A Diary Study of Information Needs Produced in Casual-Leisure Reading Situations

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ABSTRACT

Both information seeking and leisurely activities are commonplace in people's daily lives, but very little is know about searching behaviours outside of the work context. To study such leisurely information needs and subsequent searching, a diary study was performed, focusing on the context of casual-leisure reading. The week-long diary study with 24 participants was performed by a team of six graduate students. Reading was often both an act of casual searching, as well as a motivator for subsequent searching episodes, and around half were hedonistically or emotionally motivated. Casual searching often began with topical or personal interests, but did not always involve information needs. The findings confirm prior literature on casual search, while providing new insights into these less-critical and experience-driven episodes of searching, for fun.

General Terms

Experimentation, Human Factors, Theory.

Keywords

Casual-leisure, Reading, Information Seeking

1. INTRODUCTION

Although there has been decades of research into Information Seeking and Information Retrieval, very little has focused on the casual searching experiences of people outside of work. Research by Harris and Dewdney in 1994 indicated that 95% of 3,100 surveyed information seeking studies had focused on work-driven tasks [8]. Yet Pew Research found that searching simply for fun, and often for no particular reason, is one of the most popular online pastimes and counts for a significant portion of internet traffic [17]. Elsweiler et al suggest that casual, leisurely searching situations differ significantly to work or project driven tasks in that they produce search experiences that often begin without a given information need. Further, their investigations indicated that actually finding relevant information is typically less important than having fun [5]. Such scenarios involve passing time and relaxing, can be driven by the need to recover from a bad day, or to have fun with other people. Casual searching includes scenarios such as window shopping, browsing eBay, and delving into Wikipedia. To further investigate such casual-leisure searching experiences in more detail, this paper describes a diary study of searching for fun, performed in the context of casual reading.

2. RELATED WORK

The study of searching behaviour has long been embedded in the history of library and information science, where searching is presumed to be a goal-oriented research activity. This is highlighted by the common definition that Information Seeking is focused on the resolution of an *information need* [12] or *knowledge gap* [1]. Further, the common approach to describing tasks for empirical research, is named a 'Work Task' [2]. Despite implying work-oriented scenarios, Work Tasks are described as including non-work personal tasks too, but these tasks are still typically goal and need-driven scenarios. Examples include studies of everyday-life information seeking [18] and information encountering [6], which relate to non-work contexts, but can still be quite serious.

To understand non-work leisure time better, Stebbins introduced a taxonomy containing three levels: serious-leisure, project-leisure, and casual-leisure [22]. Serious leisure typically covers activities relating to committed hobbies, or volunteering outside of work [9]. Project-leisure relates to extended but temporal efforts like buying a car, planning a holiday, or researching family histories [3]. These goal- and need-driven leisure scenarios could be easily captured in Work Tasks. The third level, casual-leisure, relates to activities often involved in play and relaxation, such as watching television [4] or searching online [23], and much more. Based on their prior work, Elsweiler et al proposed a model of casual-leisure information behaviour [5] that highlighted some key differences between casual scenarios and Work Tasks. First, these scenarios were often driven by hedonistic needs, rather than information needs. Consequently, searching often began with ephemeral or absent information needs. Further, success in meeting their hedonistic needs, did not necessarily involve successfully finding information and results. Hedonistic needs include factors such as affect, novelty, social relationships, and enjoyment [10], where O'Brien, for example, studied their importance in online shopping experiences [14].

Many have also studied reading as a casual or pleasurable activity. Early work by Pjetersen converted observed book-finding behaviour into a naturalistic library-style search interface [16], helping people to browse in different modes. In 1980, Spiller found that 46% of library loans (n=500) were based upon browsing and 54% on known authors [21]. During a much smaller (n=12) qualitative study in 2011, however, Ooi and Liew saw participants often only using the library to retrieve books that they had already selected in everyday life [15]. Further, along with the introduction of e-readers and tablet devices, the nature of reading in casual episodes is changing. Research continues to highlight that increasing numbers of people perform their reading online or through digital mediums [11, 20].

