

# For the Love of Information: Motivations and Affective Dynamics of Surfing the Web for Pleasure

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## ABSTRACT

The World Wide Web (the Web) is ubiquitous in people's lives today and is used on a daily basis to get information on a variety of topics. While information seeking behavior has been studied extensively in a Web setting, many of these studies assume a task-oriented search for information even though much of the information seeking on the Web is not necessarily done with previously stated information needs or goals. Some Web information seeking activity is done for purposes of entertainment, or for simply connecting with other people (for example, via social media websites), oftentimes with an unstructured, serendipitous approach. Information seeking in general, and information acquisition, in particular, is a pleasurable activity in and of itself. Surfing the Web for pleasure is a prominent activity and worthy of our attention as researchers. To do so, we need an appropriate framework. This paper borrows ideas from a social-cognitive approach to the uses and gratifications paradigm in order to investigate the suitability of that framework in a Web information access setting. More specifically, we use the answers from questions we asked to 180 survey respondents about their motivations for surfing the Web for pleasure and their affective states during and after their surfing sessions. The findings indicate that the social-cognitive approach to uses and gratifications is a useful baseline. We make enhancements to it and propose our own framework for research in this area. We present data to bolster the notion that the seeking and acquisition of information brings pleasure and we propose a framework to study user motivations and affective states both during and after their "surfing the Web for pleasure" sessions.

## Keywords

Pleasure surfing; Motivations; Affective dynamics; Information behavior

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## INTRODUCTION

The Internet has become integrated into our everyday lives (Haythornthwaite & Wellman, 2008). People use the Internet, more specifically, the World Wide Web ("the Web"), to get access to information on a daily basis. One of the most common modes to do this is by surfing from one document to another along hyperlinks (Huberman, Pirolli, Pitkow, & Lukose, 1998). Information seeking behavior on the Web has been studied extensively including how knowledge workers use the Web to seek external information as part of their daily work (Choo, Detlor & Turnbull, 2000), and how both strategies and technologies for information seeking, gathering, and consumption are adapted to the flux of information on the Web (Pirolli & Card, 1999). Many of these studies assume a task-oriented search for information and ignore information seeking done with no specified tasks in mind. The difficulty is oftentimes in specifying the context around the information seeking activity. In an informal and non-organizational setting, contexts may be more difficult to bound and understand (Courtright, 2007). However, we should not lose sight of the fact that information seeking must be considered on a larger scale than just when an individual actively seeks information, as in a task-oriented case (Bates, 2002). It is clear that not all Web information seeking behavior comes with stated information needs or goals. Indeed, oftentimes, information needs and goals are nebulous (Belkin, Oddy & Brooks, 1982).

Some Web information seeking activity can be classified as entertainment, or a way to simply connect with other people (Charney & Greenberg, 2001), sometimes with an unstructured, serendipitous approach. Information seeking in general, and information acquisition, in particular, might even be seen as a pleasurable activity in and of itself (Donohew, Nair & Finn, 1984). We believe that, especially with the advent and immense popularity of social media and social networking sites on the Web, a substantial amount of Web surfing is done for reasons of pleasure. Sometimes these reasons are purposeful, and sometimes they are not. Marchionini (1995) differentiates three types of browsing: directed, semi-directed, and undirected. Semi-directed browsing happens when browsing is generally predictive and undirected browsing happens when browsing is less systematic. We propose to define "Web browsing for pleasure" as somewhere in between those two definitions.

Choo et al. (2000) define four different scanning modes of people browsing the Web: formal search, informal search, conditioned viewing, and undirected viewing, which respectively describe uses of information that are formal, selective, about learning, and about discovery and serendipity. We see browsing for pleasure as an amalgam of the last two types.

We also observe that the advent of social media has given information seekers new avenues by which to meet their information needs. For instance, it allows them to pose a question to their online social networks, thus validating other search results they might have obtained, and giving them personalized answers to their particular questions (Morris, Teevan & Panovich, 2010). People's certain social network characteristics, like their tie strengths (Panovich, Miller & Karger, 2012) and their bridging social capital (on Facebook) (Lampe, Vitak, Gray & Ellison, 2012), are positive indicators of obtaining information that contributes most to the seekers' overall knowledge. Due to their rich structures, social media sources have an inherent advantage over more traditional collections of document when performing information retrieval tasks, even if the quality of the content varies (Agichtein, Castillo, Donato, Gionis, & Mishne, 2008).

This quality of social media lends itself well to the example of "pleasure Web surfer" who spends countless minutes, if not hours, at a time on websites that host social media tools (e.g. Facebook, Twitter), online special-interest groups (e.g. reddit, or community boards), news sites (e.g. CNN.com, Fox News.com), or general knowledge databases (e.g. Wikipedia, IMDb). Such surfing behavior may not be task-oriented, per se, but it is not necessarily passive either. While this behavior might be associated with "wasting time", or maybe viewed as non-serious activity, it is clearly important to the person engaging in it, even if that reason might initially seem nebulous from a task-oriented point-of-view. The reasons why these users engage in this behavior is important to know, not least to providers of Web and social media content who might wish to promote their ideas or monetize their websites. Additionally, it could benefit such information providers to know if they might be able to predict user behavior, or at least understand their possible motives for surfing for pleasure, as they deploy their websites based on these users' behaviors. What instigates this behavior in the first place? Is it just everyday boredom, or is it purposeful pleasure seeking?

