and quantitative research techniques using a well-structured questionnaire consisting of 28 questions for finding empirical evidence for the theoretical ideas of poststructuralist thinkers briefly described above concerning online newspaper users. The general tendency in contemporary method discussions has evolved towards mixed methods whereby qualitative and quantitative research methods are used together. Additionally, there is a growing need for the qualitative and quantitative approaches to be grasped together by researchers working in the field of social sciences (Punch, 2005, pp. 1–11). Within this framework, two open-ended questions were added to the questionnaire to provide qualitative data to analyze the new user type in online news in the framework of hypertextuality. The open-ended questions were examined inductively and qualitatively through techniques in which concepts, classifications, patterns, themes, and relationships were obtained from the data set. The study intends to answer five questions:

- 1- What are the main factors that determine users' browsing, reading, and navigation performances while consuming Internet news?
- 2- What kind of effects do the users think that hypertextuality has on their learning and remembering practices from online news?
- 3- Does hypertextuality cause selective exposure (supporting ideas) or cross cutting exposure (opposing ideas) in terms of online newspaper users?
- 4- Is there a relationship between hypertextuality and the echo chamber effect?
- 5- How do users protect themselves from manipulative or fake links?

Sampling and Procedure: Older generations usually prefer printed text, which is mainly familiar to them because of their past reading habits. On the other hand, the younger generation, students especially, are becoming accustomed to discussing digital text on the Internet. They prefer reading from a soft copy instead of reading from a hard copy. For this reason, it is essential to allow students to talk about their online reading experiences (Patterson, 2000, p. 76; Voss et al., 2009, p. 62). Besides, younger students prefer reading news on the internet (Pew Research Center, 2008). In this context, only university students were accepted as the sample. The sample was selected from UMASS/Amherst Department of Communication students between the ages of 18 and 26.

After obtaining human subjects approval by the University of Massachusetts (IRB 2017-4276), a pilot study was conducted to ensure that the experimental procedure would be easily performed, that no technical errors disrupting data collection would happen, and that the questions and content in the materials would not be ambiguous. Interested participants, solicited through an open-call email, were prescreened for the study by completing the questionnaire. 5 Ph.D, 10 graduate and 30 undergraduate students participated in the pilot text in November 2017. Some questions were revised to improve their clarity after the pre-study, and the exploratory method was rearranged. Only the responses to open-ended questions of the pilot study were kept in the final study.

A total sample of 152 undergraduate students participated in the study through random sampling in January and February of 2018. Of the 152 participants, 100 (65.8%) identified themselves as female, 47 (30.9%) as male, and 5 (3.3%) did not identify their gender. The sample of the present study has similar features with the population of the Department of Communication / UMass - which has 1000 students - in terms of average age, average education, and attendance. Most of the participants identified themselves as White American (73%). The ethnic information of the other participants is as follows: Asian/Pacific Islander (10.5%), Latino (5.9%), Other (3.9%), Multiracial (2.6%), did not wish to answer (2%), Europe (1.3%), African American (0.7%). Ten freshman, 33 sophomores, 35 juniors, and 74 seniors completed and returned the survey.

FINDINGS

The findings of the online survey conducted are described in this section. For background information, the study asked participants about their preferred medium

for reading news. In the appendices, Table 1 presents the participants' medium preferences. The question was asked in two different ways to provide credibility. The responses were similar. The students overwhelmingly preferred to read digitally. This finding is consistent with previous studies that show younger generations' (the so-called digital natives, net generation, generation z, and screen-agers) online newspaper preference (Clark & Douglas, 2011; Huang et al., 2016). Although the work of the early years of the Web contradicts it, printed newspapers do not attract new young e-readers anymore. Primarily the way students read is digital in the post-print age.

Even if some experimental and field studies show that students learn far more effectively from print text than screens (Eveland & Dunwoody, 2001; Lauren & Alexander, 2016), more than half of the students predicted that they learned more effectively by reading online news (53.9%) (Table 2). On the other hand, twenty-four percent of those questioned (24.9%) expressed that reading printed news and reading online news do not make a meaningful difference to learning. Future studies should focus on the belief that printed newspapers and materials provide more in-depth and more effective learning.

