



# A model of information practices in accounts of everyday-life information seeking

A model of  
information  
practices

19

Pamela J. McKenzie

*Faculty of Information and Media Studies,  
The University of Western Ontario, London, Ontario, Canada*

Received 30 January  
2002

Revised 23 July 2002

Accepted 13 August  
2002

**Keywords** *Information retrieval, Models*

**Abstract** *Many research-based models of information seeking behaviour are limited in their ability to describe everyday life information seeking. Such models tend to focus on active information seeking, to the neglect of less-directed practices. Models are often based on studies of scholars or professionals, and many have been developed using a cognitive approach to model building. This article reports on the development of a research-based model of everyday life information seeking and proposes that a focus on the social concept of information practices is more appropriate to everyday life information seeking than the psychological concept of information behaviour. The model is derived from a constructionist discourse analysis of individuals' accounts of everyday life information seeking.*

## 1. Introduction

Since Wilson postulated in 1977 (Wilson, 1977, pp. 36-7) that people frequently "discover" information in everyday life while monitoring the world – e.g. browsing a magazine or watching television without the direct intention of finding specific information – library and information science (LIS) researchers have begun to focus both on everyday life information seeking (ELIS) (Savolainen, 1995), and on forms of information behaviour that do not involve active or purposeful information seeking on the part of the individual. These varieties of information behaviour encompass a range of practices that can be as premeditated as actively browsing for information to meet a known need or as serendipitous as encountering an unexpected source, miscellaneous fact, or familiar situation that may be of some assistance in meeting some present or future need.

However, many current models of information behaviour and information seeking behaviour (Wilson, 1999a) are limited in their ability to describe ELIS. First, current models tend to focus on active information seeking, to the neglect of less-directed practices. Two important exceptions are Krikelas's (1983) model of information seeking behaviour, which distinguished the less-directed "information gathering" from the more-directed "information seeking", and Wilson's (1997) revised model, which included "passive attention" and "passive search" as forms of information behaviour. Still, most models have not incorporated findings from current research related to incidental forms of information behaviour.



Second, many research-based models of information seeking are derived from studies of scholars or professionals (for example, Ellis, 1993; Kuhlthau, 1993). While such models are useful for describing the kinds of systematic information searches that go on in academic or workplace environments, they tend to reflect analysis of one single focussed current need and therefore do not attempt a holistic consideration of the variety of information behaviours individuals describe in their everyday lives – related to several distinct and possibly inter-related current and future information needs.

Finally, many models have been developed using a cognitive approach to model building. Savolainen (1995) suggested that an emphasis on the cognitive processes of the individual fails to capture the richness of information as constructed through the interaction of the individual and the sociocultural context. Tuominen and Savolainen (1997, p. 92) proposed that a constructionist discourse analytic approach to the study of information seekers within their social contexts could provide an understanding of the ways that “discursive constructions of information are contextually designed to serve different communication purposes”. This form of discourse analysis was developed by social psychologists including Potter and Wetherell (Potter and Wetherell, 1987; Potter, 1996). Drawing on several theoretical traditions (including social studies of science, ethnomethodology, conversation analysis, semiology, post-structuralism and postmodernism), constructionist discourse analysis seeks to incorporate insights from a variety of discourse analytic approaches.

A constructionist approach to discourse analysis (sometimes called discourse analysis in social psychology, or DASP), focuses on analysing the ways that accounts are constructed and made to appear factual (the epistemological orientation of discourse (Potter, 1996)) and the discursive functions that accounts are meant to perform (the action orientation of discourse (Potter, 1996)). An account is therefore not taken simply as a realistic representation of underlying cognitive processes, but is seen to have a meaning contingent on the function the discourse is meant to perform, for example whether to convince, defend, or blame.