In past studies, attempts have been made to seek out predictive models of people's Web surfing behavior based on their demographics, but these have generally not been successful (LaRose, Mastro, & Eastin, 2001). However, given the widespread use of social media and social networking facilitations in a multitude of websites, could someone's social network traits reveal any predictive behavior regarding their Web surfing for pleasure? More specifically, might the number of and the quality of the ties

they have with other people who engage in "pleasure surfing" uncover predictive patterns?

Scholars like Kari and Hartel (2007) have argued the need for more scholarship on "higher contexts" for information phenomena in order to better address the pleasurable aspects of information seeking. Hartel addresses this in several of her studies on serious leisure; for example, in her study of the way people manage culinary information in their homes (Hartel, 2010). What seems to be missing in the literature, however, are frameworks on how people currently (especially with the advent of social media) find information online for pleasurable purposes.

In this paper, our goal is to address this lack of work relating to "pleasure surfing" by reviewing relevant, but older, frameworks and models from the literature on information seeking and using them to propose a new framework within the context of information seeking behaviors relating to "pleasure surfing". The paper is organized as follows: in the next section, a review of the relevant works is presented, followed by the outcome of a mixed-methods (qualitative and quantitative) study of the motives and affective states of our study participants. This sheds light on the subsequent section, which describes our proposed framework for studying the motives of individuals surfing the Web for pleasure. The section following that presents some interesting additional quantitative findings from our research. We then discuss our findings and subsequently end with the limitations of the study and our conclusions.

## RELATED WORK

There are several theories and frameworks that have been applied to studies of Web surfing or Web use using concepts of everyday life information seeking or ELIS (Savolainen & Kari, 2004), the concept of flow as it pertains to Web surfer's positive affects (Chen, 2006; Chen, Wigand & Nilan, 1999), the principle of least effort (Huberman et al., 1998), the principle of cost-benefit approaches to understanding Web use (Perse & Ferguson, 2000), and the uses and gratifications framework coupled with socio-cognitive theory (Charney & Greenberg, 2001; LaRose & Eastin, 2004; LaRose, Mastro, & Eastin, 2001).

Savolainen (1995) found that, in the context of ELIS, the more the quantity of electronic media a person used, the more affective his or her orientation was in behavior, whereas the lighter the quantity of media consumer, the more cognitive the behavior. However, Savolainen describes the use of radio and television – two technologies whose users experience much less active interaction compared to the modern-day Web surfer. Likewise, there are studies have looked at pleasure seeking in television viewership using the concept of "the flow experience" (Csikszentmihalyi, 1990). Flow is a psychological state where a person feels motivated, and happy. Chen et al. (1999) applied this concept to Web users, proposing that when users' minds flow in virtual space they tend to forget

their mind states and problems, and will fully integrate into cyberspace. Nonetheless, flow studies focus on media users who, once again, mostly interact with the content in a passive fashion, and ignore the type of users we are studying who actively interact with other people and participate in generating content on blogs, giving advice to others, leaving comments, and so on.

The principle of least effort, first proposed by George Zipf, and applied to research in Web surfing by Huberman et al. (1998), states that a person engaged in information seeking will tend to use the most convenient or known-to-them search method, in the least exacting mode available. Information seeking behavior stops as soon as minimally acceptable results are found. This theory claims that it holds true regardless of the user's proficiency as a searcher, or their level of subject expertise, although it takes into account the user's previous information seeking experience. The principle also claims to apply to any information seeking activity (Case, 2009). However, this approach ignores Web surfers who purposely take their time seeking information for pleasurable purposes.

Perse & Ferguson (2000) demonstrate the effectiveness of using a cost-benefit approach in studying Web use amongst university students. However, their participants were specifically using the Web for school-related activities, which led to the unsurprising – and not generalizable – result that learning benefits were by far the strongest benefits for the respondents.

LaRose et al. (2001) use a social-cognitive approach to uses and gratifications in their research in order to identify new variables that might further explain Internet usage. Lee & Ma (2012) use a similar approach on news sharing intentions. Uses and gratifications theory adopts the stance that media users seek out media that gratify a variety of needs. Gratifications sought are best compared with gratifications obtained, which then iteratively feedback into users' gratifications sought the next time they engage with the same media again (LaRose et al., 2001). Gratifications, in and of themselves, do not do a good job of predicting media behavior, but rather explain the motives of users well (LaRose et al., 2001; Palmgreen, Wenner, & Rosengren, 1985). Some scholars think that the application of classic uses and gratification theory on Internet use has failed because it tends to ignore important incentive categories that motivate behavior. In bringing in ideas from social-cognitive theory, they re-configure the gratification incentive components of Internet use (LaRose et al., 2001; Lee & Ma, 2012). Social-cognitive theory, popularized by Bandura (1986), explains an individual's behavior in terms of his or her environment and his or her observation of others via social interactions. An example that we found useful for our research is the concept of self-evaluative reactions. Social-cognitive theory posits that when individuals see discrepancies between their performance at a task and a higher standard they seek to attain, then self-

dissatisfaction can serve as a motivational cause to try the effort again (Bandura & Cervone, 1986).

