Human-Computer Interaction

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HCI: Human Computer Interaction

- The boundaries of information behavior research have extended to understanding the social-psychological effects of including a computer as a member of the team, the role of emotional state on search engine efficacy and the reduction in information overload experienced in 2D and 3D data spaces.
- Human information behavior research is found in the LIS literature decades before the introduction of information technology.
- increase in the likelihood of information use when texts and video are made available online and do not require a visit to a library building

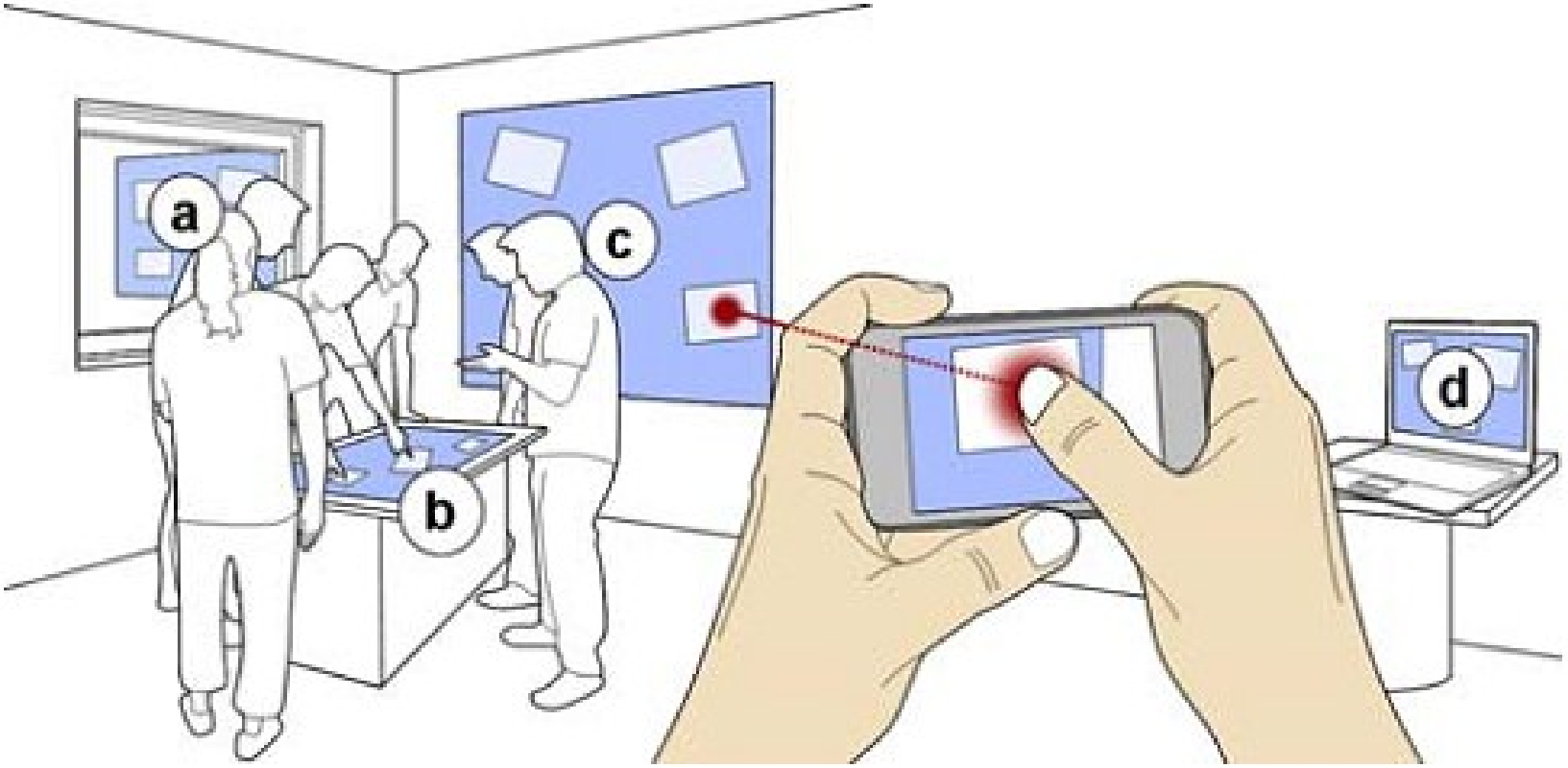
HIB: Human Information Behavior

- information production may be automated (structured task)
- information access is analyzed by HCI
- information utilization (semi-structured tasks) is covered by HIB