In LIS, Jacobs (2001) used DASP to study the ways that “technology” is reproduced as a series of interests, and the ways that formal scholarly communication acts as a resource within researcher-participant interviews. The larger study on which this paper is based used DASP to describe the ways that accounts of information seeking can take discursive action. First, the study addressed a specific form of the epistemological orientation of discourse: the discursive techniques that participants (in this case, pregnant women) used in representing information sources as authoritative. Rather than making straightforward cognitive authority claims, participants constructed very flexible and complex explanations for their decisions of source authority, which both reflected and resisted prevailing constructions of authoritative knowledge (McKenzie, 2001a). Second, the researcher considered the action orientation of information seeking accounts – the ways that participants used these accounts to make certain claims about themselves as individuals – and found that

---

participants either represented themselves as active information seekers or provided compelling reasons why they could or should not actively seek information. Seeking information was represented as an important part of becoming “prepared” for motherhood, and accounts of different forms of information seeking served to demonstrate that participants were becoming adequately prepared (McKenzie, 2002).

The present paper considers the range of information practices that participants included in their accounts of information seeking. It reports on the development of a research-based model of ELIS and builds on the growing literature on non-active information seeking, which helps to widen the analysis of information behaviour through its acknowledgement that active engagement in information seeking does not account for all of information behaviour. This paper also responds to Erdelez’s (1999, p. 28) call for “holistic and detailed tools for modeling information users’ behavior”.

## 2. Overview of the study

The model was developed as part of a larger qualitative study of the information-seeking accounts of 19 Canadian women pregnant with twins (McKenzie, 2001b). The researcher conducted semi-structured in-depth interviews with participants, who ranged from 19 to 40 years of age, and were between 11 and 35 weeks pregnant at the time of the initial interview. The extremely small number of women pregnant with twins at any given time (Millar *et al.*, 1992) necessitated a convenience sample. Although participants were older and better educated than the average for women giving birth in the province in which they lived (Statistics Canada, 1999; Statistics Canada, Health Statistics Division, 1999), they were representative of their home region in terms of their ethnic and linguistic backgrounds, marital status, and urban/rural place of residence (Statistics Canada, 1999). Approximately one-third of participants (7 of 19, or 36.8 per cent) had other children, while this was the first successful pregnancy for the other two-thirds (12 of 19 or 63.2 per cent). This was the first multiple pregnancy for all participants.

Two forms of data collection were employed. Initial, semi-structured interviews (ranging from 25 to 110 minutes long) were conducted with respondents. Questions were asked about significant incidents of information seeking or encountering, or receiving advice. Retrospective in-depth interviews have been used to examine aspects of incidental information behaviour (Williamson, 1997, 1998; Erdelez, 1997). Erdelez (1999) observed that “a majority of participants in [her] information encountering study, when asked about past experiences of ‘bumping into information’, were familiar with the notion of accidental discovery and could recall these experiences clearly”. However, this method alone has limitations for eliciting accounts of incidental encountering. Pettigrew (1997) found that her nurse-informants were often unconscious of having provided information incidentally and had trouble recalling such incidents spontaneously during the later interviews.

A variant of the diary/diary-interview technique (Zimmerman and Wieder, 1977; McKechnie, 1996) was therefore developed as a method of systematic and regular data reporting over a short period of time to prompt memory of incidental events. Rather than having participants themselves complete a diary describing relevant incidents, the researcher telephoned each participant twice during the week following the initial interview at prearranged times and asked what incidents had occurred since their last conversation. Using this method, the researcher kept the diary, based on notes and transcripts from the tape-recorded telephone calls. The prolonged engagement facilitated by the phone check-ins and follow-ups permitted access to a “week in the life” of study participants, allowing the researcher to capture descriptions of some events as they unfolded. These notes were then used as Zimmerman and Wieder (1977) and McKechnie (1996) used the diaries, as documents for structuring in-depth follow-up interviews with 17 respondents[1]. The follow-up interviews ranged from 6.5 to 74 minutes long and took place at respondents’ convenience between 5 and 13 days after the initial interview. Interview transcripts were audio-recorded, transcribed, and analysed qualitatively (Lincoln and Guba, 1985; Potter and Wetherell, 1987; Potter, 1996). In analysing the ways that participants constructed their accounts of seeking information and used those accounts to represent themselves in particular ways, the researcher also attended to the variety of information practices that participants described. The model presented here is based on that analysis, and is therefore derived from accounts of information seeking and not from observation of information seeking as it happened.