LaRose et al. (2001) apply social-cognitive theory to Internet usage by showing that users' expectations about positive outcomes of use (for example, finding interesting information on a website) increase usage. They then propose 7 incentive categories as extracted from their review of 12 relevant studies. The most commonly assessed of these 7 incentives are:

- a) "activity" (fun, entertaining, exciting, or boredom-relieving activities),
- b) "social" (for example, social interaction or communication),
- c) "novel sensory" (that is, information seeking), and
- d) "self-reactive" (motivations meant for relaxation or escape).

They also found that these first four incentive categories are significantly related to Internet usage. The remaining three incentive categories are:

- e) "pleasing sensory" (for instance, enjoyable graphics or sounds), which is not a predictor of Internet usage,
- f) "status incentive" (for example, being motivated to go to a website because it was "cool"), which is further described as not a major component, and
- g) "monetary incentive" (for instance, finding bargains online), which is characterized as having mixed predictive value and presence in the literature.

In the following sections, we will compare and contrast our findings to LaRose et al.'s (2001) seven incentive components of Internet gratification factors and hence propose a modified framework for studying the motivations of people who surf the Web for pleasure. We want to note here that while we use the term "Web" and LaRose et al. use the term "Internet", we believe that since we are both referring to individuals seeking information online, then for purposes of comparing our findings to theirs, the two terms are interchangeable even though the WWW is, technically, a subset of the Internet. Our data will also bolster the notion that the seeking and acquisition of information typically brings pleasure (Donohew et al., 1984), more specifically regarding the type of information seeking done via Web surfing for pleasure.

## **GENERAL STATISTICAL DESCRIPTIONS**

We distributed surveys to 250 undergraduate students at a Northeastern university and asked what motivated them to surf the Web for pleasurable information seeking purposes. The students were given a specific definition of surfing for pleasure. We told them that we were looking for their experiences about surfing the Web for pleasurable activities that were about seeking information and specified that surfing the Web to watch a movie, for example, or engaging

in strictly for entertainment purposes where no real information seeking is going on did not count towards that definition. The survey had two parts to it: one collected general information on the students, such as demographics, and their general access to information technology, as well as information on the websites they visited when surfing for pleasure, and how much time they typically spent on them. The other part of the survey contained open-ended questions in an attempt to ascertain what motivated the students to go to those websites and how they felt about it both during and after their Web surfing sessions. Of the 250 students given the survey, 180 of them responded.

The median age of the participants was 20 ( $N = 180$ ,  $M = 20.5$ ,  $SD = 2.4$ ). Additionally, 74% of the participants were female, most did not have or were not pursuing technical degrees (84%), and all of them had anytime access to at least one type of computer (52% had access to a computer desktop, 95% to a laptop computer, 41% to a tablet computer, and 89% to a smart, Internet-capable phone). Most of the participants did not come from low socio-economic backgrounds (81% had their own, unshared bedrooms at home, and 66% said their family had three or more cars). Although only 2% identified as non-US natives, 33% said they spoke a language other than English with members of their family.

The participants reported 145 different websites that they liked to visit when surfing the Web for pleasure. The most popular destination was Facebook (about 18% of the total number of all named websites), followed by Twitter (11%), YouTube (8%), Tumblr (6%), and BuzzFeed (5%). Websites that specialized in or mostly focused on making information available to their users, such as reddit, IMDb, and Wikipedia, were also amongst the top websites named.

The participants self-reported that they typically spent 30 minutes (median) per surfing session, although a third of the participants reported spending longer times ( $M = 35.8$ ,  $SD = 38.2$ ). When asked how interesting they found the visited websites' subject matter(s), from a scale from 1 to 5, the average (mean) answer was 4.2 ( $SD = 0.9$ ).

### **MOTIVES AND AFFECTIVE STATES**

The short-form, open-ended questions yielded answers that one researcher manually coded. This was done using content or thematic analysis (Braun & Clarke, 2006; Miles & Huberman, 1994). More specifically, we identified, analyzed, and reported patterns we saw within the textual data. We also examined the frequencies of the codes to get an interesting idea of how the themes were distributed. We coded three questions in which we asked the participants about their habits surrounding surfing for pleasure. We started by asking the respondents to think about the times they surfed the Web for pleasure, in general. The three open-ended questions that followed probed the participants' motivations as well as affective states during and after the surfing sessions. We coded the participants' motivations with knowledge and guidance from the previously

established incentive components of Internet gratification factors by LaRose et al. (2001).

The first open-ended question was: "What is (or are) the reason(s) that you visit these websites?" We identified 54 different sub-themes in 321 answers (some of the 180 participant replies showed more than one sub-theme), which we then categorized into 8 different major or main themes: *commercial*, *communication*, *creative*, *self-reactive*, *entertainment*, *informational*, *info-entertainment*, and *other*.

