Reflecting on Two Decades of Information Horizons Theory and Method: Applications and Innovations

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ABSTRACT

Information horizons is a theory and method that embraces behavioral, cognitive and social aspects of information seeking, sharing, and use. As the first method originating in information science that uses a graphical data collection technique (Hartel, 2016), it has served as the underpinning methodology for numerous investigations for over 20 years. The method is often applied in studies of diverse communities not traditionally included in research, such as lower socio-economic populations. Information horizons is also valuable in teaching master's and doctoral students about information behavior and importance of theoretical constructs. For example, over 700 master's students at the University of Toronto have completed exploratory, empirical studies using the method. A strength of the method is its extensibility; researchers have extended and adapted the method for use with different populations and to investigate different types of information behavior. This panel will explore the varied applications of the information horizon method, engage the audience in open discussion about the information horizons method for research and teaching, and explore how theoretical and methodological approaches can be more effectively shared across the information science and related communities.

KEYWORDS

Information horizons, mixed methods, lower socio-economic communities, teaching, research.

INTRODUCTION

Information horizons is both a theory and method that embraces behavioral, cognitive and social aspects of information seeking, sharing, and use. The information horizons method is the first method originating in information science that uses a graphical data collection technique (Hartel, 2016). The theory was introduced in 1999 (Sonnenwald, 1999), and the method in 2001 (Sonnenwald, et al, 2001). The method was awarded the 2001 ALISE Research Methodology Best Paper Award and cited as one of the ten most impactful research results in last decade by ASIS&T SIG-USE (in 2011).

The method has been used in numerous investigationsto learn from communities not traditionally included in scientific research studies. It has been used to study information behavior of immigrant children (Henefer, 2008), earthquake preparedness in Indonesian villages (Romo-Murphy, 2013), refugee and immigrant women (Zimmerman, 2018), and Korean immigrant mothers in the US (Lee, 2018). The method is taught in doctoral and master classes and used by master students (e.g., master students used the method to study information behaviour in a LGBTQ community (Hartel et al, 2018). Researchers have also extended and combined this method with other methods. For example, Huvilo (2009) used the information horizon maps to illustrate the information practices of a group; Savolainen & Kari (2004) extended the approach to create information source preference maps; and, Greyson and colleagues (2017) extended information horizon maps to include additional information behaviours, such as receiving, sharing, storing and managing information. Additionally, the significance of the information horizons method is underscored by over 900 views of an instructional video (INFIDEOS: The Information Horizon Interview), and over 870 citations to the initial key papers.

PANEL GOALS

This panel has three key goals:

1) Introducing the information horizons theory and method.
2) Sharing experiences using and extending the information horizon research method, and experiences teaching the method.
3) Engaging the audience in an open discussion to identify additional ways the method can be extended, and propose new ways innovative methodolocial approaches can be more effectively shared across the information science and related communities.

INFORMATION HORIZONS OVERVIEW

The information horizons method consists of an interview during which study participants are asked to provide a graphical and verbal articulation of their information horizon in a particular context, after discussing experiences when it was difficult and when it was easy to find information in that context. The graphical illustration, or map, portrays the participant's information horizon by capturing the full range of information resources, including people they typically access when seeking information within a specific context. Each study participant is also asked to describe the information resources and explain their value and role in the information seeking process. Techniques to analysis these data are drawn from social network and graph theory.

Key ideas in the theory include the role of social networks and contexts in information behavior, the importance of understanding information behavior as a process, and the concept of an "information horizon" that constrains and enables information behavior, and varies according to the information need. These concepts illustrate that certain types of data, which have not been traditionally included in studies of information behavior, are, in fact, important. These data include: when and why people access and do not access individuals and other information resources; relationships among information resources; the proactive nature of information resources; experimentation as information seeking behavior, and the impact of contexts and situations on the information seeking process.

Study participants often report enjoying the information horizon interview; it is an opportunity for participants to tell their story and to create a map that illustrates their information seeking patterns. Participants frequently request to keep a copy of their map. The method is straightforward to teach and applied by university students at all levels. The method is less intrusive and time-consuming compared to observational techniques, e.g., participants do not need to continually log their behavior. The information horizon maps created by study participants embed the first level of data analysis and synthesis, aiding the researcher in data analysis.

PANEL FORMAT

The panel has two parts. **Part 1:** Four experts will share their expertise and experience with the information horizon method (10 to 15 minutes each); **Part 2:** The audience and panel members will engage in an open discussion to identify new approaches in teaching, using and extending the information horizons method, and propose new ways to more effectively share innovative methodological approaches across the multi-faceted information science community and related communities (30-40 minutes). This discussion will be moderated by Greenberg.

Panel member abstracts

Diane H. Sonnenwald, Emerita Professor, University College Dublin, Ireland.
Information Horizons: Foundations, Extensions and Personal Reflections

Sonnenwald, the primary author of the theory and method, will provide an overview of the theory and method, presenting central concepts and data collection and analysis techniques. In addition, she will highlight ways it has been used and extended. Further, going beyond the typical research presentation, Sonnenwald will share her personal journey formulating the theory and method, and discuss potential future pathways for extending the method, including ways the method can be extended to incorporate political and power relationships that impact information behavior. The aim is to inspire future methodological development.
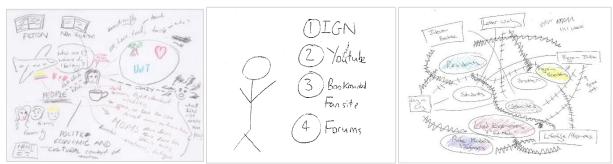

Figure 1. Information Horizon Maps produced by informants in studies by Hartel's students.

