Exploring User Engagement in Online News Interactions\(^1\)

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ABSTRACT
This paper describes a qualitative study of online news reading and browsing. Thirty people participated in a quasi-experimental study in which they were asked to browse a news website and select three stories to discuss at a social gathering. Semi-structured interviews were conducted post-task to understand participants' perceptions of what makes online news reading and browsing engaging or non-engaging. Findings as presented within the experience-based framework of user engagement and demonstrate the complexity of users' interactions with information content and systems in online news environments. This study extends the model of user engagement and contributes new insights into user's experience in casual-leisure settings, such as online news, which has implications for other information domains.

Keywords: User engagement, user experience, online news.

INTRODUCTION
Online news represents a dynamic, information-rich environment characterized by multimedia, interactivity, and hypertext (Opgenhaffen, 2011); it provides the public with up-to-date information about local and international events, sports scores, financial trends, human-interest stories, etc. A goal of news in general is to appeal to a wide-range of people with different motivations for browsing and reading news, including to escape, to follow breaking news, or to be generally informed about what is happening in one’s world (Marshall, 2007). In the hope of appealing to a wide range of motivations, online news providers are incorporating interactive features to “make the news reader part of the news experience” (Opgenhaffen, 2011).

Interactivity may be defined according to two dimensions: 1) control over content (e.g., accessing news content through preferred channels, such as news websites, RSS feeds, political blogs, etc., and being able to hyperlink to related content while reading news items); and 2) conversation, the sharing of news content via social networking tools and the ability to comment on news stories and view the opinions of others (Opgenhaffen, 2011). Individual interests and motivations play a significant role in shaping users’ propensity to engage with interactive news features (Flavián & Gurrea, 2009), yet Chung (2008) argues that interactivity may not be a sufficient construct for understanding the complexity of online news interactions. Rather, we need to examine the intersection of users’ behaviors and attitudes in this environment and capture “the experience of interacting with online news” (Chung, 2008, p. 662). Thus the purpose of this paper is to adopt an experience-based framework for exploring the interaction between user and system variables and its implications for user engagement with online news. The outcome of this exploration demonstrates the benefits of taking a more holistic approach to information interaction in domains such as online news, where information behavior

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is exploratory and not always goal directed, and where the interface is designed to promote browsing.

PREVIOUS WORK
News has been studied by researchers in many disciplines, such as human-computer interaction (HCI), media studies, and communications. However, with some exceptions (e.g., Toms, 2000), information scientists have focused little on newsreaders as information seekers/users. One reason for this may be that news has been associated with “entertainment” rather than “information,” the dichotomizing of which represents a “blind spot” in our field (Case, 2002, p. 102). There has been a longstanding concern for the utilitarian and cognitive aspects of information behavior. This is demonstrated in numerous studies situated in workplace and academic environments that have taken problem solving and task-based approaches to understanding information seeking behavior and use. However, attention is increasingly being drawn to the hedonic and affective aspects of information behavior in all information contexts. There has been growing interest in the information behavior of everyday life and leisure given the prevalence of technology used to support (e.g., following a favorite film star via Twitter) or constitute (e.g., playing an online game) leisure activities (Elsweiler, Wilson & Lunn, 2011). As a result, we must re-evaluate what constitutes a successful outcome of an information encounter. Traditional criteria, such as effectiveness, efficiency, and satisfaction, are sharing the stage with more affective outcomes, including fun, sensory appeal, and user engagement (O’Brien & Toms, 2008).

Elsweiler et al. (2011) propose that we need a new model for thinking about casual leisure information behavior. They point out that searching and browsing behaviors are present in both work and non-work contexts, but that we require a greater appreciation of casual leisure settings, specifically what motivates users, what systems and strategies are employed, and how information interactions are evaluated. Their model is based on a diary study of 38 television viewers conducted over a one-week period and an analysis of 2.4 million Twitter feeds. The researchers found evidence of active information seeking in these settings, but concluded that existing models of information behavior did not explain the non-critical and hedonic nature of information needs with these media. In the case of entertainment (television) and social (Twitter) media, the emphasis was not on the information itself, but on the experience of locating it or sharing it with other people.

Therefore, capturing the experience of online news interactions requires a more holistic way of thinking about information behavior in this context – a perspective that encapsulates not only usability, but also “enjoyability” (Chen & Corkindale, 2008). An experience-based framework that has potential for exploring online news experiences is user engagement (O’Brien & Toms, 2008). Developed with information-rich environments in mind, user engagement seeks to encapsulate the individual and system variables that contribute to information interactions.