### 3. Patterns in accounts of information seeking

Participants provided extremely rich accounts of the information practices that made up their ELIS. The following excerpt from Rachel’s[2] transcript provides an example of one such account. Here Rachel described several information practices related to one specific situation: after moving to a new city early in the summer, she attempted to contact the local multiple birth organisation, which did not meet until September. Rachel’s twins were due to be born in the autumn, and she was concerned that they might arrive before the first meeting.

I’ve had people I’ll run into almost constantly that either *are* a twin or *know* a twin. It’s just incredible how many there *are*. And yet, these people are not really there to help me sit down and [laughs], “Please tell me [laughs] what I’m supposed [to do] . . .” I think I was initially told [about the New City multiple birth association] right from the get-go. I initially saw my doctor in [Old City], she referred me to someone here. So right away she said, “Oh, I, you know, you should really call them. There’s an organization you can talk to”. Great. And I had, actually my sister-in-law lived in [New City]. Her father looked on the Internet, got a phone number for me in [New City], the [New City] branch. I had it on my dresser from the day we moved in and then I thought, oh I’ll call them once I settle. And I called, and we waited for two weeks to hear back from this person. And they never called back. So then my husband said “This is weird. We called twice”. And he called some sort of, maybe it was just a Health Unit in town or something. They gave us a completely *different* number. So we called *them*, the woman got in contact with us with, within a day. And, obviously the other person was no longer, I don’t know [laughs]. That was kind of discouraging, cause we waited for two weeks to hear back

---

... and nothing really happened. And then the woman, was very apologetic, even getting back one day, 'Oh, I'm sorry I didn't get back to you right away'. And then she said 'Unfortunately we don't meet until September, we're off in the summer', cause she said all of the [people] that run it are all parents and they take the summer off. And I said, 'Well that doesn't help me much' [laughs]. And so she said, 'Well, we don't even know where we're meeting in the fall yet ...' And she goes, 'Oh we, I have to get a[n information] package together for you, so I won't be able to get it to you until, like, August some time' ... And I was like, 'Oh, okay'. So, she goes, 'Well, if you have any questions just call me'. And I'm thinking [laughs], 'Oh, I've got tons of questions!' But I don't think she meant it in that way. I don't think, that's the impression I got. Like, 'If you have any questions regarding the *association*' is kind of the impression I got. Not, like, 'if you have any questions, why don't we get together because you won't be able to talk to anyone before you have babies'.

Rachel's account is typical in that it presents a saga of active, incidental and serendipitous information practices being repeatedly foiled by barriers beyond her control. In some participants' accounts, information seeker's creativity, persistence, and plain good luck prevail, while in others, such as Rachel's, the quest is unsuccessful and the story accounts for the lack of success (McKenzie, 2001b, 2002). A brief outline of the many information practices described in Rachel's account will serve as an introduction to the elements of the model:

- *Identification of potentially helpful sources.* Although Rachel described in detail the kind of help she wanted (someone to "tell me what I'm supposed to do"), she reported facing barriers in identifying a source for that particular kind of help: "These people are not really there to help me."
- *Serendipitous encounters.* "I've had people I'll run into almost constantly that either *are* a twin or *know* a twin. It's just incredible how many there *are*."
- *Being given information without active seeking.* "I think I was initially told right from the get-go."
- *Planned encounters with potentially helpful sources.* "I initially saw my doctor in [Old City]."
- *Referrals to potentially helpful sources.* "She referred me to someone here. So right away she said, 'Oh, I, you know, you should really call them. There's an organization you can talk to.'"
- *Proxy searchers.* "Actually my sister-in-law lived in [New City]. Her father looked on the Internet, got a phone number for me in [New City], the [New City] branch." "So then my husband ... called some sort of, maybe it was just a Health Unit in town or something."
- *Barriers to seeking connections.* "I'll call them once I settle."
- *Making connections with potentially helpful sources.* "And I called," "So we called them, the woman got in contact with us with, within a day."
- *Connection failures: unsuccessful attempts to make connections with potentially helpful sources.* "We waited for two weeks to hear back from

this person and they never called back.” “I have to get a[n information] package together for you, so I won’t be able to get it to you until, like, August some time.”

