Overwhelmed by Smartphones? A Qualitative Investigation into Mobile Information Overload

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ABSTRACT
In this poster, we describe the concept of mobile information overload—a type of information overload that comes along with the increasingly ubiquitous use of mobile devices and mobile information and communication technologies. We also identify key issues around mobile information overload based on the literature and present the results of a pilot study that investigates (1) how people experience mobile information overload, (2) what factors cause mobile information overload, and (3) what coping strategies people use to mitigate the problem.

Keywords
Information behavior, information overload, mobile devices, mobile ICTs, mobile information overload

INTRODUCTION
Information overload has been studied for decades in various research disciplines, such as economics, organization science, psychology, and library and information science. Generally, the concept of information overload refers to various phenomena and theories related to “too much information” (Bawden, Holtham, & Courtney, 1999).

More recently, the increasing use of web-enabled mobile devices is making mobile information and communication technologies (ICTs) ubiquitous, blending into the background of people’s everyday work and life (Sørensen & Gibson, 2004). Statistics show that 2.1 billion out of 6.8 billion global mobile-cellular subscribers also subscribe to mobile broadband for wireless Internet access, with an annual growth rate of 40% from 2007 (The international Telecommunication Union, 2013).

Therefore, the motivation for this study is to investigate information overload in the context of ubiquitous usage of mobile devices and mobile information and communication technologies (ICTs). Specifically, we aim to understand the information overload phenomenon when people are using mobile devices and mobile ICTs, which we refer to as mobile information overload, as well as people’s coping behaviors in response to this phenomenon.

LITERATURE REVIEW
Previous information overload research has addressed several key aspects: the situations, the causes, and the effects of information overload, as well as people’s countermeasures against information overload.

The information overload literature has identified many reasons that contribute to information overload, at both the organizational and personal levels (Eppler & Mengis, 2004). Bawden and his colleagues (1999) showed that the amount of information (“too much information”) and the variety of information (type, format, version, etc.) were two major causes of information overload. Bawden and Robinson’s more recent paper (2009) suggested that web 2.0 technologies exacerbate information overload, reinforcing the belief that information technologies themselves aggravate the problem of information overload. Some factors at the organizational level (e.g., organizational design) also lead to information overload, but our study aims to understand causes of mobile information overload at the personal or interpersonal levels.

Previous studies have also explored countermeasures to information overload, that is, how people reduce the negative effects of information overload. In this study, we mainly focus on personal countermeasures as coping strategies, such as queuing, satisficing, withdrawing and filtering (Bawden & Robinson, 2009). Savolainen (2007) found that people tended to employ withdrawing and filtering strategies to cope with everyday life information overload, which was obviously different from the strategies they used at work (e.g., queuing). With the increasingly ubiquitous and diverse usage of mobile devices, people often deal with both work-related and non-work information on their mobile devices via mobile ICT. This fact may complicate people’s coping behaviors toward
mobile information overload, making the issue worth investigating.

Besides information overload research, research on mobile information behavior and mobile human-computer interaction (HCI) has been booming in recent years. Context is a key concept in information behavior research (Courtright, 2007), and findings from many mobile information behavior and mobile HCI studies suggest that context may play a particularly important role in mobile device usage, given that the portable nature mobile devices tends to diversify people’s information needs (Church & Smyth, 2009) and information usage (Falaki, Mahajan, Kandula, Lymberopoulos, Govindan, & Estrin, 2010). Thus in the current study, we explore how various contexts (location, time, activity, social interactions, etc.) impact people’s experiences of mobile information overload.

RESEARCH QUESTIONS
Few studies have tackled the problem of mobile information overload, defined in this poster as a type of information overload people experience when using web-enabled mobile devices and mobile information and communication technologies (ICTs). This study addresses the following three research questions:

RQ1: What kinds of mobile information overload, if any, do people experience when using web-enabled mobile devices or mobile ICTs?

RQ2: What factors cause mobile information overload?

RQ3: How do people cope with mobile information overload?

METHODOLOGY
Since few studies have examined the topic of information overload on mobile devices, the current study is relatively exploratory. As a result, we use the qualitative method of semi-structured interview in order to gain a deep understanding of mobile information overload. The interview questions start with participants’ information tasks recently conducted on their smartphones, and then expand to their subjective feelings and coping behaviors towards mobile information overload.

We use the purposeful sampling technique to recruit participants for the study; that is, we target the population who own smartphones and frequently conduct information tasks on smartphones. All participants are being recruited from faculty, staff and students of Drexel University via the university’s internal mailing lists and campus-wide tear-off flyers. Data collection and analysis are currently underway and will be completed in time for presentation in the final version of the poster.

EXPECTED FINDINGS
Drawing upon the literature review and prior investigation, we predict some of the expected findings from the pilot study. First, smartphone users are likely to experience mobile information overload when using their smartphones and mobile ICT. Second, a wide variety of factors will contribute to mobile information overload, such as the need to monitor “too much information” via smartphones, the increasing functionality and complexity of mobile ICT, and the limited affordances of smartphones. Third, those who experience mobile information overload intentionally or unconsciously will use coping strategies to mitigate the problem, such as filtering, satisficing and withdrawing.

The poster will present findings not limited to those listed above. We hope to provide more comprehensive findings and deeper understanding on mobile information overload from the pilot study and the full study in the near future.

REFERENCES


