# Forecasting the Next 10 Years in Information Behavior Research: A Fish Bowl Dialogue

by Gary Burnett and Sanda Erdelez

Special Section

On the afternoon of the third day of the 2009 ASIS&T conference in the drizzly downtown of Vancouver, British Columbia, Special Interest Group/Information Needs, Seeking and Use (SIG/USE) convened a session celebrating its 10th anniversary. Following brief panel presentations on the history of both the SIG itself and information behavior research, the bulk of this session was devoted to an open discussion dedicated to "Forecasting the Next 10 Years for Information Behavior Research." Although there were four "initial discussants" (Marcia J. Bates, Gary Burnett, Sanda Erdelez and Eric Meyers) and 15 designated "discussants," the session used the fish bowl technique to ensure that all attendees, whether named in the program or not, had a chance to weigh in and participate.

The result was a lively discussion including many voices and visions of what the future should hold for information behavior research (for example, see Figure 1. Information Behavior by Karen Fisher and Heidi Julien). The participants ranged from freshly-minted Ph.D.s to long-established and respected researchers to those involved in professional practice. The on-site participants were also joined by seven off-site participants who attended the session through the Second Life virtual environment. Statements from the 20 or so participants, who spoke from places at the center of the fish bowl, included calls to improve the capability and usability of search engines and other information systems, arguments in favor of focusing on particular user groups (particularly children) and impassioned pleas that we remember the centrality of the user in information provision.

FIGURE 1. Information Behavior by Karen Fisher & Heidi Julien. From their panel presentation at *Celebrating 10 Years of SIG/USE: A Fish Bowl Dialogue on Information Behavior Research Past, Present & Future*


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This article does not attempt to summarize in any degree of detail or accuracy what was said during the session. Rather, it presents reflections by the authors (two of the session's initial discussants) on some of the themes



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that emerged during the session. As such, it should not be taken to suggest any kind of authoritative or inclusive account of the myriad positions articulated by session participants, but only speculation concerning future directions in information behavior research from two interested participants. It is offered in the spirit of continuing the dialog set in motion during the SIG/USE session.

## Brave New Context: The Future of Information Behavior Research

To those readers who attended the SIG/USE panel, it should not come as a surprise that we selected the "future of context" as the opening topic for this article. One of the co-authors (Sanda) turned the fish bowl into, as she quipped, "a magic crystal ball," and predicted that the future of information behavior research would be impacted by the disappearance of information "context" as we have known it so far. This prediction sparked many engaging comments from the participants about the importance of context in information behavior research.

The context of information behavior emerged as a key concept in information behavior research in the last several decades. This development was documented by the conception of the conference Information Seeking in Context (ISIC) in the mid-90s and numerous panels at ASIS&T Annual Meetings that focused on cognitive and social dimensions of interaction between context and information behavior. While, as Narresh Agarval of Simmons College commented in his fish bowl contribution, there are many, often conflicting, definitions of context, some broad topics in which it has been studied in information behavior research include the roles of the information users, the location where information behavior takes place and the tasks performed by the users.

On a pragmatic level, if we look at information systems that have been developed to facilitate human activities in various contexts, we see a world where users' information behavior – just as the information needs that the behavior addresses – is compromised by the physical limitations in system design. As the users of information systems physically and cognitively move from one traditional context to another, they are traditionally guided with strong perceptual cues that evoke a specific type of information behavior. The activities and tasks that need to be performed in combination with available system features define users' information behavior to the extent that the users are not aware of many aspects of this behavior, except perhaps the most obvious expressions of information search requests.

However, as developments in information and communication technologies make the information tools we use more portable, mobile and accessible at any time, the notion we have of context is beginning to change. The old dividing lines between contexts are blurring. Context is becoming an integrated multiple, rather than a singular, and these multiple contexts impact information behavior simultaneously. As singular contexts crumble, information behavior emerges as a visible link that users cling to as they navigate through the landscape of new information worlds with overlapping and constantly intersecting contexts. One possible implication of this trend could be that users may become more cognizant about their visceral information needs, the ways they go about acquiring information, their processes of information use and strategies they implement to manage information. They may become more aware of the processes they rely on when using information tools across blending contexts.