User Engagement as a Lens for Understanding Online News Experiences
User engagement is defined as a quality of user experience with technology, and is a suitable construct for exploring interactions with online news. It purports to be a holistic framework that takes into account the characteristics of systems (e.g., usability, aesthetic appeal, interactivity), users (e.g., level of felt involvement, positive affect) and what happens when these two entities meet at the system interface. In addition, the emphasis of user engagement is on what the user finds “innately compelling” according to their motivation for using a technology, e.g., to have an enjoyable experience (O’Brien & Toms, 2008, p. 941).
O’Brien and Toms (2008) developed and refined a process based model of user engagement situated within McCarthy and Wright’s (2004) Threads of Experience (i.e., sensual, emotional, spatio-temporal, and compositional). The model was informed by an extensive literature review and an interview study. First, an analysis of the information science, education, human-computer interaction, and information systems fields was conducted to identify how researchers in each of these disciplines described and defined user engagement. Second, interviews were carried out with 17 people who described their experiences with e-learning, e-shopping, web searching, and gaming activities to understand how people described their engagement with these applications. The analysis of the literature and the interviews were used to develop and test a conceptual model and characteristics of engaging experiences.

The model consists of distinct stages characterized by the presence of specific attributes (O’Brien & Toms, 2008). The point of engagement occurs when the user decides to invest in the interaction. It is precipitated by the aesthetic or novel aspects of the interface that work to capture users’ attention and interest. The period of sustained engagement is characterized by the richness of the interface and its ability to maintain users’ attention and interest, and to support the users’ activities within the site. Disengagement occurs when the user “checks out” of the interaction either physically or mentally. It is typically associated with negative feelings of frustration brought about by poor usability or inappropriate levels of challenge that leave the user feeling over- or underwhelmed. Distractions, interruptions, and time constraints also contribute to disengagement. However, disengagement may also occur simply because the user decides they have completed the activity and are satisfied with the experience. The user may decide to re-engage after disengaging, and this initiates the process again (O’Brien & Toms, 2008). Overall, the model demonstrates that information interactions are not static and that users’ levels of attention, interest, etc. are changing during an encounter with an information system.

Online News

Online news is a domain ripe for exploring interactive user experiences through the lens of user engagement. It represents a rich environment for investigating a range of behaviors (e.g., reading, searching and browsing), cognitions (e.g., deciding what to read, evaluating the content or way in which it is delivered) and affective (e.g., motivations) elements of users’ experiences. Online news mediates informational and social experiences through a multi-media, interactive, hypertextual interface. Information is presented in text, audio, video, and images; social awareness and participation are encouraged via links to recommended and related content and space for readers to express their opinions about articles and issues.

Previous research in HCI and media studies has focused on users’ motivations for reading online news (Flavián & Gurrea, 2009; Marshall, 2007) and their desire for choice and novelty (Toms, 2000) when selecting news content. These studies have identified the need to support different types of reading and browsing behaviors in the design of news interfaces. For example, Marshall (2007) describes how readers may approach news, either rapidly scanning to get a general sense of the overall content, or engaging in more in-depth, focused reading of specific news items. Toms (2000) advocates for news platforms that provide stable navigation aids to keep newsreaders oriented in the space, yet that also support browsing by presenting content that is diverse and novel, thereby promoting the discovery of that content.

In addition to examining people’s motivations for reading news and their preferences for browsing news websites, others have focused on users’ perceptions of interactive (Chung, 2008; Deuze, 2003) and personalized (Lavie, Sela, Oppenheim, Inbar & Meyer, 2010) news interfaces. This work has concentrated on identifying levels of interactivity afforded by the
navigational, functional and adaptive features of news websites (Deuze, 2003), and plotting interactivity on a continuum from user-technology to user-user communication (Chung, 2008); studies have also tried to account for and satisfy the varied interests of newsreaders through personalization (Lavie et al., 2010). These studies have concluded that interactive and personalization features are not always utilized by newsreaders (Chung, 2008) nor do they affect the frequency in which online news is being accessed (Nguyen, 2010), but that they have untapped potential for transforming the way in which news is delivered and consumed (Opgenhaffen, 2011).

What remains to be explored is how these user (e.g., motivation, preference for choice and novelty) and system (e.g., browsability, interactivity, personalization) qualities come together to create an online news experience. What is the intersection of user and system variables during an interaction with an online news website? What makes interacting with online news engaging?

CURRENT STUDY
Online news reading and browsing has not been viewed through an experiential lens such as user engagement. The objectives were twofold: 1) to gain a broader understanding of users’ engagement with online news in order to understand the interaction between individual and system variables on experience, and 2) to test the suitability of user engagement as a framework for exploring information behavior in the domain of online news. Interviews were conducted with 30 people who browsed a news website and selected three articles of interest that were appropriate to share in a social setting. The following sections elaborate on the method employed in this study and on the findings gleaned from semi-structured interviews with participants.