Participants were also asked to choose between hypertext and linear text. Hypertext and basic linear text were explained to the participants by the two figures shown in the appendices Illustration-1 to avoid terminological confusion. Surprisingly, the students preferred basic linear text. They have traditional reading habits even if they choose to read news in a virtual environment. Thus, the students transfer their reading habits from printed text to hypertext. In other words, although the medium preferences are online, the text preferences are linear text instead of hypertext. In this context, it is examined whether the news reading practices on the internet have positive features as claimed by the poststructuralist thinkers due to the hypertextuality function in the following table.

A question was asked to determine what types of hypertext reading practices the participants have. According to Slatin, there are three diverse kinds of hypertext readers: the browser, the user, and the coauthor (1992, p. 158). The aim of the browser type readers is merely to find engaging content. At the same time, the users are trying to find specific information by using hypertext. The third and last kind of readers are the coauthors who add their own opinions to a piece of digital text on purpose (Patterson, 2000, p. 79). As shown in the appendices Table 3, very few of the

students who participated in this research perform such a participatory online reading activity (13.2%). They would rather be browsers (80.3%) and users (55.9%) than be a coauthor (13.2%). A recent study has emphasized the importance of supporting coauthor students (Patterson, 2000, p. 79) for developing a participatory culture, interactivity, and critical thinking. Besides, according to Pallfrey (2016), scholars should find ways to encourage students to take another step and to engage more meaningfully with the fact and the context. Students were also asked whether they add their own comments while sharing news links. Many students stated that they did not add their opinions while sharing news links (73.6%). This finding does not confirm the claim that hypertext allows a cooperative reading. On the contrary, the positive features attributed to hypertext are exaggerated.

The rise of visualization has become one of the critical findings of academic research in recent years (Burnett, 2004; Bolter, 2003; Hocks & Kendrick, 2003; Kellner, 2002). Virilio emphasizes that visualization is the decisive feature of the phenomenon called virtualization today by establishing a connection between Internet technologies and visual culture (2003, p. 18). An image is superior to a word in digital media. To support this claim, it was observed that the students gave responses that prioritized the visual narratives for describing fundamental elements of online news. Images/photographs are considered as the essential narrative type of the online news (94.7%) (Table 4). Furthermore, data visualization as a new kind of visual narrative is regarded by the students as an essential element as well (58.6%). In the beginning, the images were bearing the promise of being a proof of the truth. But now, they are deconstructing the reality in the post-truth era. In this context, the students' passion for visuals is worth questioning.

Interestingly, the students do not accept the zoom and color options as being important elements of online news (7.2%). However, these features are especially significant for color-blind, disabled, and senior users' online news reading practices. Technical problems such as slow internet connection may disrupt obtaining information, and poorly designed Web sites pose problems for users to access their desired information (Kirsner, 1997). Accessibility of the World Wide Web (WWW) for the disabled has been considered significant since the beginning. In 1997, Tim Berners-Lee, the inventor of the WWW, launched the World Wide Web Accessibility Initiative and stated its purpose as "removing accessibility barriers for all people with disabilities – including the deaf, blind, physically challenged, and cognitive or visually

impaired" (Robertson & Hix, 2002). It is seen that digital divide is not an issue that simply implies accessing a specific technology. On the contrary, web accessibility is a broader and multidimensional problem. In this regard, web accessibility in the context of the principles of universal design should be added to media ethics courses to give students a better understanding of the digital divide.

Internet journalism has brought about new problems as well as extending the existing debate for media ethics. Issues such as the violation of the right to be forgotten, dubious/suspicious claims due to speed pressure, misleading labeling/linking or titling, unclear distinction between commercial and non-commercial information, giving links to untrusted sources are the main points of problem areas that internet journalism has caused. In this context a question was asked to understand the participants' awareness of the ethics of hypertext. As seen in the appendices Table 5, approximately one-fourth of the participants replied that there would not be an ethical problem if an online news story gave a link to a fake source. According to them the main source would not be responsible in such a situation.