- *Barriers to interaction with identified sources.* Once Rachel had successfully contacted an appropriate source, she explained how the person on the other end of the telephone line was unable or unwilling to provide the kind of help that she wanted: “And then she said ‘Unfortunately we don’t meet until September.’”
- *Patterns of interaction with identified sources.* Although Rachel told of connecting with an appropriate source and had specific questions that the source could have provided answers for, she described not asking. “Oh, I’ve got tons of questions! But I don’t think she meant it in that way. I don’t think, that’s the impression I got. Like, ‘If you have any questions regarding the *association*’ is kind of the impression I got.”

Two things are evident from Rachel’s example. First, the phrase “information seeking behaviour” is inadequate as an umbrella term for describing the practices that made up participants’ information-seeking accounts. Wilson’s (1999a, pp. 262-3) analysis of models of information seeking suggests that the varieties of information behaviour research may be seen as:

... a series of nested fields: information behaviour may be defined as the more general field of investigation ... , with information-seeking behaviour being seen as a sub-set of the field, particularly concerned with the variety of methods people employ to discover, and gain access to information resources, and information searching behaviour being defined as a sub-set of information seeking, particularly concerned with the interactions between information user (with or without an intermediary) and computer-based information systems, of which information retrieval systems for textual data may be seen as one type.

Erdelez (1999, p. 25) observed that the label information seeking behaviour “is a misnomer because passive and opportunistic information acquisition such as some types of browsing, environmental scanning or information encountering more resembles ‘gathering’ than ‘hunting’ – the active pursuit suggested in the term seeking”. Participants in this study described receiving much information, both helpful and unhelpful, with no active seeking on their parts. Even Wilson’s (1999a, p. 249) broader concept of information behaviour – “those activities a person may engage in when identifying his or her own needs for information, searching for such information in any way, and using or transferring that information” – requires a cognitive focus and implies action on the part of the individual that was not always present in the stories women told.

The social constructionist paradigm puts emphasis on social practices, “the concrete and situated activities of interacting people, reproduced in routine social contexts across time and space” (Rosenbaum, 1993, p. 239). A focus on practices rather than on behaviour shifts the analysis from cognitive to social and is consistent with the study of information seekers within their social context (for examples, see Rothbauer (2002), McKenzie and Davies (2002)).

---

Accordingly, the term information practices is used here to refer to the entire range of elements present in accounts, both those falling within Wilson's definition of information behaviour and those appearing in accounts of how information comes or is given through the initiative or actions of another agent.

Second, making a firm distinction between "active" and "incidental" information practices in participants' accounts was problematic at best. While Erdelez's (1996, p. 102) concept of information encountering – "a type of information acquisition that involves memorable experiences of unexpected discovery of useful or interesting information that has not been sought, or the discovery of unforeseen characteristics of information that had been sought" – is useful, it fails to account for the wide variety of information-seeking and encountering situations that participants described. After analysing several participants' descriptions of multifaceted information practices, the researcher developed a process model which considered the representations of information practices at two stages of the information process.