METHOD
Participants
Thirty people participated in this study. There were more males (N=19, 63.3%) than females (N=11, 36.7%) and 66.7% (N=20) of the participants were students. This was a fairly educated sample, with 46.7% (N=14) of the students enrolled in an undergraduate program, and 33.3% (N=10) in a Masters program. Approximately one-third of the sample was between the ages of either 21 and 25 (N=11, 36.7%) or 26 and 35 (N=10, 33.3%). The remaining participants were between 19 and 20 (N=1, 3.3%), 36 and 45 (N=3, 10%), or over 55 (N=3, 10%) years of age.

The majority of participants reported that they read online or print news on a daily basis (N=18, 60%) or several times a week (N=8, 26.7%). No one indicated that they never read news; 3 people (10%) and 1 person (3.3%) indicated they read news on a weekly or monthly basis, respectively. None of the participants read news solely in print. Over half of the sample (N=16, 53.3%) reported reading news both in print and online, while 46.7% (N=14) said they read only online news. Four of the participants listed “CBC,” the news website selected for this study, as a preferred news source.

News Website
The Canadian Broadcasting Corporation (CBC) news website (http://www.cbc.ca/news) was used in this study. The research was not affiliated with CBC. It was selected because it is typical of news websites in that it offers a variety of regional, national and international news and incorporates multimedia formats and interactive features. The following is a brief description of the website.

The CBC news website offers a search box as well as categories presented within a menu along the top (e.g., News, Sports, Radio, TV, My Region) for browsing. There is a breaking
news banner directly under this menu, and an ad and current weather conditions directly above the menu. The right side of the screen, from top to bottom, includes: a “headline news” story with a prominent photo and an icon to indicate if there are reader comments or video associated with the story; a leading CBC sports headline; news by region with tabs for “top headlines” or “most commented”; “Your Voice” that invites reader feedback to specific issues; and a request to share breaking news stories, video, and images. The centre column of the screen features the day’s top headlines in categories such as “Canada,” “World,” “Sports,” “Politics,” “Arts and Entertainment,” “Money,” “Health,” etc. The left side of the screen highlights CBC Television and Radio, with changing images and captions for programs. Beneath this is the programming schedule for CBC radio and televisions, and a series of images with accompanying headlines that lead the reader to stories that are linked to upcoming television and radio programming or the CBC archives. Below this is a statement about website accessibility and options for “Stay[ing] Connected with CBC” through RSS, mobile, email, etc. means. Along the bottom of the screen are further categories for “CBC.ca” and corporate information.

Procedure
This quasi-experiment was conducted in a quiet room in a university building. A laptop with a 15-inch monitor was used. Morae screen capture software recorded the browsing session. Interviews were audio recorded using Livescribe Pulse Smartpen.

Recruitment took place through email listservs and fliers posted around a university campus. Volunteers responded to the recruitment notices by emailing the researchers and setting up a convenient time to participate. The duration of the experiment was between 45-60 minutes. After participants consented to participate in the study, the experiment commenced. First, they completed a demographic questionnaire, which gathered information about their age, gender, and level of education, as well as news reading frequency, and preferred news sources. Next, they were introduced to the online news task.²

This study employed a simulated task scenario (Borlund, 2000) to situate participants’ news reading. The purpose of the simulated task scenario was to bring realism to the study. It was designed to provide participants with some parameters for their interactions with online news (e.g., minimum number of articles to read/browse, time frame, etc.), but was meant to be open-ended in order to facilitate choice, an attribute that has viewed as important to user engagement (O’Brien & Toms, 2008).

You will be attending a social gathering this evening. It is a birthday party for a friend being held at a local restaurant. You do not know many of the guests in attendance. You thought it might facilitate meeting new people and taking part in conversations if you were up-to-date on some recent news. You decide to browse the CBC news website to see if there are any interesting items. You only have about 20 minutes before you have to start getting ready for the party. You decide that looking at one article might not give enough variety of information since you do not know the interests and backgrounds of the other guests. In the end, you determine that three articles would give you enough things to bring up in conversation.

Participants were then asked to browse a news website in response to the scenario. The study was confined to one news website in order to keep the experiment as tightly controlled as

² Physiological data (heart rate, electrodermal activity, and electromyography) was collected with 10 participants using non-intrusive sensors. These results are not reported here, but are noted because they were part of the session for some people.
possible. The sample was asked not to select non-news content, such as weather or classified ads, but was otherwise uninhibited in their news reading. A time frame (20 minutes) was provided in the instructions to limit the variability of time on task between participants and to prevent participants from becoming fatigued, since the browsing/reading period was followed by an interview. The final component of the study was a talk-after interview facilitated through the playback feature of Morae. The interviewer scrolled through the browsing session and asked participants to identify the articles they selected for the scenario, pausing on each one and allowing it to play forward. This provided the participant and researcher with a frame of reference for the interview. A semi-structured interview script was followed in which participants were asked to describe and rate the articles they selected for the task and to comment on the news reading and browsing experience as a whole. After the interview, participants were thanked for their time, debriefed, and paid an honorarium for taking part.