In fact, a critical reading on links in a news story gives useful additional information about journalists' unclear assumptions (Jones & Hafner, 2012, p. 38). In this regard, the context provided by the links can cause ethical problems. Weinberger points out that every link is not "as pure as Sister Teresa" (2008, p. 189). He indicates that a large number of links on the web can quickly lead to advertisements or porn sites (Jones & Hafner, 2012, pp. 39–40). Therefore, it is insufficient to limit the analysis of ethical concerns of news contexts with only the available text. The studies on online journalism ethics should focus on other content reached by links as well.

In order to learn the students' awareness of hypertext ethics in detail, an open-ended question was also asked to students to learn how they protect themselves from fake online news links. Some students do not make any special efforts to combat fake news. According to them, the truth emerges sooner or later.

"The truth always comes out in the end." (Female-Senior)

"I believe that in the end the truth will conquer." (Did not identify gender-Senior)

"In the post-truth age, the truth in the end shall prevail." (Female-Senior)

"After a while news channels declares that it is not real. No need for a special effort."
(Female-Senior)

A small number of users have stated that they are not reliant on news organizations by saying it is not possible to escape from fake content and links.

"I do not usually consume online news because it is so hard to trust/ know if it is reliable" (Female-Freshman)

"I couldn't. It is almost impossible." (Female-Sophomore)

"I am skeptical of everything I read. There are no real news sources anymore." (Female-Sophomore)

"I rarely read the news online or offline. I generally distrust news providers and have little interest in what they consider to be the 'news'" (Male-Sophomore)

Only four of the students gave responses that emphasized the critical thinking and opposing reading skills developed by critical media literacy lessons. As the level of media literacy increased, the competence of answers also increased.

"In general though I try to apply what I've learned in my journalism courses in terms of weeding out accurate and misinformed/inaccurate sources by using sites like Politifact or newswires like AP/Reuters, to double check information. I also feel like as an online news consumer you learn to pick up when an online news site may be more 'bloggish' or biased in terms of how/what they're reporting on." (Female-Senior)

"Do background research on the news outlet/website where you find the news. Find out who owns it, what their political inclination is, if they are partnered with other companies for financial purposes." (Male- Senior)

"I don't follow mainstream media. Being skeptical of sources, trying to access the main page of a source." (Female-Senior)

"If something sounds bias and extremely right-wing, I can usually tell due to prosperous claims it may make that skew from what I've learned from reliable and independent sources." (Female-Senior)

Checking other sources, reading multiple perspectives, double checking information, checking the URL, looking who is writing the content, looking at the news at the other news in the same topic, looking at the user comments, following the official or main page, and being vigilant about fact-checking web sites were repeatedly stated as the most commonly used methods for avoiding fake online news/links.

Another prevention method that users often emphasized was getting information from reliable, credible, certain, well known, and legitimate news sources. The subject of source, the question of which source is trustworthy varied according to the participants. While few of the participants have identified alternative and independent media as reliable sources, a large portion emphasized that the mainstream media is reliable. Even though mainstream media is mostly unreliable and makes up facts, it is still considered as a reliable source by some of the communication students:

“Credible sources like NYT” (Female-Senior)

“I try to find the “news” on reliable websites e.g. NYT” (Male-Junior)

“I try to stick with sites I know are reliable like CNN” Male-Freshman

“I usually rely on what I know to be a few reliable and credential sources, CNN, NPR, Aljazeera, etc.” (Female-Freshman)

“I try to stick to sources that are reliable, such as the Guardian or BBC news” (Female-Senior)

“I get NYT & Washington Post daily briefings delivered to my email every morning.” (Female-Senior)

The most surprising result of the research was the answers that emphasize the actual communal social effect. This finding is important regarding primary relations and the effect of two-step flow of communication.