3. DIARY STUDY

The main goal of this study was to investigate the information seeking behaviours performed in the context of casual-leisure reading. Prior work by Ross found that people who read for pleasure often encounter new information, without having an existing related information need [19]. Here, six researchers, as part of their post-graduate studies, coordinated a diary study of casual-leisure information behaviour. The methodology used was similar to the diary study performed by Elsweiler et al [4], which studied information needs produced while watching television. In total 24 participants took part in the diary study for one week. Participants were recruited by the six researchers using snowball-sampling; participants were primarily young adults in their 20s.

Participants were given a small portable physical diary, so that it could be used in both digital and physical contexts; an example is shown in Figure 1. Participants were asked to fill out one entry page per information need or searching episode that was initiated during a period of reading undertaken for self-motivated pleasurable reasons. To support continued participation, the participants were managed by one of the six researchers. Each participant had regular contact with their researcher, including but not limited to: an initial interview, an informal interim discussion, and a final debriefing interview.
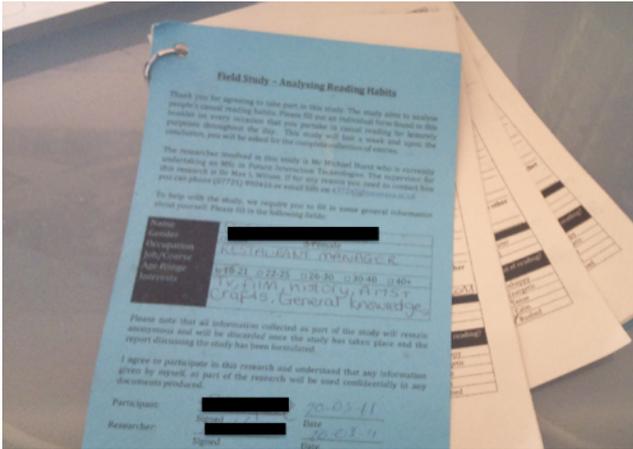

Figure 1: An example diary; a bound set of A5 card.

The diary consisted of a mix of open and closed questions. After logging the time and date, participants were asked to indicate the type of material they were reading and their environment, such as home, work, library, coffee shop, etc. Participants were then asked to describe a) what they wanted to search for, and b) why they wanted to search. Participants were then asked to identify how they then performed the search, if at all.

3.1 Analysis

Although some summative information was collected about the nature of the reading scenario, a Grounded Theory analysis [7] was performed to systematically extract key elements from the information needs and information seeking described in the open text fields. The six researchers individually transcribed their diaries and initially coded them for key points. As a group, and in collaboration with the supervising author, these codes were discussed, analysed, and configured into affinity diagrams, using post-it notes and a whiteboard. These codes, and the relationships captured in the affinity diagrams, were discussed, referring back to example diary entries, until they stabilized and all researchers were in agreement. Entries that challenged the evolving definitions and affinity diagrams were frequently considered

during this process. The six researchers then returned to their diary entries to re-examine them in the context of the final codes.

4. RESULTS

Over the course of the week, most participants recorded around 1 or 2 diary entries per day, producing around 120 usable entries in total. To provide an overview, approximately 20% of reading was performed with physical paper objects (books, newspapers, and magazines), with the remaining being split between e-readers and mobile devices (around 30%) and laptops and PCs (50%). Reading content included: News (around 45%), email (20%), magazines (15%), and fiction (10%). In terms of physical surroundings, around 40% of entries were produced in work contexts, with the remaining performed in home environments. Figure 2 shows the model developed from the analysis, which is described further below.

1. *Reading Motivations*
   a. *Hedonistic or Emotional*
   b. *General knowledge interests*
      i. *Interest driven*
      ii. *Carer*
      iii. *In-the-know*
      iv. *Decision*
2. *Searching Motivations*
   a. *Information need*
   b. *Personal scoping*
   c. *General topical*
   d. *Decision-making*
3. *Search focus*
   a. *Factual information*
   b. *Background information*
   c. *Object related information*
4. *Source of Information*
   a. *Paper sources*
   b. *Social networks*
   c. *Expert sites*
   d. *Generic sites*

Figure 2: The developed coding scheme.