FINDINGS

This section highlights the findings of semi-structured interviews conducted with participants after they completed the simulated task scenario. (The quantitative data will be reported elsewhere to maintain appropriate length and scope for this paper.) Interviews were transcribed and explored using a grounded theory approach (Strauss & Corbin, 1998). In this case, a more deductive approach was taken in the analysis because an objective was to examine news experiences within the existing framework of user engagement. The analysis focused on identifying previously defined attributes of engagement, such as interest, aesthetic appeal, etc., and participants’ perceptions of the system they interacted with during the experiment. However, the semi-structured nature of the interviews meant that participants were not asked to comment specifically on these attributes, but to comment on the news reading/browsing experience as a whole. Therefore, the findings are a collective story of these 30 participants’ perceptions of their experiences and are presented according to the stages of the process model proposed by O’Brien and Toms (2008) (i.e., point of engagement, engagement, disengagement, and non-engagement). As this was a laboratory-based study, it is not possible to determine if participants would re-engage with the website at a later time; therefore re-engagement is not reported on.

Point of Engagement

All participants began the task from the homepage of the news website. Participants formed initial impressions about the website that influenced the trajectory of their experience. The presentation of the interface led to evaluations about the website’s usability and presentation.

Useability and Presentation of the News Website

With respect to usability, some participants surveyed the navigational features of the website positively. For instance, they commented on the “easily laid out sections” (P27) and appreciated the “clear categories” (P24) of news by topic or geographic location (P25). Its appearance was in line with expectations of what a news site should look like according to participant 6: “it’s clearly a news site”. Two participants remarked that there were sufficient options for browsing the content of the site (P2, P7).

Regarding the overall visual appeal, some participants described it as “fairly simple...visually it’s not too messy” (P29), “clean” (P10, P30), “stylistically interesting,” and “visually appealing” (P21). Some of the interviewees were drawn to the color scheme (P4, P28), while others maintained that they liked the simplicity of the website. For two people, compared to other news websites they had seen, the CBC news website did not have “a lot of bells and whistles” (P17) and was not “really flashy” (P18), and they equated this positively to the usability of the website.
**Capturing Attention and Interest**

As participants began to interact with the website, the content facilitated their engagement through the images and headlines that drew them to specific stories. One person described how an image was so “compelling” that they chose to examine an article even though “I'm actually not that interested in the subject matter,” and then “reading through the article…the subject matter became more interesting” (P21). Another individual explained how the images and the headlines worked in concert to capture his attention: “Well the thing that hooked me was the image of the Pakistan flooding. That image and then that title hooked me, because I'm interested in that” (P5).

Participants explained that headlines “stood out” (P22) to them and captured their attention and interest (P1, P4, P12, P29). Sometimes this was due to the way they were presented. For instance, one person described being drawn to the “big headlines” as “the first things I tend to read” (P4) and another talked about the use of bold font to make the headline “seem important” (P28). At other times it was because they resonated with participants’ interests or backgrounds (P16, P24), or they were novel. Participants came upon headlines that they evaluated as “weird stuff” (P24), “strange” (P9), “outlandish,” “odd” (P10), “weird” (P29) and “shocking” (P19). Such headlines made these people select the articles even though they were not necessarily interested in reading about the topic of the article (P1).

**Engagement**

During the period of sustained engagement, participants described engagement with the website, focusing on its navigational elements and usability, and on the content of the news articles.

*Engaging with the Website*

In the thick of the task, usability continued to influence people’s level of engagement. One participant commented that the structure of the website and the absence of banner ads helped her to be “more focused on the articles than I have been on other sites” (P21). Others commented positively on the ease with which they were able to navigate the website (P19, P26) and appreciated that the main menu was consistently present when they were reading articles because “you're never actually more than half a page away from being able to access the rest of the content on the website” (P4).

In some participants discussion of their experiences, the interactive components of the news website featured prominently. Interviewees talked about using some of these features during the experiment, such as selecting articles because they had been recommended by other readers (P14, P24), following links within stories, and examining the comments of other readers (P20). In fact, one of the interviewees regarded the comments as “informative and interesting” and remarked, “sometimes the article is not nearly as great as people's reaction to it” (P20).