“I do further research or ask my Dad.” (Female-Senior)

“I discuss the suspicious news with my father.” (Female-Freshman)

“I get my dad’s opinion.” (Female-Freshman)

“I check the information by asking my family members.” (Male-Freshman)

“Ask friends if they know whether it is real or not” (Female-Senior)

“People will say it isn’t correct, in that case I would do my own research to find out.” (Female-Senior)

Fathers especially were described as accurate fact-checkers by some female, White American participants. It is estimated that this finding might be unique to American culture.

The present research also examined whether hypertextuality has led to a variety of meanings or causes filter bubbles, the echo chamber effect, and polarization with

semantic closure among the users. The different impacts of approaching and avoiding certain messages are still an essential scientific debate (Beam & Kosicki, 2014, p. 61). In this context, the appendices Table 6 presents the criteria that have an impact on the participants' decision to click on any news link.

Many researchers are worried that selective exposure weakens the quality of online information that people see. Selective exposure studies indicate that news readers will probably participate in news that is relevant to their own choices (Iyengar & Hahn, 2009, p. 20). According to the selective exposure theory (Festinger, 1957), navigation takes place in a way that readers choose texts consistent only with their own behavior, ideas, and priorities. Whereas some recent research emphasizes that democracies are critically dependent on voters who are exposed to various political views and read them critically (Baron, 1994, p. 33; Lassen, 2005, p. 103). As a result, due to the increasingly polarizing news reading practice, more and more citizens are worried about having incomplete and incorrect information.

According to the echo chamber effect, internet sites cause users to filter the messages they do not support and thus to set up their own echo chambers. For this reason, users are blind to the opposing views in the virtual environment. They create homogeneous groups and follow only the internet resources and accounts that fit their own opinions (Colleoni et al., 2014, p. 319). Selective exposure, which seems more useful and efficient at first glance, causes "group polarization" (Sunstein, 2004, p. 59) over time.

It was questioned whether the hypertextual narration established by the links led to the polarization of opinion by asking which news links the students decided to read. According to students, the most important criteria that determine clickable news link are an interesting subject, a reliable source, and current news. Supportive or opposite ideas do not have a strong influence on clicking on stories.

However, the polarization of opinion is observed at the moment of sharing the news link. Students were asked which news links they shared. They tend to share news links that support their own views. The students are reluctant to share balanced news covering all perspectives. This finding is essential to show the connection between hypertextuality and echo-chamber effect. Hypertextuality has not prevented semantic

closure as predicted by poststructural thinkers. On the contrary, it has become a technology that only accelerates the circulation of certain ideas (Table 7).

DISCUSSION AND CONCLUSION

In this research, it is examined how the department of communication students read, interact with and learn from digital news in the context of hypertextuality. The students could identify their digital reading habits with an online questionnaire rather than through experimentation. Additionally, the users were questioned about their ways to deal with fake links while reading online news within the context of the ethics of hypertext.

Although the students preferred to read news online, their preferred text type was basic linear text. This finding is valuable in that it shows the traditional linearity of the habits of reading, even if the students confirm the preferences of reading digital media. In other words, the reading habits do not show a hypertextual characteristic in contrast to the fact that the news reading preferences have increasingly become digitized.

The students were also reluctant to share news by adding their comments. For this reason, it was observed that the students did not practice such a cooperative reading habit. Therefore, most of them are neither cowriters or rewriters as poststructuralist thinkers' claimed (Derrida, 1999; Barthes, 1968/1984; Haneef, 2010; Huesca & Dervin, 2003). Although hypertextuality allows users to make a participative reading, this possibility was not reflected in the reading practice of the students.

Those participants who paid a lot of attention to visual digital news items were not interested in the zoom and color enhancing features which are especially useful for helping people with disabilities and senior citizens to access digital news. Since the digital divide is beyond simply having access to technology, web accessibility in the context of the principles of universal design should be added to media ethics courses to give students a better understanding of the digital divide.

Another important result of the study showed how the communication students identified reliable news sources. Even though mainstream media may be mostly unreliable and may make up facts; it was considered reliable by a large part of the sample. In addition,

social influence is still influential in the debate on the truth of the news. This result showed the importance of primary relations and the effect of two-step communication.