4.1 Reading motivations

Reading material can be considered a source of information itself. Consequently, our study observed reading as being both the act of casual searching, and as a source motivating separate casual search episodes. This section focuses on the former, where casual reading is itself sometimes an act of casual search.

Although around 50% of casual reading episodes were driven by hedonistic or emotional needs, around 50% were driven by the participants' general knowledge interests. Examples of hedonistic or emotional motivations included "to pass time", "to help cope with things", and "to relax after my day". Although following knowledge interests could also be seen as a pleasurable pastime, the knowledge-driven entries also occasionally broached the concepts of 'project leisure', such as reading about possible holiday destinations, and 'serious leisure', such as reading around a hobby domain. The majority of the knowledge-drive situations described by participants, however, were casual episodes relating to a project-leisure interest, rather than active periods of research or work. One participant, for example, was reading about a neighbourhood area as they were soon to be "moving into a new house".

While the hedonistic and emotional scenarios were pretty uniform in motivation, we further classified the casual knowledge-driven reading scenarios into four types: Interest driven, Carer, In-the-know, and Decision-oriented. Interest driven were those casual bouts of reading relating to a hobby or temporary interest.

Examples included "information about buying a car abroad" and "information on fixing my PC". For a participant who was a "new fan of J.K. Rowling's novel series", they were "reading about the latest Harry potter sequel", which was due to be delivered.

Carers were those that were reading information that has personal or emotional relevance. Carers often read news, for example, about zones with natural disasters, or places and events relating to their childhood, or to distant friends. One participant cited choosing to read "more information on tsunamis", while another had a personal interested in the unrest in the Bahrain.

In-the-know readers were those that casually monitored general knowledge information sources, including news, to be aware of current events and new technology. Example diary entries included a participant who "read about the 2011 budget meeting in today's paper" in order to get "updates on current budget meetings". Another participant said "I wanted to know what was happening while I was asleep". In-the-know readers often recorded more frequent small reading sessions, than extended periods like those with hedonistic or emotional motivations.

Finally, decision makers were those that read up on interest areas related to things like casual purchases, such as new movie releases or new cameras. In another example, a participant wrote that they were reading "reviews of the movie 'Inception'", because they were "planning for a movie at the weekend".

4.2 Motivations for Searching for fun

The casual reading, recorded in our diary study, often created separate episodes of casual searching. These episodes were driven by encountering information that created an Anomalous State of Knowledge [1], but did not always relate to a direct information need. Some ASKs also led to additional smaller bouts of casual-interest reading, rather than searching. The four identified key motivations for additional searching or reading, were: information need, personal scoping, general topical, and decision-making.

Information need examples included those that identified a clear piece of information they would like to know in order to continue reading. These specific information needs often consisted of dictionary definitions, such as one participant who was looking for "the meaning of the word 'oakum'" because they did not know what it meant.

Personal scoping motivations related to participants who encountered information that was somehow related to their history or personal life. The participant interested in the Bahrain also provides a good example here. Personal scoping examples also often led to searching behaviour within one's own information, such as email or media collections, or within social networks. Typically, personal scoping was aimed at establishing, or remembering, the connection they had with the information they had just encountered.

General topical searching was motivated by discovering something of novel interest, and often initiated casual learning without a specific information need. One participant, another example of a Carer, wanted to "know more about children with dementia" after they "read [an] article in [the] newspaper about a 9yr girl with this disease".

Finally, decision-makers were those searching when motivated by the need to make a new decision. Often relating to a topical interest, such decision-making motivations included deciding if an activity was something they would want to do, or to learn more about in future casual reading. One participant said that they

wanted to "check the weather for the weekend" in order to make some plans.

4.3 Focus of information sought

The information that people sought in these casual scenarios could be largely broken into three types: factual information, background/overview information, and object related information. Factual information, of course, related to specific information needs, and were often represented by factual content, such as dates, prices, locations, etc. One participant was searching for "yesterday's lottery results". Background and overview information was typically sought in general topical situations and interest-driven reading, such as "wales football information". Finally, object related information pertained to places, people, and events with one participant suggesting they were "searching for more about Mississippi". Such information was often sought by caring readers, or personal-scoping searchers.