*Engaging with Content*

The articles played a major role in sustaining participants’ engagement in the experience. Engaging content maintained users’ curiosity and felt involvement in the articles. News stories were viewed positively when they looked at issues from a different perspective, or linked seemingly unrelated topics together. Some examples of novel content were a report about a scientific study to map emotions through social networking applications (P2), an article about an
elephant fitted with “a new set of tusks” (“it’s an elephant!”) (P8), and a thief who held a garage sale in a home that he had broken into (P5). These engaging stories were not always positive. One participant felt compelled to read about a tragic incident that was “appalling” and “horrible” but “I wanted to see what was going on” (P27). Other people described articles as engaging when they made them ask questions (“I was wondering…” [P13]; “I wanna know…” [P29]), or generate an opinion (“Maybe they should spend money on more important stuff…” [P13]). The ability of news to engage the reader was described as “intrigue in the “different plot lines” running through a story (P10).

Whereas some people were drawn to novel news on topics that they might not typically peruse, others indicated that their interests and preferences determined their engagement, according to how well they were able to relate to the content. Finding a personal connection helped people become “excited” (P15) about the experience.

These interviewees described their news selections as salient when the article contained current information on news they had been following (P8; P15), or was on a topic that was “close to home” (P11). Some examples of these were an article that resonated because the participant had a family member with diabetes (P25), and a story that appealed to someone’s love of animals (P8).

Disengagement
The same components of the experience that engaged some participants disengaged others who took part in the study. This section describes how elements of the website (usability, aesthetic appeal) and content (novelty) led some individuals to feel disengaged.

Disengaging with the Website
Some participants judged the usability and aesthetic appeal of the news website as poor. For these participants, the layout was “very cluttered” (P12), “distracting” (P26), “busy” (P30), “convoluted,” and “difficult to navigate” (P11). They described being frustrated (P15), “annoyed” (P19), and “losing interest” (P26) because of the layout (everything was “squished to one side” [P15]; “wasn't laid out the way I'd have chosen” [P6]), or the selection of items on the front page made them wonder what content was not in view but perhaps worth reading (P6); these people were left wanting “more variety” (P8).

Negative initial impressions of the aesthetic elements were that the color scheme was “very plain” (P18), “kind of dark” (P21), and “very bland” (P20). One person reacted strongly to the use of red (P19), and another said, “the gray immediately just says boring to me, uninteresting” (P20). In addition to the colors, some participants commented negatively on the legibility of the text. For example, one individual talked about the size of the menu font as affecting his ability to navigate the site (P5) and another said that, while the main headline was prominent, she wanted the other headlines to be larger because they were “difficult to see or read or know how important they were” (P28). This sentiment was shared by another person who explained, “There's a lot of text everywhere and that were similarly sized, so I don't know if I have to pay attention to them or not, how relevant it is, how updated it is” (P3).

These legibility issues continued beyond the main page of the website, with participants commenting on the size of the article text (P13) and the lack of contrast between the words and the background (P5). In addition, some participants expressed frustration navigating within the site, specifically in their ability to locate specific news sections, e.g., editorials (P3), or related stories in areas of the news site where they expected to find them (P1). Other usability issues
were encountered when a video failed to load (P12) or a story required a Flash application (P15).

The images, which worked to captivate some users, were not deemed to be compelling by other participants (P15, P19). In one case, this was because the visuals were not interactive (P27), while in another instance they were described as “thrown in” to the articles, interrupting the reading flow and “making it harder to read” (P24). Another element that interrupted the flow of reading articles for one person was not being able to view just the text of the article, and seeing ads on the screen (P7). This was also the case for another participant, but she cited the amount of interactive features on the screen as preventing her from focusing on the articles:

*I still find a lot of news sites overwhelm you with a little too much supportive stuff. I know there's comments, and social media and related videos and related everything else. I kinda find, that's great, but while I'm reading the article, I just want to just look at the article. And that stuff is attempting to draw my attention away from the article reading, whereas it's kinda supposed to be supporting my article reading.* (P1).

**Disengaging with the Content**

Some participants reported feeling disengaged by the lack of novelty in the articles. One individual selected an article about an environmental disaster, an ongoing and prominent world news event, but concluded that the piece “didn't give me all that much. I mean part of it is there isn’t really all that much new to say,” (P6). This was also the case for other people who remarked that a story “was just a rehash of everything” (P19) or “nothing new, it's the same old problem/idea” (P30). In one case, the article seemed promising but the participant was disappointed when he realized that the essence of the article was captured in the title and “[t]here wasn’t really any discussion” (P9).