The *commercial* theme emerged as respondents said that they were motivated by engaging in commercial activities, most notably, by online shopping. These accounted for about 6% of the answers. The *communication* theme came from people telling us that they wanted to stay in touch with others, usually via social media tools like Facebook or Twitter, or to read email, and so on. This accounted for nearly 21% of the answers we analyzed. The *creative* theme reflects motivations of wanting to visit the websites as outlets for creativity, such as wanting to be exposed to high art, to express oneself via blogs, or to get inspired to change their lives by reading stories about living healthier lives or the latest fashions. The creative theme made up about 5% of the answers. The *self-reactive* theme emerged from respondents saying they were motivated by the need to relax or to surf these websites simply because it was a habit – they constituted around 8% of the answers we saw. The *entertainment* or entertainment activity theme came from people wanting to alleviate boredom, find humor or other amusements. Given an obvious connection between pleasurable activity and entertainment, it is not surprising that we saw this main theme comprise of approximately 26% of the answers we coded. The *informational* theme, however, was the largest we found making up around 29% of the answers we saw. This came from respondents saying that they wanted to seek knowledge, look-up information of varying sorts, read news articles or blogs, and other informational-intensive activities. A related theme, *info-entertainment*, emerged from sub-themes that showed an informational need, but more explicitly for the sake of being entertained, for example, wanting to keep up with mass-cultural events like concerts, or discovering new musical artists (whilst listening to their work), or reading the latest celebrity gossip. These accounted for about 4% of the answers. Finally, a very small amount of the answers (less than 3%) were un-categorizable in any of the major themes, so they were classified as "*other*". These included motivations such as wanting to practice reading in another language, or to complete a work task. Table 1 lists all 54 minor themes and the 8 major themes.

The next two questions that we coded related to the participants' feelings during and after their surfing sessions. In coding the answers to the questions, "In your own words, can you describe any feelings you might have experienced during this visit?" we identified 27 different sub-themes from 214 answers (again, there were sometimes more than

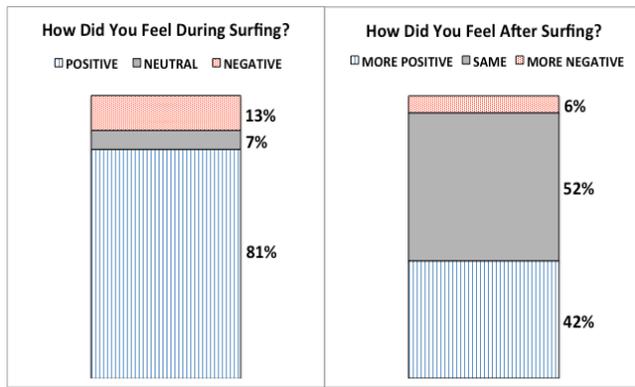
one sub-theme per participant answer). We then categorized them into one of three main themes: positive, negative, or neutral. As one might expect from asking about pleasurable Web surfing, most of the answers would turn out to be positive (81%), while 13% fell into the negative category. Most of the latter category answers described conflicted feelings of pleasure and guilt or remorse.

The follow-up question was “Did you feel any differently after you visited this website from before you visited it?” There were 29 identifiable sub-themes from 180 answers that formed the main three main themes of: more positive, more negative, or the same. About 42% of the respondents said they felt more positive after their surfing, around 52% said they felt no different, and only about 6% said they felt worse. The largest contributor to feeling better was the feeling that they left more informed than before. The largest component of the answers given about feeling worse was the answer of feeling conflicted or guilty about surfing for pleasure. Interestingly, the percentage of participants’ answers that indicated positive or neutral (i.e. not negative, 81%) feelings *during* the surfing sessions was noticeably less than the percentage of participants’ answers indicating more positive or the same feelings *after* the surfing sessions were over (94%). Figure 1 illustrates these findings.

No.	Minor theme	Major theme
1	To do business	COMMERCIAL
2	Shopping	(5.6%)
3	To generally communicate	COMMUNICATION
4	Email	(20.6%)
5	Get advice	
6	Keep in touch	
7	Social networking	
8	Be creative	CREATIVE
9	Exposure to art	(4.7%)
10	Express myself	
11	Get ideas	
12	Inspiration	
13	Write/interact with blog	
14	Alleviate boredom	ENTERTAINMENT
15	Entertainment	(26.5%)
16	Seeking humor/amusement	
17	Look at pictures	
18	Look at videos (not for info)	
19	Play games	
20	Keep up with cultural events	INFO - ENTERTAINMENT
21	Read about/listen to/discover music	
22	Read gossip	(3.7%)

23	Find something interesting	INFORMATIONAL
24	Lookup answers	(28.7%)
25	Lookup cooking info	
26	Lookup current events	
27	Lookup fashion info	
28	Lookup general info	
29	Lookup health info	
30	Lookup historical info	
31	Lookup info sources	
32	Lookup movie/TV/actor info	
33	Lookup music info	
34	Lookup a name	
35	Lookup political info	
36	Lookup pop culture info	
37	Lookup sports info	
38	Lookup travel info	
39	Lookup work/school-related info	
40	Portal to other sites (for info)	
41	Read articles	
42	Read blog	
43	Read news	
44	Referred to by friend (for info)	
45	Seeking knowledge	
46	Translate to/from English	
47	Habit	SELF-REACTIVE
48	To relax	(7.8%)
49	Pass the time	
50	Read in another language	OTHER
51	For personal organization	(2.5%)
52	To do work	
53	For unspecified pleasure	
54	Other unspecified, unknown	

**Table 1. Minor and major themes emergent from the content analysis.**



**Figure 1. Distribution of self-reported affective states during and after surfing the Web for pleasure.**

### PROPOSED FRAMEWORK TO STUDY MOTIVATIONS

We will now compare our 8 major emergent themes of user motivations for pleasure Web surfing with LaRose et al.'s (2001) seven incentive components of Internet gratification factors.

