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Intervals on Perceptions of Recommender Systems

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ABSTRACT

Receiving poor results from a personalized recommendation system is frustrating. When users try to compensate by putting on a "different face" and game the system, the results can be even more frustrating. This paper investigates how to improve the user experience of such systems by: 1) adding personal photos to increase self-awareness, and 2) providing recommendations interspersed with personal questions. We will focus on how financial data can be used to show users where they spend their time, when they accomplish certain habits, and what the impact of their activities is on the environment.

Author Keywords

Recommendation systems, recommenders, personalization, face-work, impression management, presentation of self, online dating, personal photos, recommendation intervals.

ACM Classification Keywords

H.5.4. Hypertext/Hypermedia: User Issues. H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

General Terms

Management, Security, Design, Human Factors

INTRODUCTION

As mobile phones increasingly support users accessing data and running applications that were previously only available within the relative physical safety of homes and businesses, enabling users to secure their phone-resident data is becoming more important. However, today's phones still use a binary (locked/unlocked) security model designed over a decade ago when phones stored only call histories and contacts' names and numbers. This security model presupposes a single, primary user (the phone's owner) as is common in developed nations.

Have you ever been frustrated by finding a coworker's office empty with no indication when they will return? Do you find it hard to stay aware of what remote collaborators

are working on? In recognition of the importance and challenge of staying aware of coworkers, many systems for supporting group and coworker awareness have been built and studied, e.g. [1, 2, 3, 5, 6].

Urban planners, urban designers, and architects often visit a site prior to a design activity related to the site. These *site visits* are used for different purposes by different professionals, but the general goals are to get a sense for the physical site, find patterns, and discover and record new insights about the physical location and its characteristics. Site visits are similar to ethnographic study in human-computer interaction research, but focus on the physical place, as well as the people in that place.

Interactive art in HCI is a topic of continued interest and debate [15]. Despite controversy on the topic, the relationship between technology design and art continues to prompt new systems within HCI [4, 14] An assumption of interactive art design is that interactivity engages users, and enhances user self-reflection.

Scholarly literature spanning a variety of disciplines consistently shows the centrality of imagery (e.g., symbols, icons, and art) in religion. Morgan [6] shows that across diverse faiths, imagery facilitates belief by connecting people to each other and to the sacred experience of religion. Previous research in techno-spiritual practices also highlights imagery in two important ways.

Empirical Measurement and Evaluation

SID research is now in a similar situation to that of early days of CSCW or Ubicomp research. In order to iteratively improve SID, we need to identify measures of success to gauge performance because design intuitions are often fallible. Relatively little SID research publishes results from an evaluation or end-user perspective. Only with a large base of interaction designs for sustainability can we make comparative evaluations. And only through the combination of clear and well-articulated design heuristics and the utilization of appropriate evaluation methods can we create a powerful momentum for SID research.

However, when these personalization systems do a poor job of gathering user data and/or presenting their recommendations, and then make bad recommendations, the results are disastrous. Users will not only think poorly of the system, but also attempt to trigger better recommendations by trying to game or trick the system. These attempts can often lead to an even more frustrating user experience. One

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anecdote describes a TiVo user who believes his unit mistakenly thinks he's gay, tries to compensate for the system's misstep by watching "guy stuff", and ends up with even more unanticipated and undesired recommendations from his TiVo [9].

Gaming recommendation systems parallels the work on face-work, impression management, and presentation of self [3]. These concepts posit that in human-human interactions, people will actively perform and behave in ways to both broadcast a desired persona and to convince their audience to accept that persona as accurate. In HCI, however, particularly in the context of personalization systems, active face-work can lead to the negative outcomes described above.

As technology continues to facilitate easier collaboration across broad distances, collaborations involving people who speak different languages are becoming increasingly common.

Audio/video meetings (e.g., conference calls) are one of the most popular and effective ways of long-distance collaboration. In most audio/video meetings held across a multilingual group, all members must share one common language to communicate, which means some members have to use their second language. As studies have indicated, understanding the speech of a second language poses many difficulties [1]. Thus, non-native speakers in the group frequently find it difficult to understand the meeting and the collaboration tends to be ineffective.

A key question looms concerning how much time it takes for the stabilizing photo effect and the timing of recommendations to wear off in the context of profile building and interacting with a recommendation engine. Future research can address this topic through longitudinal methodologies based on this experiment. Nevertheless, these

findings and implications, if implemented, can positively affect the design of recommendation systems today.

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