**Non-Engagement**

For some participants, there was neither a positive nor negative reaction to the experience of interacting with the news website. In two instances this was due to the static nature of the website: “I have such a hard time pulling up any kind of strong reaction to it at all…it hasn't changed in years” (P29), and it’s “pretty much the same that's it's always been” (P30). One person generalized the lack of novelty experienced during the experiment to his interactions with Web browsing more universally: “I spend too much time on the Internet to really find things engaging or wonder at them anymore” (P29). Another person compared the experience of interacting with online news to reading a print newspaper: “I don't get the same experiences as connecting with a newspaper” (P10).

For other people, the lack of interactivity and “more options” beyond reading the story (P17) was cited as the reason for remaining neutral about the experience. People brought in examples from other news websites to illustrate the potential of interactive features and why they liked it. For example, one person talked about an interactive map used by the BBC to represent news events geographically. She emphasized that the map was “clickable” and “visual” rather than presenting everything textually (P25). Another individual (P27) talked about a news story he read on the *New York Times* website that featured a panoramic photo that provided more information about the individuals pictured in the image when he moused over it; the same story included a video that expanded upon the content.
Overall Evaluations of the Experience
Perceptions of and Reactions to the News Stories

When asked about their overall experience of reading and browsing within the news website, some participants described being “engaged by what I found, the articles that were pertinent to my life or that I found interesting” (P5) or “the news stories themselves” (P15); others said that the element of selecting stories was “the most interesting part” of the experiment (P11). In relation to the articles, a few participants commented that some of them told “a good story” but were not intellectual in nature (P5, P6) and acted as diversions (P16). On the flip side, others described the brevity or lack of depth of the articles as disengaging when participants wanted to extend their existing knowledge of a topic or issue (P16), wanted more than “just the facts” (P16), or failed to create a “personal connection” (P20).

Some participants described how their emotional reactions to and perceptions of the articles changed over the course of the experience. Some participants evaluated the articles they selected as “depressing” (P6), “bureaucratic” (P20) or “boring” (P16, P21); this was not always a negative judgment, as Participant 6 talked about being “drawn in by the gloomy subject matter” of a piece. Likewise, articles that received favorable descriptions, such as “interesting” (P5) or “compelling” (P4), were sometimes dismissed by participants because they could find no connection with their own “passion in life” (P5) or if the story, due to its international scope, was “a bit distant” (P4). Similarly, one interviewee described a “random and surprising” piece of information within an article she had evaluated as mundane (P22), while Participant 29 found a gem of a “controversial issue” in an otherwise “boring” article.

Some interviewees commented that stories began “kind of captivating” but ended up being “not that remarkable” (P22) or, though the headline or topic was interesting, the story was a “disappointing end” and not as “controversial” as expected (P24). For Participant 21, the “general premise” of an article was interesting, but “as I got deeper into the article, I got bored.” In contrast, another participant described sticking with a story that “started out pretty boring” but then “got pretty interesting,” exceeding his expectations (P10); another individual expressed his involvement in an article by saying that, although it was “pretty long, it didn’t seem long (P16).”

Perceptions of and Reactions to the News Website

Others reflected not on the content of the articles, but on the news website’s presentation when evaluating their overall experience. One participant said that, although the news categories “made some amount of sense […] you’re stuck with the way they’ve broken everything down” and she wondered about the articles that were not seen:

> There may well have been a lot of articles that didn't come up to the front when I immediately clicked because they're not the most current or they don't think that people are all that interested in them (P6).

This was also the case for another interviewee who could locate “top news and most popular” items, but relayed that “if I read something it would be nice to have [had]…other articles that are related or that followed up…to that article” (P9). Participant 17 agreed, “there wasn’t a lot of options beyond simply reading the story” and that this limited opportunities for interaction: “I didn't see too many links within the story where you could get deeper or off on a tangent” (P17). This was also an issue for participant 21, who “found it very hard to find anything deeper in it…I didn't find the site that engaging to interact with.”

Others wanted more information about the stories featured in the related articles list in order to decide whether to pursue these links (P8, P10). Someone who enjoyed hunting for news
expressed an exception to this: *I find that under each category, they don’t list all the news. So you have to go looking…dig deeper in order to find some stuff. Because some of the ones are listed in the top, may not be of interest to you, so you might have to dig deeper* (P13).

**DISCUSSION**

The findings of this study corroborate the process model proposed by O’Brien & Toms (2008) yet also pose some interesting discrepancies. Similar to their e-shoppers, gamers, web searchers and e-learners, the newsreaders in the current study described the organization and aesthetic appeal of the news website as capturing their attention and interest. In this specific domain, the use of images and headlines drew people to the content of the articles. As their interactions with the news website continued, usability and the presentation of the information continued to contribute to their experiences, but the novelty or personal relevance of the articles also influenced engagement. Disengagement occurred when users became frustrated trying to navigate the website or when the aesthetic or interactive features of the website interfered with reading the news articles. In addition, articles that failed to offer novel information or involve the participant also led to disengagement. Some participants did not react positively or negatively to anything during the interaction, either because they saw the web in general as lacking novelty or interest, or because they compared interacting with the CBC news website with reading a print newspaper or using the website of other online news providers that incorporated more interactive elements.