This increased self-awareness may facilitate empirical data collection for future generations of information behavior researchers and thus provide new insights into information behavior phenomena that traditionally were methodologically difficult to research. However, the multi-layered context is also likely to create new types of information needs and questions for users: Who am I? Where am I? What am I doing here? Future information behavior will have to attend to these questions, since they will have an impact on our understanding for new generations of technological solutions needed by users to be satisfied and productive in the mashed contexts of the future.

## Linkages and Continuities: The Future in the Past

In discussions of future research trends – especially in a domain marked by ongoing and rapid changes in available technology – it can be tempting to envision new directions that, in whole or in part, signify radically new directions, approaches and concerns. And it is certainly the case that the

increasing development, proliferation and use of technologies, such as mobile devices like cell phones, have had and will continue to have a major impact on both the availability of information and on the behaviors of people seeking, browsing and otherwise interacting with information. Indeed, in his ASIS&T conference plenary session, Tim Bray (director of web technologies at Sun Microsystems) noted the near ubiquity of cell phones and their use for a variety of information-related activities in the third world. A recent article in the *New York Times* documenting the extensive – not to say extreme – use of iPhone data networks for information gathering perhaps foreshadows similar trends in the United States (www.nytimes.com/2009/09/03/technology/companies/03att.html?_r=2&hp).

However, several participants noted in their comments during the SIG/USE fish bowl session that such technological transformations are not necessarily harbingers of equally radical changes in information behavior research. That is, while the tools through which human users come into contact with information may change – and may raise many interesting questions about the degree to which specific technologies transform our understanding of the contexts of information use and about the degree to which technological innovation and change determine (or, more accurately, influence) information behavior – the particular relationship between such human users and information itself remains the focus of information behavior research. As Paul Solomon of the University of South Carolina noted in his comments during the fish bowl session, it is important not to reinvent the research wheel each time a new technology is introduced, but rather to draw and build upon valuable previous work. The concepts and approaches of the past 10 years (and more) of information behavior research, thus, remain relevant; the next 10 years should be seen less as a turning point or a break with that past than as an extension of it. Even work that challenges or transforms the work of the past is inextricably indebted to that past, and open acknowledgement of this fact should continue to be an important part of the identity and trajectory of our field.

Discussions of some relevant aspects of that past can be found elsewhere in this special issue, and there is no need to duplicate those discussions here, beyond a brief observation that one of the goals of the fish bowl session was to establish a vantage point from which researchers can sustain a vision both of the importance of previous work and the potentials of future work. While the session explicitly asked questions about the future, it is important to note not only that numerous precursors – Elfreda Chatman and Patrick Wilson central among them – were acknowledged, but also that the participants themselves, scholars at all stages of their careers, collectively embodied such a vision, maintaining ties to work that has already appeared as well as work that has yet to begin.

## Intersections: Information Behavior Research and Other Disciplines

Information behavior research has historically attracted researchers belonging to library user studies and the "softer" side of information retrieval. With the dominance of web-based technologies for processing and providing information during the last 10 years, we have seen that many other disciplines have gained interest in the human aspect of information systems design and use, especially human-computer interaction, communications, marketing and sociology. The phenomena that all these researchers are focused on are multifaceted and can be addressed from multiple perspectives and levels of specificity. Inevitably, these perspectives intersect, sometimes complementing, and sometimes contradicting each other.

In many ways the above disciplinary relationships resemble the organization of the United Nations, with all countries sharing a common goal of world peace and prosperity, but coming from different cultural, language and political backgrounds. Just as a language translation is needed in the United Nations, there is an ever-pressing need to identify a common language that would ease translation and understanding of related concepts researchers use to describe human engagement with information on various levels – are these information behavior, information interaction or information activities? Without a common language, or at least understanding of the terminology used for the same concepts by other disciplines, we are limited in the cross-pollination of research ideas, the sharing of research findings and thus left to proverbially re-discover hot water.