LaRose et al.'s (2001) "activity" component seems to fit well with our "entertainment" major theme in that they both describe activity centered around finding entertainment to relieve boredom and/or find amusement on the Web. However, we also incorporated the motivation to find enjoyable music and/or pictures in with our "entertainment" category. This is generally what LaRose et al. call "pleasing sensory" incentives. So our "entertainment" major theme encompasses both of the aforementioned categories. Likewise, their "social" component seems to be the equivalent of our "communication" major theme as both categories describe the motivation for social interaction and for users to connect with others. Also, the "novel sensory" incentive category from LaRose et al. matches well with our "informational" major theme. Both describe the motivation for users to seek information and knowledge on the Internet.

LaRose et al.'s (2001) and our "self-reactive" categories are identical, which is not surprising as we borrowed the term "self-reactive" from their work and the general socio-cognitive literature (Bandura, 1986; Bandura & Cervone, 1986). Likewise, LaRose et al.'s "monetary" incentive is the same as our "commercial" motivation as both describe the incentive for users to shop and find bargains online.

LaRose et al.'s (2001) "status" incentive, however, was not one that we found in our coding efforts. It is not too surprising that our participants did not mention status as a motivator since the "status" factor is neither a major component nor a predictor of Internet use, according to LaRose et al.

This leaves our two extra categories of "creative" and "info-entertainment". The latter, a theme describing incentives related to seeking entertaining information, such as celebrity gossip, can be argued to be close enough to either or both of LaRose et al.'s (2001) categories of

"activity" and "novel sensory". However, our "creative" major theme stands out.

The "creative" major theme that we found emerged from our participants' answers that described wanting to find a creative outlet on the Web for expressing their opinions (on their personal blogs, for instance), and their or others' art and music. Participants also wanted to find venues where they could feel inspired, whether it was by art, fashion, music, or the written word.

LaRose et al. (2001) kept their "activity" and "novel sensory" categories separate and would have likely placed our "info-entertainment" theme within their "activity" category as per their definition: "preferences for enjoyable activities are the basis for activity incentives" (p. 398). However, we believe that themes of wanting to keep up with cultural events, or to discover new music, or to know the latest gossip in Hollywood, are not simply entertainment activities, but are also motivated by the need to be informed.

The current popularity of social media, which was not in existence when LaRose et al. published their work, has played a big part in mainstreaming the amalgamation of information seeking and entertainment. Social media can, after all, be used to share news information and serve as a means for entertainment and escape (Lee & Ma, 2012). Likewise, our "creative" motivation theme would have likely been seen by LaRose et al. as "activity" incentive per the same definition stated above. We think that wanting to be inspired by art, for example adds a distinct dimension to "enjoyable activity" and thus should have its own categorization. Again, a newly emergent technology – the blog – that was not found in the same quantity in 2001 may explain why LaRose et al. might have missed it. Blogs, while in existence in 2001, can be argued to have continued to rise to mass popularity over the next two to three years after LaRose et al. published their work. We point, for example, to Google's purchase of Blogger in 2003, or to the fact that blog readership continued to rise well into the mid-2000s, increasing 58% in 2004 (Rainie, 2005). Many of our respondents pointed out blogs as sources of creativity for them, whether they kept up their own blog, or they simply followed others' on a regular basis.

We have presented our 8 major themes as comparable categories to established work by other scholars, with an important added theme of "creative" motivations. It is worth noting again that the older framework was created before the immense popularity of social media and its use as an information source. We thus propose our emergent themes as a framework for studying the motivations of individuals to surf the Web for pleasure.

### CORRELATIONS OF USER MOTIVATIONS AND THEIR AFFECTIVE STATES

Are there any correlative relationships between users' motivations for surfing the Web for pleasure and how they felt both during and after their surfing sessions? Our online

survey collected data on the subjects' demographics including their age, education level, gender, socio-economic status, and access to technology. It also collected quantifiable data on users' motivational and affective states. Statistical analysis was done using IBM's SPSS software package (IBM, 2014) where we calculated Pearson correlations on all the variables and, based on the results, conducted multiple analyses of variance (ANOVA), including both linear and binary logistic regression (BLR) analyses, in order to assess the relative predictive utility of the various independent variables. BLR is a statistical regression technique used when the dependent variable is strictly dichotomous (binary; 0 or 1). BLR assumes that the dependent variables (DVs) are statistically independent and mutually exclusive of one another, as was the case in our analyses discussed in this section (Warner, 2012).

In our statistical analyses, we sought 95% confidence intervals whenever appropriate, looking for p-values of under 0.05. The Pearson correlation analysis found only a few statistically significant correlations between demographic data and respondents' motivations or feeling about surfing. We found very significant ( $p < 0.01$ ), but small negative correlations between the motive for communication and having positive feelings both during (-0.281) and after (-0.212) the surfing sessions.

Armed with these initial statistical findings, we ran a BLR analysis with the "communication" motivation variable as DV ( $Y_{MC}$ ) and the two positive feelings-reported as independent variables (IVs) ( $X_{Pduring}$  and  $X_{Pafter}$ ). The result showed statistically significant coefficients in the logistical relationship between  $Y_{MC}$  and  $X_{Pduring}$  and  $X_{Pafter}$ . The model showed a Nagelkerke  $R^2$  value of 0.144.