Jenna Hartel, Associate Professor, University of Toronto
Teaching Information Behaviour with the Information Horizons Interview

For the past decade, Hartel has been teaching information behaviour using Sonnenwald's information horizon interview (Hartel, Oh, & Nguyen, 2018). More than 700 students in her introductory course on Library and Information Science have completed exploratory, empirical studies with the information horizon interview, on a topic or population of their choice. Hartel's presentation will focus on the pedagogical potentials of an information horizons interview-centered assignment at the master's level, including, the: ethical protocol, social organization, background

materials (Hartel, 2021, 2016), and week-to-week staging. Hartel will report on topics and populations selected by students, her student's surprising methodological insights—including a selection of striking information horizon maps, and feedback on the assignment from course evaluations. A complete set of instructions for implementing small-scale information horizons interview studies in a course context will be provided.

Kaitlin E. Montague, PhD candidate, Rutgers University
Using and Extending the Information Horizons Method to Study the Information Behavior of Vehicle Residents

Montague will describe her experience using the information horizons method in a high exposure study focusing on the information practices of vehicle residents via Zoom. Participants engaged in two sets of interviews: the first was a semi-structured interview with the goal of understanding vehicle residency and their general information practices on a broader level, accompanied by a guided tour of their vehicles. Four months later, participants engaged in information horizon interviews to understand when and why they accessed different resources over others in the context of health, government, legal, and employment information. Participants then drew information horizon maps, depicting all information resources, including people, which they accessed in the aforementioned contexts while describing their preferences. After the interview, participants took photos of their information horizon maps and emailed their pictures. Additionally, Montague will also describe her adaptation of the information horizons method— longitudinal information horizon diaries, in which Montague integrates the information horizons interview using time-space diaries (Kenyon, 2006) where participants record what they are doing and where, their information horizons, and information resolution movements over an 8-week time period.
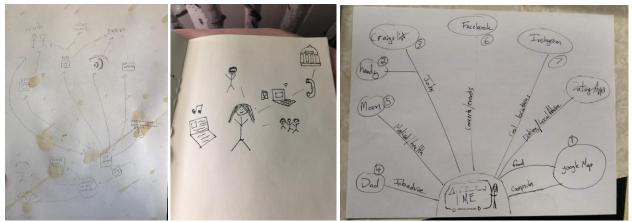

Figure 2. Information Horizon Maps produced by Montague's study participants

Ina Fourie, Head of the Department of Information Science and Chair of the School of Information Technology, University of Pretoria, South Africa
Using the Information Horizons and Complementary Methods to Understand Commuting Challenges in Lower Socio-economic Communities

Fourie will describe the use of information horizons method in a mobility information behavior study focusing on lower socio-economic commuters who depend on informal transportation methods, such as minibus-taxis and tuk-tuks, for everyday commuting in an urban area in South Africa (Fourie, et al. 2022). In this study, information horizon maps were enhanced with additional methods. Study participants, i.e., commuters, first completed a three day travel diary collecting quantitative details on the times and frequency of travel, means of transport, and costs; and they concurrently collected photos and voice recordings on the conditions and contexs of travel during the three day period (Julien, et al., 2013). Next, information horizon interviews were conducted, during which commuters were asked to draw pictures of the information sources they used for two (critical) incidents, e.g., typical daily communiting and a non-routine or first- time incident. Drawing maps opened opportunities for participants to focus on experiences and to share their emotions during the information encounters as well as their perceptions of human information sources as being helpful or rude. The diaries were essential in providing factual quantitative information. Thus, the information horizon interview was an enriching method, and the additional complementary methods provided supplementary persuasive evidence regarding the complexity of challenges faced by commuters and the need for advocacy for better circumstances.

Panel participant biographical notes
Diane H. Sonnenwald is Emerita Professor at the University College Dublin, Ireland. She currently conducts workshops on collaboration skills and strategies, and consults with CILIP and the European Commission. Sonnenwald has received 25 grants from international foundations, corporations, and funding agencies, and has

authored over 130 publications. Her research has focused on interorganizational and interdisciplinary collaboration, and on the design and evaluation of emerging and future technologies. She served as ASIS&T President in 2012, and in 2020 she was awarded the ASIS&T Award of Merit.

Jenna Hartel (www.jennahartel.info) is an Associate Professor at the University of Toronto. Her scholarly career has been motivated by the question, "What is the nature of information in the pleasures of life?" To that end, she explores information in pleasurable and profound contexts and employs visual and creative research methods. She is the source of (INFIDEOS) a YouTube channel of educational videos, where she shares her passion for information in outrageously playful ways. She is a recipient of *Library Journal*/ALISE's Excellence in Teaching Award (2016) and the ASIS&T/SIG-USE Outstanding Contribution to Information Behavior Award (2022).

Kaitlin E. Montague is a PhD candidate from Rutgers University, The State University of New Jersey, at the School of Communication and Information in the Department of Library and Information Science (LIS). Her research focuses on place and mobility in information behavior in the context of vehicle residents. Kaitlin received a Master's of Information (MI) from Rutgers in 2016. She worked as a public librarian for four years before returning to Rutgers to begin the PhD program in LIS.

Ina Fourie is a Full Professor, Head of the Department of Information Science and Chair of the School of Information Technology, University of Pretoria, South Africa. Ina holds positions in the leadership of the ASIS&T Executive Board and the Research and Supervision Section of the European iSchool Region. Her research focuses on information behavior, especially health information behavior in cancer, palliative care, grief and bereavement.

Panel moderator: Jane Greenberg is the Alice B. Kroeger Professor and Director of the Metadata Research Center, College of Computing and Informatice, Drexel Univeristy. Greenberg's research and teaching covers automatic metadata generation, semantic web/linked data, knowledge organization at the intersection of data science and AI. She teaches a foundations information science doctoral course and introduces the information horizons theory and method, along with other theories and methods. .

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