HIB: Human Information Behavior

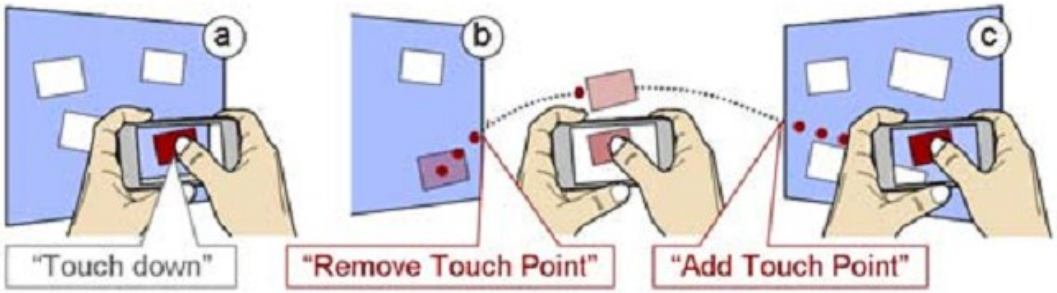
- How do people search for and utilize information provided in information systems?
- How does behaviour change depending on different information sources and channels?
  - facebook, ÕIS, Google, …

HCI research leads to HIB research



HCI innovates computer usage techniques

- analyze techniques helping to focus on information
  - zoom capability for mobile device
  - temporarily freezing of captured image
  - virtual preview – update frozen image



- increasing the user performance with respect to finding information

Goals of …

HCI research

- increase task execution speed
- lower failure rates
- remove usage barriers
- establish new ways how to access information

HIB research

- analyze how users combine multiple systems
- find means to improve system interaction and search experience
- identify impact of HCI innovations

How‘s that supposed to help?

?

HIB & HCI: Common Interests in Different Communities

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ABSTRACT

New connections between research and practice are necessary to address human information behavior in an increasingly technologically mediated world. Socio-technical systems for encountering, finding and sharing information have become sophisticated enough to blur the boundary between human and computer, and transform important design and research questions in human computer interaction (HCI) to questions for which human information behavior research (HIIB) offers a deep tradition. We sought to understand present connections between these two progressively more interrelated research areas by performing a citation analysis of prominent HIIB research with the most prominent publications in the HCI field. While the conceptual affinity between the two research fields is increasingly strong, the production of ideas and the exchange of research agendas between them is weak in the citations we analyzed. We propose a number of explanations for this gap, and suggest a more activist research agenda by HIIB in the realm of HCI as one potential means for bridging this gap.

Categories and Subject Descriptors

H.1.1 [**Systems and Information Theory**]

General Terms

Human computer interaction (HCI), Human information behavior (HIIB), Human information interaction (HII), information needs and uses.

Keywords

Information behavior, human computer interaction, socio-technical systems.

1. INTRODUCTION

The boundaries of information behavior research have extended to understanding the social-psychological effects of including a computer as a 'member of the team [11], the role of emotional state on search engine efficacy [13] and the reduction in information overload experienced in 2D and 3D data spaces [24]. With the explosion of information resources available, and the growing role of computers in the access and retrieval of information [5,18], a new breed of user interface is called for. Designs that consider both the social and technical aspects of information seeking, discovery and use are now essential, though not common [18,25].

Human information behavior research is found in the LIS literature decades before the introduction of information technology. HIIB studies today, however, usually incorporate information and communication technology (ICT) as an assumed part of the user's information context. Mansourian & Ford [14], for example, described search satisficing behavior among 37 researchers, raising questions about the extent to which a user's information seeking behavior consistently resulted in a quality result. The information seeking in their study was electronically mediated. Kwon [12] demonstrated the continued existence of library anxiety among undergraduate students, and the relationship between library anxiety and lower levels of critical thinking. It appears that even in a technologically savvy generation, anxiety about information seeking and use remains an issue that influences work and learning. Perhaps suggesting a solution to library anxiety, the probability of information resources being accessed appears to increase when the information is available through information and communication technology. Chen & Choi [3] discovered a strong preference among students for access to video information over the Internet, and a statistically significant increase in the likelihood of information use when texts and video are made available online and do not require a visit to a library building.

None of the above mentioned HIIB studies referenced relevant HCI theories or prior works that speak to the importance of design in the use of ICTs. Fitt's law [2], for example, suggests that the time required to move to a target area is a function of the distance to the target and the size of the target, i.e., small buttons matter. While the human computer interface is central to information seeking behavior in these studies, the role of the ICT interface itself in the results is not discussed.

While HIIB studies now incorporate ICTs as a matter of course, studies of human computer interaction increasingly focus on socio-technical and collaborative computing systems that blend communication, information and work in complex socio-technical arc. Poltrock, Grudin, Dumais, Fidel et al [18] contrasted the information seeking and sharing behaviors of two different design teams, one solving a hardware problem and the other solving a software problem. They showed that design teams identify information needs, form questions and seek information collaboratively. Their information behavior is closely connected to technology and social behavior. Gu & Mandonca [7] designed a discrete event simulator to allow the safe manipulation of information resource availability in emergency response simulations. Their simulator recognizes resource

Social Informatics

Thank you! ☺