#### **4. A two-dimensional model of information practices**

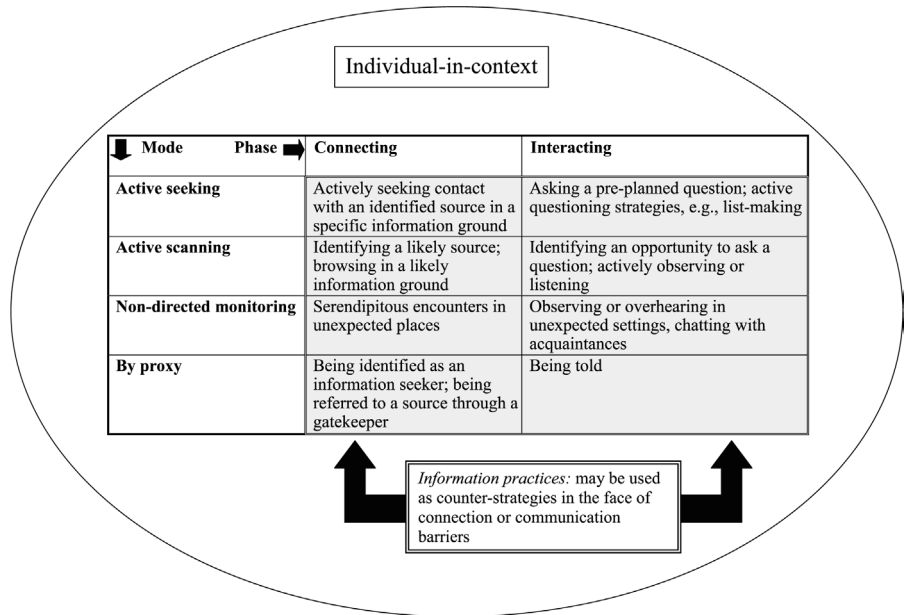
Several LIS scholars have developed process models of information seeking. Those examined in the development of the present framework include Westbrook's (1996) general model, Kuhlthau's (1993) model of the information search process, Ellis's models of scientists and social scientists (Ellis, 1993; Ellis *et al.*, 1993), Wilson's (1997) revised general model and uncertainty model (Wilson, 1999b), and Choo *et al.*'s (1999, 2000) model of information seeking on the Web.

Choo *et al.* (1999, 2000) developed a two-dimensional model which combined Ellis's stages of the information seeking process (Ellis *et al.*, 1993) with four modes of active and incidental information seeking based on Wilson's (1997) model and the literature of environmental scanning (Choo and Auster, 1993). The combination of these two dimensions resulted in a flexible model of information seeking, which allows for the description of systematic changes in the mode of information seeking as an individual moves through the information-seeking process.

It is evident from Rachel's example, however, that participants' accounts of ELIS did not necessarily contain descriptions of the same kinds of systematic processes associated with more directed Web searches (Choo *et al.*, 1999, 2000). To reflect the idiosyncrasies present in accounts of ELIS, the researcher has developed a two-dimensional model of the information practices described by participants (Figure 1). This model consists of four modes of information practice, each of which may figure in accounts of either of two stages of the information process. The remainder of this paper introduces the model and gives a brief overview of its components.

##### *4.1 Modes of information practice*

Participants' information-seeking accounts included a continuum of information practices, from actively seeking out a known source or planning a



**Figure 1.**  
Two-dimensional model of the information practices described by participants

questioning strategy, to serendipitously being contacted by a previously unknown source or being given unasked-for advice. The left-hand column of the model identifies the following modes:

- Active seeking is the most directed mode of information practice. Accounts of active seeking mentioned practices such as specifically seeking out a previously identified source, conducting a systematic, known-item search, asking a pre-planned question, and planning or employing active questioning strategies (e.g. list-making). This category is related to Wilson's (1997) active search, Choo *et al.*'s (2000) formal search, Erdelez's (1996) information seeking and Toms' (1998) searching.
- Active scanning involves practices such as semi-directed browsing or scanning in likely locations (for example, doctors' offices or bookstores), systematic observation of physical characteristics or behaviour, identification of opportunities to ask spontaneous questions, and active listening to conversations or questions in likely locations (e.g. group discussions in prenatal classes or multiple birth association meetings). Accounts of active scanning involved the recognition of a particular location as a likely information ground, or of a particular source as likely to be helpful, although the seeker may not describe having an expectation of finding anything specific. This category corresponds to Wilson's (1997) passive search, Choo *et al.*'s (2000) conditioned viewing, Erdelez's (1996) and Toms' (1998) browsing.
- Non-directed monitoring involves serendipitously encountering and recognizing a source (e.g. seeing a father pushing a double baby