We also found significant, but small positive correlations between the motive for information and having positive feelings both during (0.252,  $p < 0.01$ ) and after (0.176,  $p < 0.05$ ) the surfing sessions. When we ran a BLR analysis with the "information" motivation variable as DV ( $Y_{MI}$ ) and the two positive feelings-reported as IVs ( $X_{Pduring}$  and  $X_{Pafter}$ ). The result showed a statistically significant coefficient in the logistical relationship between  $Y_{MC}$  and  $X_{Pduring}$  only. The model showed a Nagelkerke  $R^2$  value of 0.104. In addition to not showing a significant  $X_{Pafter}$  coefficient, the Wald  $\chi^2$  for the constant value in this model increased dramatically between baseline (B0) calculation and the after-baseline (B1) calculation. This meant that the full model (with IVs) was a worse fit than the null model (without IVs), so we concluded that we should likely ignore this finding.

As a result, we decided to run a BLR analysis in a reverse manner: with  $X_{Pduring}$  and  $X_{Pafter}$  as DVs and  $X_{MI}$ ,  $X_{MC}$ , and  $X_{ME}$  (for the "entertainment" motivation variable) as IVs. The results showed two further statistically significant models.

The BLRs imply that a person's motivation to communicate while surfing the Web for pleasure is significantly and

positively predicted by two variables: that they experienced positive feelings *during* the session and they experienced positive feelings *after* the session was over. The baseline constant in the relationship, however, was not significant ( $p = 0.583$ ). The Nagelkerke  $R^2$  factor indicates that 14.4% of the variability in the model is explained in the IVs. Additionally, the BLRs imply that informational and communication motivations were significant predictors of the user feeling positive *during* a surfing session. The Nagelkerke  $R^2$  factor tell us that 13.7% of the variability in the model is explained in the IVs. Finally, the BLRs also tell us that informational and entertainment motivations were significant predictors of the user feeling positive *after* a surfing session. The Nagelkerke  $R^2$  factor clarifies that 13.9% of the variability in the model is explained in the IVs.

Table 2 summarizes the findings of the three significant BLR model analyses and we discuss their implications more in the next section.

DV	IV	B0 Wald $\chi^2$	B1 Wald $\chi^2$	Exp(B)	Nagel- kerke $R^2$
$Y_{MC}$	$X_{Pduring}$		8.86	0.294**	0.144
	$X_{Pafter}$		4.25	0.396*	
	Constant	53.7	0.302	0.835	
$Y_{Pduring}$	$X_{MI}$		4.13	2.55*	0.137
	$X_{MC}$		4.88	0.375*	
	Constant	47.2	14.8	3.13**	
$Y_{Pafter}$	$X_{ME}$		4.08	0.261*	0.139
	$X_{MI}$		11.2	0.166**	
	Constant	69.1	11.7	0.396**	

Note: \*  $p < 0.05$  and \*\*  $p < 0.01$

**Table 2. Results of the binary logistic regressions.**

## DISCUSSION

The Web cannot be considered new technology any more. However, several very popular applications on the Web today date back to less than ten years ago, including social media websites like YouTube, Twitter, or Facebook (in its current incarnation as an available service to people outside of universities). This makes it all the more pertinent for scholars to keep up with studies on the use of the Web in everyday life.

Our 8 major emergent themes of user motivations for pleasure Web surfing compare very well with LaRose et al.'s (2001) 7 incentive components of Internet gratification factors. Their "activity" and "pleasing sensory" factors fit well with our "entertainment" theme. Their "social", "novel sensory", "self-reactive", and "monetary" incentive categories match quite well with our "communication", "informational", "self-reactive", and "commercial" motivation themes, respectively. LaRose et al. also have a "status" incentive category, which we do not have an equivalent for in our motivation themes, however, our

participants did not mention status as a motivator for them in surfing the Web for pleasure, which is consistent with the position of LaRose et al. that the “status” factor is neither a major component nor a predictor of Internet use. Of our two remaining user motivation themes, “creative” and “info-entertainment”, we note that the latter can be mapped onto the older framework (either or both of the older categories of “activity” and “novel sensory”).

However, our findings enhance the existing social-cognitive version of the Internet gratifications factors by introducing the “creative” major theme. This theme emerges from our participants’ answers describing their motivations to surf their particular favorite website(s). These motivations are about wanting to find a creative outlet on the Web for expressing opinions, being inspired by art, music, fashion, and articles or stories.

The “creative” motivation theme makes up about 5% of our participants’ responses. There seems to be a gap in the literature that explores surfing or searching for inspirational material on the Web, which suggests an opportunity for follow-up research on this type of Web surfing motivation.

The questions related to the participants’ feelings during and after their surfing sessions also show that, for the most part, surfing the Web for pleasure has a positive affect on the users. Most users reported feeling positive (81%), and 13% said they felt negative in this time frame. Most of the latter group described both feelings of pleasure and guilt, indicating they possibly felt conflicted about surfing for pleasurable purposes.

When asked about their feelings after they had finished surfing, almost 42% of the respondents said they felt *more positive*, most claiming that they left more informed than before. Around 52% said they felt no different and about 6% said they felt worse. Again, the largest component of the answers given about feeling worse was the answer of feeling conflicted or guilty about their surfing. For example, a typical response from a respondent in this category was, “(I felt) fascinated, though I was also procrastinating from my projects”, or “(I felt) euphoria then shame”. Note, however, the marked decrease in the number of people describing negative affects after they had finished surfing.