4.4 Sources of information

The diary study also asked participants to describe how they sought information during episodes of casual searching, motivated by their casual reading. Perhaps correlating with the large percentage of our participants who read using digital devices, much of the information was sought online. Figure 3 highlights that some participants sought their information using additional physical paper resources, often including those who performed additional topical interest reading. Of those that used the internet to search, many consulted their social network, especially those establishing personal scope with the information. The remainder typically referred to news sources and Wikipedia articles, or generally searching the web for related pages. Several participants described themselves as searching for websites with authority on a topic, such as one participant who went to the UK government website for "…census information. To find out the deadlines".
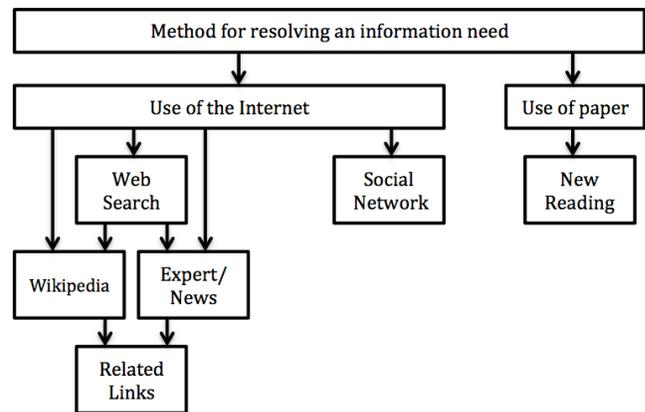

Figure 3: Methods used for casual searching.

5. DISCUSSION

This research has continued the recent interest in investigating casual searching behaviour that people undertake for fun. We aimed to further investigate the findings of researchers like Elsweiler et al [5], and the model of casual-leisure searching behaviour they produced. In line with their model, our study found that around half of the casual reading episodes were motivated by hedonistic or emotional needs, rather than information needs. For those that engaged in searching behaviour, some did aim to find specific information, either facts or information connecting what they had found to their own lives, while others began additional reading or topical browsing without

a given information need. This finding, however, highlights that although Elsweiler et al's model separated information and hedonistically driven motivations, these episodes are often intertwined and highly connected. Further, our work contributed additional insights into variables created by person- and situation-types, both of which have an affect on the interplay between informational and emotional motivations. While these findings are novel, future work should focus on fully understanding these conditions; some notions, for example, are closely related to elements of McQuails Mass Communication Theory [13].

Unfortunately, the design of the study meant that we did not capture information about whether people succeeded in finding information. Future work could help to validate these latter phases of Elsweiler et al's model, by focusing on the success, failure, and importance of casual searches.

5.1 Limitations
Although the study covered 24 participants over the space of a week, and gathered over 120 casual searching episodes, there are some potential limitations in the methodology that should be acknowledged. First and foremost, the study was performed by five masters and one PhD student, each in the first few months of their postgraduate study. Consequently, this was their first field study and they were learning the techniques by performing them; their individual skills varied. Further, each researcher produced their own paper diaries, which also introduced some slight variations in content. Despite the fact that execution of the study may have been less rigorous than many diary studies, the results did reveal several findings that both confirmed elements of other research and revealed new insights into casual-leisure searching.

6. CONCLUSIONS
This paper has described a diary study that investigated searching for fun, in the context of casual reading. Research has shown that such activities make up a significant portion of internet traffic, while remaining largely under-studied. Our findings provided further evidence for previously proposed models of casual searching, including the significance of hedonistic and emotional, rather than information-driven, motivations. Further, we have shown that many of these activities relate to areas of interest and personal scope, rather than being specifically related to an information need. Finally, much of the casual leisure searching was for decision-making, but in regards to pleasurable hedonistic activities and purchases. Combined with previous research in this area, our findings contribute to the developing understanding of these less-critical, experience-driven, often-hedonistic episodes of searching, for fun.

7. ACKNOWLEDGMENTS

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