---

carriage, finding a book sale) in an unlikely place, while not seeking information at all (chatting with acquaintances), or while monitoring information sources (such as reading the daily newspaper) with no intent other than to become generally informed. Accounts of non-directed monitoring also included incidentally observing informative behaviour or physical characteristics or overhearing (rather than actively listening to) conversations between other people. This category corresponds to Choo *et al.*'s (2000) undirected viewing, Savolainen's (1995) monitoring the context, Toms' (1998) chance encounters, Wilson's (1997) passive attention, Ross's (1999) finding without seeking, and Erdelez's (1996) information encountering.

- By proxy refers to those occasions when participants described making contact with or interacting with information sources through the initiative of another agent, either the information source or some other gatekeeper or intermediary. Because the agent may be using any of the other three modes of connecting with the recipient (active seeking, active scanning or non-directed monitoring), accounts of proxy practices are extremely varied in their characteristics. They can include such practices as being identified as an information seeker by an acquaintance or stranger, being referred to a source through a gatekeeper or intermediary, or being given advice, information or prescription. This mode of information practice does not correspond to any of Choo *et al.*'s or Wilson's (1997) categories, although several researchers have begun to describe various forms of information seeking by proxy (Chu, 1995; Erdelez, 1996; Erdelez and Rioux, 2000; Gross, 1995, 1998, 1999; Gross and Saxton, 2001; Metoyer-Duran, 1991, 1993; Pettigrew, 1997, 1999; Williamson, 1997, 1998). Both Gross (1995) and Erdelez and Rioux (2000) considered such information-seeking from the perspective of the agent actually asking the question. This model describes the practice from the perspective of the imposer (Gross and Saxton, 2001) of the original question, or the holder of the original information need.

#### *4.2 Stages of the information process (first row of model)*

Many existing process models of information behaviour have been developed to describe a systematic search for information to solve a specific problem (Ellis, 1993; Kuhlthau, 1993), sometimes involving successive iterations (Wilson, 1999b), and do not necessarily describe the complexities of information practices during ELIS. However, participants' descriptions of information encounters moved very quickly and fluidly from one stage to another, and a process model with many stages would fail to capture the richness of the accounts. After detailed study of participants' accounts, it became evident that a two-stage model of the information process would best preserve the fluidity of the practices they described, while at the same time

systematically describing both the practices and the process. The topmost row of the model describes two stages of the information process:

- (1) *Making connections*. Considers descriptions of the barriers and practices involved in identifying (or being identified by) and making contact with (or being contacted by) information sources or potential sources, whether directly or through a referral.
- (2) *Interacting with sources*. Considers descriptions of the barriers and practices involved during the actual encounter with an information source, once the identification and contact have been established.

Combining the modes of information practice with the stage of the information-seeking process results in a two-dimensional model which reflects the study's intent to focus holistically on the role of information practices in accounts of the individual within her context. Such a focus places this work with studies like that of Julien and Michels (2001) which provide an overview of information practices in the life of the individual rather than analysing specific information practices in the individual's repertoire.

The following sections provide more detailed descriptions of the specific information practices (highlighted boxes in model) that participants described in accounts of the two stages of the information process.

## **5. Information practices in accounts of connecting with information sources**

### *5.1 Making connections through active seeking of sources*

Participants described a variety of practices by means of which they sought or made contact with known or likely information sources:

- Seeking contact with a source to meet an acute need (such as calling the doctor's office between appointments or going to a bookshop to purchase a specific title). When experiencing worrisome symptoms, Natalia explained that "I picked up the phone to call the doctor".
- Re-connecting with a previously used source to meet a new need (such as contacting an old classmate or former neighbour to ask about his or her twins). Barbara described having "a friend who works in daycare so I asked her what the going rate for her daycare was for babies".
- Activating an ongoing informal consulting relationship for a specific need (for example, calling a friend to ask for advice on baby clothes).
- Actively seeking out potential sources against future needs (such as joining a multiple birth association in hopes of meeting other parents of twins).