In some utopian world of the future one would hope that an organizational

framework would be available to bring researchers from different disciplines together to address their differences and identify a common language. However, such resolution is unlikely, given the organizational, research funding and peer evaluation structures that create a disciplinary chasm. What the future may bring to information behavior research is the increased awareness of individual researchers, as elaborated elsewhere in the article, that they are building their research inquiry on the "shoulders of giants" within and outside of our discipline. As some of the speakers suggested, this connection should be established not only with the neighboring science and social science disciplines, but also with more distant fields such as neuroscience and evolutionary biology where interesting research advances have been made recently about information processing on a cellular level and the socio-historical contexts of human development.

The requirements for interdisciplinary collaboration in large research projects funded by major U.S. research funding agencies, such as the National Science Foundation (NSF) and the National Institutes for Health (NIH), create an opportunity for information behavior researchers to become involved in multidisciplinary research teams. Active participation of information behavior researchers in collaborative research projects could be a needed catalyst for development of stronger interdisciplinary ties, thus resulting in the cross-pollination of research ideas and increased awareness of the ongoing contribution of information behavior research to the understanding of human information needs, acquisition and use.

## Pathways: The Objects of Information Behavior Research

Information permeates our lives, professional and personal, whether that information comes to us as the intended result of a focused and targeted searching, incidentally as the by-product of other activities or simply because it is inextricably intertwined with our day-to-day social interaction. Participants in the fish bowl session brought a wide variety of emphases and interests to bear in their comments about the future of information behavior research. However, as Marcia Bates pointed out in her statement to the group, all of these approaches share a common concern: each has information at its center, and, in particular, each looks specifically at human behavior as it relates to that information. As Bates noted, this shared focus is what differentiates our field from other social sciences that investigate human behavior, such as sociology.

While it seems certain that all participants would concur that the focus of future research in the field will continue to be on this relationship between human activities and information, there is less agreement about the precise nature of that relationship and, thus, about the specific object of such research. Several participants, including Katriina Byström of the University College of Borås, strongly emphasized the importance of information in goal- and task-oriented settings. Others, such as Dania Bilal and Louise Limberg, argued that special attention should be paid to particular populations, such as children and to the multiplicity of cultural perspectives and practices in different user groups and around the world. Other emphases – and this list is far from exhaustive – included system development, the importance of theory, the role of professional practice and the need for pragmatic approaches and practical outcomes that make a positive impact on the world.

As the very name of the SIG/USE suggests, with its emphasis on information seeking and use, many research approaches have, historically, been linked in certain ways to more technically oriented information retrieval research, with a focus on a relatively narrow range of information behaviors specifically in the context of formal information systems such as libraries: in the classic model, information seekers come to an information system with a particular need, articulate that need in the form of a query and retrieve information that, if all goes well, matches the query and meets the user's need.Such a characterization of information behavior research past or present is, of course, something of an oversimplification in any event. Even as brief an account as that presented here of the comments made during the SIG/USE celebratory 10th anniversary fish bowl session make it clear that current trends have unquestionably expanded well beyond a focus limited to information seeking activities and have branched off in many directions. If anything, it seems clear that the diversity of approaches seen during the session will continue to be at the core of information behavior research – that the core of our field is, in other words, both singular in its shared

attention to the relationship between information and human behavior and multiple in how it instantiates and analyzes that relationship. To put it simply, people interact with information many different ways (seeking, browsing, encountering, using, exchanging, avoiding, etc.) and for many different purposes (to complete tasks, to resolve needs, to give assistance to others, to keep themselves entertained, etc.); it is appropriate that information behavior research attend to all of these guises of the phenomenon that simultaneously unites us and makes possible the manifold and divergent approaches that we all take.

## Conclusion

As noted above, this article does not attempt to cover the full range of topics and issues raised during the SIG/USE fish bowl session. However, we hope it is clear from our brief account that the active – and even enthusiastic – participation of numerous scholars at all stages of their careers in the session bodes well for the future of information behavior research. We hope, further, that this article – like the session itself – points to some fruitful issues and directions for the next 10 years and that it might help to foster continued dialog and interaction between information behavior scholars. ■