More to the point, the number of users who felt the same or more positively after their surfing sessions than during their surfing sessions was close to 94% of the participants. This indicates that surfing for pleasure is not only a positive experience, but that also, at worst, it does not alter the users’ moods any lower. At best, it enhances a lot of users’ moods.

The binary logistic regressions we ran on some of the motivation categories yielded interesting results too. We found that a person’s motivation to communicate in a Web surfing for pleasure session is significantly predicted by if they experienced positive feelings during the session as well as by if they felt more positive after the session was

over. The non-significance of the baseline constant, however, puts some doubts on the strength of this model. Another predictive model we found illustrates that a person’s chance of feeling positive *during* a Web surfing for pleasure session is significantly predicted by if they were motivated by informational needs and by communication needs. Yet another model showed that a person’s chances of feeling positive *after* a Web surfing for pleasure session was over was significantly predicted by if they were motivated by informational needs and by entertainment needs.

This means that, despite the self-reporting nature of the data, we have encouraging signs that indicate that our qualitative analysis findings and quantitative analysis findings give some support to one another.

People seek information online on a daily basis. They often do so to be entertained, to communicate with one another, to get quick information, to buy or sell, to indulge themselves, or to engage in creative activity, as our research attests. The higher things in life, as Kari and Hartel (2007) tell us, are pleasurable phenomena, experiences, or activities and they are important to us because they give deeper meaning to our lives. Seeking information for pleasure is an easy and popular, albeit only one of several means of engaging in these “higher things” in our lives.

#### **LIMITATIONS AND FUTURE WORK**

The participants are, by and large, young, educated, and technology-savvy. Of course, the Web can no longer be considered a new or nebulous technology, as most of the current generation of university students has grown up with its presence all or most of their lives. Surfing the Web for pleasure is, like most pleasurable activity, the domain for a subset of people in the general population who can afford to spend a lot of time doing so in an undirected fashion. Our participants are undergraduate students, most of whom are around 20 years old. One might therefore conceive of some motivations to surf the Web that may not be covered by our minor themes, for example, wanting to look up stock investment information, which is not an expected motive for our participants’ general demographic. We would hope, however, that newly discovered minor themes might still be classified under one of our 8 major themes.

The data was self-reported by the participants who answered questions in an online survey. The reliability of self-reported data has been shown to be low in other studies. This is a major reason why the quantitative data especially can be viewed as interesting, albeit difficult to verify. The qualitative data, however, can be considered to be a lot more reliably descriptive. It is this data that has yielded the framework that we propose.

Future work could consider this research as a pilot study and seek to give robust verification to the proposed framework. It could also use more established survey metrics from studies like the ones examined in LaRose et al. (2001), which the authors of this research article did not

have the benefit of hindsight to use here. Semi-structured interviews and/or focus groups may also shed more light and provide richer details on motivations and affective states.

## CONCLUSION

Some Web information seeking activity is done for reasons of seeking information for its own sake, for entertainment, or for simply connecting with other people, oftentimes with an unstructured approach. Information seeking in general, and information acquisition, in particular, is a pleasurable activity in and of itself. It can arguably *enhance the affective states* of users. We have presented data to reinforce this notion and propose a framework to study user motivations and affective states both during and after their “surfing the Web for pleasure” sessions.

Our qualitative analysis yielded 54 minor and 8 major themes. These were comparable categories to established work by other scholars (LaRose et al., 2001). We have improved this existing work by adding a major theme of “creative” motivations for surfing the Web for pleasure. In addition, our quantitative analysis shows significant predictability relationships between certain motivation factors and certain affective states both during and after Web surfing for pleasure sessions.

There are a myriad of factors that influence individuals’ motives to surf the Web. We have proposed 8 themes, and judging by their complement with prior scholarly work, they should cover most, if not all, motivations of people surfing the Web, certainly if they are doing so for reasons of pleasure or as a pastime.

Our quantitative analysis has shown that being motivated to surf the Web for pleasure to meet *informational* needs is a predictive factor of feeling positive both during and after the surfing session. This suggests a reinforcement of the view that information seeking is a pleasurable activity. Furthermore, this analysis suggests that feeling positive during and after such sessions is, in turn, predictive of a motivation to communicate with others.

Our framework suggests that people’s use of the Web for pleasure mirrors the activities they do in everyday life: they seek information, entertainment, connection with others, inspiration, opportunities to engage in commerce. It reinforces the view that the Internet has become integrated into our everyday lives (Haythornthwaite & Wellman, 2008), indeed, that seeking information on a daily basis (for whatever reason) is cemented in our quotidian online activities.

Surfing the Web for pleasurable reasons is a widely popular activity, and thus should be worthy of our notice. To study this phenomenon properly, we need an appropriate framework. Recognizing the utility of a social-cognitive approach to uses and gratifications, our research has uncovered a suitable framework for the study of individual’s surfing the Web for pleasurable reasons. We

have coded answers from 180 participants who told us about their motivations for surfing the Web for pleasure and described their affective states during and after these surfing sessions.

We thus propose our emergent themes as a framework for studying the motivations of individuals to surf the Web for pleasure.