It was determined that hypertextuality does not cause opinion polarization at the moment of selecting a link to be clicked. Rather, an interesting topic and a reliable source are more important when participants choose to click. However, students tend to share links that often support their own views, rather than the balanced news that covers all perspectives. This finding shows the relationship between the echo-chamber effect (Colleoni et al., 2014) and hypertextuality that allows the news to be easily disseminated through link sharing.

To sum up, hypertext as a new digital text, allows the readers to get improved, holistic, and contextual information. However, the hypertextual reading practices of the sample students did not show this potential. From this perspective, hypertextuality is not a technology that provides better news reading habits, nor is it a feature that changes the news reading practices. Future studies should focus on reception practices of digital news readers in other geographies for comparative analysis.

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TABLES AND FIGURES

Table 1: The Preferred Medium for Reading News

Survey statements	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Total
I prefer to read printed news if I have a chance to choose between online news and printed news.	10 6.6%	14 9.2%	35 23.0%	66 43.4%	27 17.8%	152 100%
I prefer to read online news if I have a chance to choose between online news and printed news.	40 26.3%	60 39.5%	33 21.7%	16 10.5%	3 2.0%	152 100%

Table 2: Depiction of the Effective Learning Experience -According to the Participants-

Depiction of the effective learning experience	Frequency	Percentage
By reading online news	82	53.9%
I do not think that reading printed news and reading online news makes a meaningful difference to learning	37	24.3%
I'm not sure	15	9.9%
By reading printed news	14	9.2%
I have no idea	4	2.6%
Total	152	100%

Illustration-1: Examples of the preferred text type for reading

Basic Linear Text

%75 (f=114)



Clickable hypertext with links

%25 (f=38)



Table 3: Online News Reading Practice (The participants Selected All That Apply)

Online news reading practice	Frequency	Percentage
No particular purpose / finding something interesting	122	80.3%
Looking for specific information	85	55.9%
Giving feedback or add my own comment while sharing a link	20	13.2%

Table 4: The Essential Elements to Have a Good News Reading Experience -According to the participants- (The participants selected all that apply)

The essential elements to have a good news reading experience	Frequency	Percentage
Images/photographs	144	94.7%
Verbal Text	107	70.4%
Videos	100	65.8%
Data Visualization	89	58.6%
Digital Maps	48	31.6%
Sharing in Social Media Options	45	29.6%
Links and Tags	34	22.4%
Comments	33	21.7%
Slide Shows	30	19.7%
Onsite Search Engine	18	11.8%
Pools	17	11.2%
Zoom and Color Option	11	7.2%
Rating News Item	9	5.9%
Contact Information About Reporter	8	5.3%
Automatic Fact-checking Option	4	2.7%
Animation	1	0.7%

Table 5: Ethics of Hypertext

Survey statement	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Total
Even if a news content itself conforms to ethical rules, if it gives a link to a fake news source it is still ethically responsible.	29	54	34	26	9	152
	19.1%	35.5%	22.4%	17.1%	5.9%	100%

Table 6: The Criteria that Has an Impact on the Participants Decision to Click on any Link - According to the participants- (The participants selected all that apply)

The criteria that has an impact on the participants decision to click on any link	Frequency	Percentage
Interesting subject	128	84.2%
A reliable source	122	80.3%
Current news	117	77%
Powerful Headline/Curiosity	102	67.1%
Enjoyable topic	81	55.3%
Supporting my opinions	56	36.8%
Inclusion of different or opposing views	55	36.2%

Table 7: Selective Exposure and Cross-Cutting Exposure

Survey statements	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Total
I prefer to click and share the links that support my opinions.	46 30.3%	66 43.4%	25 16.4%	12 7.9%	3 2.0%	152 100%
I prefer to click and share the links that include all sides (balanced news).	11 7.2%	39 25.7%	67 44.1%	28 18.4%	7 4.6%	152 100%