While there was evidence to suggest that, like participants in O’Brien and Toms’ (2008) study, the newsreaders experienced the stages of engagement, there are some notable differences between the current and previous work. Firstly, O’Brien and Toms (2008) did not emphasize content in their model of engagement; rather they focused primarily on the characteristics of the system and how these were perceived and acted upon by users. However, content was an important quality of users’ engagement when interacting with news websites. Thus, we suggest that the user engagement framework be broadened to incorporate content, and for more investigation of the relationship between the nature of the content and how it is presented through the interface. Secondly, engagement has generally been viewed as a positive experience, where negative emotions lead to disengagement (O’Brien & Toms, 2008). In this study, it was interesting to see the range of emotional words used to describe participants’ reactions to news, and how perceptions changed during their interactions with a story. Stories that were serious, devastating, or depressing in subject matter were as compelling as those deemed humorous or feel-good; articles deemed to be boring became more interesting as they read further, and vice versa. Thus the experiencing of negative emotions may not necessarily deter engagement, and this is also worthy of further investigation.

Some of the attributes that were situated in O’Brien and Toms’ (2008) process model proved to be more salient in the current study. Notably, novelty emerged as an important attribute of engagement in news websites, both for browsing and selecting articles, as well as reading them, a finding concurrent with Toms (2000). In some cases, novelty manifested in headlines or content that evoked curiosity because they were outside the norm. In other circumstances, the topic or issue was not novel to the participant and it was selected because they could relate to it personally. However, if the content did not provide some new insight or information into the issue, participants became disengaged. This conflicts somewhat with previous research that determined that “personal interest” was the most important factor in whether and how long people would invest in reading news. According to Chu et al. (2009): “If there is no personal interest, even the best design may be unable to impact the reader’s attention and recall of information” (p. 41). In the current study, people may have selected articles based on personal salience, but their ability to stay engaged in the story depended in part upon its novelty.
Furthermore, some of the attributes described by O’Brien and Toms (2008) did not map in the current study. For example, participants did not explicitly mention challenge, feedback, or control, although the usability of the website was discussed with respect to ease of use and navigation. Nor was there much mention of motivation or perceived time. The reason for the lack of emphasis on motivation may be that participants did not have diverse goals for interacting with the site because they were browsing news in a laboratory setting within the parameters of a simulated task scenario. Another reason may be that participants were asked about what they found most or least engaging, not about specific attributes in the model. In addition, participants were given a time frame and a task; therefore they did not disengage because they had reached a natural stopping point or were interrupted by their natural environments, which may have prevented them from thinking about the passing of time. Only one person commented that, though an article was long, it did not seem to be so because he was enjoying himself. Overall, the quasi-experimental setting may have hampered engagement for some newsreaders and certainly produced some different results to O’Brien and Toms (2008), who were drawing upon people’s recollections of lived experiences.

However, the controlled, laboratory setting does offer some fascinating insights that were not captured in the retrospective accounts of O’Brien and Toms’ (2008) participants. By creating an experience for people using a simulated task scenario and directing them to a specific website, we were able to see not only what engages people, but also what deters engagement. In other words, we moved away from documenting an intrinsically meaningful experience and observe how different people react to and evaluate an interaction using the same interface and under the same circumstances.

One thing that stands out when we examine what enhances and deters engagement is the significance of individual differences in how users perceived the news website and its content. The same elements of the website’s structure and presentation that appealed and engaged some participants disengaged others. The “busy-ness” of the CBC news website is not uncommon; many news websites have home pages that are laden with headlines, navigational menus, ads, images, and interactive and social media features. After all, good browsing systems facilitate choice and interest through diversity (Toms, 2000) and it is recommended that personalization of news websites should not be “too specific and restricted” (Lavie et al., 2010, p. 487). However, while this works for some users to create visual interest, opportunities for serendipitous discovery, or experimentation with interactive features, it may be complex and overwhelming for others. Thus, it may detract from these users’ experiences of interacting with news websites, especially if they have no interest in the interactive features, prefer to search for specific items or within particular categories, or are unable to focus on the content because they feel distracted. With regards to the content, some participants were left wanting more – more depth in the articles they selected, more related content, more stories that resonated with them personally, and more content beyond the day’s top headlines. Thus, the needs of these users may be met through applications, such as Brussell, that support newsreaders with background information (e.g., about current events or people) and links between related content so that people may situate news stories in their proper temporal context (Wagner, Lui, Birnbaum & Forbus, 2009).