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## REFERENCES

- Agichtein, E., Castillo, C., Donato, D., Gionis, A., & Mishne, G. (2008). Finding high-quality content in social media. In *Proceedings of the 2008 International Conference on Web Search and Data Mining (WSDM)*. 183-194. ACM, Chicago.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice Hall
- Bandura, A., & Cervone, D. (1986). Differential engagement of self-reactive influences in cognitive motivation. *Organizational behavior and human decision processes*, 38(1), 92-113.
- Bates, M. (2002). Toward an integrated model of information seeking and searching. *New Review of Information Behavior Research*, 3, 1-16.
- Belkin, N. J., Oddy, R. N., & Brooks, H. M. (1982). ASK for information retrieval, Part I: Background and theory. *Journal of Documentation*, 38(2), 61-71.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology*, 3(2), 77-101.
- Case, D.O. (2009). Principle of least effort. In Fisher, K.E., Erdelez, S., and McKechnie, E.F. (eds.) *Theories of Information Behavior*, Ch. 50, pp. 289-292.
- Charney, T., & Greenberg, B. (2001). Uses and gratifications of the Internet. In C. Lin & D. Atkin (Eds.), *Communication, technology and society: New media adoption and uses* (pp. 383-406). Cresskill, NJ: Hampton.
- Chen, H. (2006). Flow on the net—detecting Web users’ positive affects and their flow states. *Computers in human behavior*, 22(2), 221-233.
- Chen, H., Wigand, R. T., & Nilan, M. S. (1999). Optimal experience of web activities. *Computers in human behavior*, 15(5), 585-608.
- Choo, C. W., Detlor, B., & Turnbull, D. (2000). Information seeking on the Web: An integrated model of browsing and searching. *first monday*, 5(2). Accessed at:

- <http://journals.uic.edu/ojs/index.php/fm/article/view/729/638>
- Courtright, C. (2007) Context in information behavior research. *Annual Review of Information Science and Technology*, 41: 273-306.
- Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal performance*. NY: Cambridge University Press.
- Hartel, J. (2010). Managing documents at home for serious leisure: a case study of the hobby of gourmet cooking. *Journal of documentation*, 66(6), 847-874.
- Haythornthwaite, C. & Wellman, B. (2008). Introduction to Wellman, B., & Haythornthwaite, C. (Eds.), *The Internet in everyday life*. John Wiley & Sons.
- Huberman, B. A., Pirolli, P. L., Pitkow, J. E., & Lukose, R. M. (1998). Strong regularities in World Wide Web surfing. *Science*, 280(5360), 95-97.
- IBM (2014). *Statistical package for the social sciences* (Version 20 for Macs).
- Kari, J., & Hartel, J. (2007). Information and higher things in life: Addressing the pleasurable and the profound in information science. *Journal of the American Society for Information Science and Technology*, 58(8), 1131-1147.
- Lampe, C., Vitak, J., Gray, R., & Ellison, N. (2012). Perceptions of Facebook's value as an information source. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*. 3195-3204. ACM.
- LaRose, R., & Eastin, M. S. (2004). A social cognitive theory of Internet uses and gratifications: Toward a new model of media attendance. *Journal of Broadcasting & Electronic Media*, 48(3), 358-377.
- LaRose, R., Mastro, D., & Eastin, M. S. (2001). Understanding Internet usage: A social-cognitive approach to uses and gratifications. *Social Science Computer Review*, 19(4), 395-413.
- Lee, C. S., & Ma, L. (2012). News sharing in social media: The effect of gratifications and prior experience. *Computers in Human Behavior*, 28(2), 331-339.
- Marchionini, G. (1995). *Information Seeking in Electronic Environments*. Cambridge: Cambridge University Press.
- Miles, M. & Huberman, A.M. (1994). *Qualitative Data Analysis: An Expanded Sourcebook*. 2nd ed. Thousand Oaks, CA: Sage.
- Morris, M.R., Teevan, J., & Panovich, K. (2010). A comparison of information seeking using search engines and social networks. *ICWSM*, 10, 23-26.
- Palmgreen, P., Wenner, L., & Rosengren, K. (1985). Uses and gratifications research: The past ten years. In K. Rosengren, L. Wenner, & P. Palmgreen (Eds.), *Media gratifications research* (pp. 11-37). Beverly Hills, CA: Sage.
- Panovich, K., Miller, R., & Karger, D. (2012). Tie strength in question & answer on social network sites. In *Proceedings of the ACM 2012 conference on Computer Supported Cooperative Work (CSCW)*. 1057-1066. ACM.
- Perse, E. M., & Ferguson, D. A. (2000). The benefits and costs of web surfing. *Communication Quarterly*, 48(4), 343-359.
- Pirolli, P., & Card, S. (1999). Information foraging. *Psychological review*, 106(4), 643.
- Rainie, L. (2005). The state of blogging, *Pew Internet & American Life Project*, January 2005.
- Savolainen, R. (1995). Everyday life information seeking: Approaching information seeking in the context of "way of life". *Library & information science research*, 17(3), 259-294.
- Savolainen, R., & Kari, J. (2004). Conceptions of the Internet in everyday life information seeking. *Journal of Information Science*, 30(3), 219-226.
- Warner, R. (2012). *Applied Statistics: From Bivariate Through Multivariate Techniques*. SAGE Publications, Inc.