Chung (2008) recommends that news providers introduce interactive features gradually to users to increase their comfort with interactivity. In this study, some users were already adept with interactive features and had high expectations of their use; however, interactive features may be of little consequence to those looking to become absorbed and involved in news content. What will have most appeal for this group are compelling stories, links to more background material, and the means to see an ongoing news story within the context of other articles written about
the topic. In sum, while some users are seeking intellectual challenge and fulfillment, others are more drawn in by the different ways in which they can interact with the news website and its overall presentation.

Overall, participants in this study may be underscoring two types of engagement with online news: one that is rooted in the novelty and quality of the content - the need for “story” - and one dependent upon interactivity and aesthetic appeal. However, these cannot be wholly separated. The ability to capture users’ attention and interest was facilitated by the structure and visual presentation of the interface, but also the expression of headlines and choice of images. Thus, if the interface fails to engage the user, the content may not matter; at the same time, the interface elements and the content may compliment each other and bring about an engaging experience.

Limitations
In this study, a task scenario was used to provide some parameters for interacting with the news website and participants were asked to interact with a specific news provider, CBC news website. As indicated, participants completed a questionnaire about their news reading frequency and preferred sources before beginning the browsing session. Only four participants listed the CBC news website as a preferred source. Though more than four people may have been familiar with the news website, it was not listed as a preferred choice in the open-ended question. Thus many participants may have been either unfamiliar with or not fond of the site selected for this study. This may have limited some people’s engagement with the website and the domain of online news. Future work could examine engagement using other methods, such as a diary or field study (e.g., Marshall, 2007). However, as previously stated, the experimental setting does afford an opportunity to contrast engaging and non-engaging user experiences, and this design demonstrated the significance of the users’ perspective in the experience of engagement.

It should be restated that participants were not asked specifically about the attributes of engagement in relation to the activity of reading and browsing news on the CBC website. Rather, they were asked about their overall perceptions of what made the experience engaging or not engaging and to rate their interest in the articles they read. Structured interviews that asked explicitly about the stages of engagement or the attributes may have produced different findings. Therefore, the themes derived in the analysis may not be representative of all participants. However, it is interesting that participants honed in on many of the attributes of engagement presented O’Brien and Toms (2008), and enhanced the model of engagement by underscoring the importance of content as well as the system to experiencing engagement.

Our participants were primarily under the age of 35 (two-thirds) and had some university education. Based on previous research (Pew Research Centre, 2008), our sample fits the profile of avid online newsreaders. In addition, they consumed news through the Web or a combination of print and online media; none of the participants read print media only. Collectively, this demographic participates in a range of activities, such as locating for news via search engines and aggregator sites, reading blogs, emailing news stories to friends and family, and receiving news through social networking sites, customizable web pages, and portable devices such as cell phones (Pew Research Center, 2008, pp. 21, 50). Thus, it is likely that participants in this study were adept at navigating online news websites, comfortable reading news online, and open to online news experiences. Thus, their experiences may not be generalizable to the news reading public as a whole.
CONCLUSION
The purpose of this paper was to illuminate users’ experiences with online news and explore ways to document and make sense of this experience using O’Brien & Toms’ (2008) framework of user engagement. The findings demonstrate the complexity of users’ interactions with information content and systems in online news environments. It also highlights the significance of what the individual brings to the experience, as evidenced in the polar reactions to the news website and content amongst engaged, disengaged, and non-engaged participants.

The current work builds upon research that has examined the motivations for reading online news (Flavián & Gurrea, 2009; Marshall, 2007) by exploring how users’ expectations play out during an online news interaction, specifically their desire for novelty and interactivity. The results concur that users have varying perceptions about the interactive features of news websites (Chung, 2008), and that they approach news reading differently (Marshall, 2007). However, it also extends previous research by examining users’ perceptions of system features, such as interactivity, and content in concert with user variables. Thus, user engagement offers a more holistic framework for thinking about users’ experiences with online news and enables us to observe aspects of the interactivity of system, content, and uses and how these shape experiences with information and multimedia-rich systems.

Although the focus of this study was online news, the findings have implications for other domains that heavily utilize browsing or that fulfill casual leisure information needs. Such domains must support browsing and discovery (Toms, 2000); yet they must also present content in ways that are meaningful to or captivating for the user and allow them to become involved with the content – be it text, images or other media.

In conclusion, to appreciate information interaction in casual-leisure settings as an experience, it is imperative to investigate user engagement with both the reading of content and the platform used to present this content, so that we may understand the significance of each of these to the experience of various user groups. User engagement, with its emphasis on system, user, and task variables, can help us reach a broader understanding of human information experiences.

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