Participants described active seeking in relation to all kinds of published and interpersonal information sources, both professional and peer. Participants' accounts of active seeking to make connections with information sources had several characteristics. First, active seeking was described as a response to a

---

specific and premeditated question or goal. Second, descriptions of active seeking indicated that the individual paid systematic attention to the connection process. Finally, this mode of making connections was described in specific “information grounds” (Pettigrew, 1997), information-rich places where participants indicated an awareness that an appropriate source might be located: doctor’s offices for medical staff, friends’ homes, bookstores, or libraries for published materials.

### *5.2 Making connections through active scanning*

Active scanning involves seeking and recognizing appropriate information sources, “having feelers out”, not actively seeking information about a specific concern, but keeping a “to-do” list of information needs in mind. Participants described scanning when they:

- Found or deliberately placed themselves in resource-rich environments, or information grounds (Pettigrew, 1997), such as doctors’ offices or bookstores. Christine described finding pamphlets by looking around while she was on a tour of the delivery area in the hospital. “Oh, they were all in the *postpartum* ward and stuff. They were all lying up there.”
- Attempted to connect with published, electronic, or broadcast sources. Consistent with Erdelez’s (1997) findings, several women described scanning in bookstores or libraries. Jacquie explained how she “spent a few hours [in a bookstore] reading just books on pregnancies and names and stuff like that.”
- Recognized a relevant source when they encountered it. Irene reported that she would “flip through the books to see if there’s anything that kind of grabs me and says, yeah, now you need to buy this book.”

Accounts of connecting with information sources through active scanning involved several characteristics. First, descriptions of active scanning referred to “broadly specific” information search goals: for example, searching for a known subject or category (e.g. twin pregnancy books, support groups) but not a specific known item. Second, descriptions of active scanning were accompanied by an indication that the individual had identified or recognised a likely information ground. Once she had described identifying a likely information ground, the individual might describe pursuing an information source systematically or non-systematically, for example actively browsing the titles in a bookstore or just keeping her ears open in a prenatal class to hear a relevant story. Finally, descriptions of active scanning often entailed recognition and identification of appropriate sources related to a need in mind but not necessarily actively pursued at that specific moment.

### *5.3 Making connections through non-directed monitoring*

Non-directed monitoring involves regular activities that people do to get along in the world without actively seeking or scanning for information. This category includes:

- “Monitoring the context” (Savolainen, 1995) or regular monitoring of an information source (such as reading the newspaper or watching the news). When Lynn, at risk for premature birth, “got a chance to read the paper”, she told of running across a reassuring birth announcement for a very premature baby who was coming home from hospital.
- Serendipitous encounters of all kinds, occurring in locations such as the individual’s workplace, a friend’s home, or a grocery store or other public place. Rachel “ran into a woman at [local shop] that had five children and three of them were, under [the age of] six. All of them were under six, and her two smallest were twins, in a little buggy”.

As Williamson (1997, 1998) found, participants often described being unaware that they needed such information until they “picked it up” from these sources, and the same source or content may not have been “informative” at another time.

Accounts of non-directed monitoring included no specific information-seeking goal on the part of the pregnant woman. In fact, participants described not specifically attending to the environment, and often used words like “unexpected” to describe their reaction to finding a relevant source. Finally, context-monitoring was not specific to any one information ground, but accounts were situated in any kind of place where the pregnant women were likely to go. Participants often described the ways that the visibility of infant and toddler twins facilitated their connections with potential information sources. The converse also held true, and women identified the visibility of their pregnancies as a facilitator of making contact “by proxy”.

### *5.4 Making connections by proxy*

Proxy connections represent an inversion of the three other modes of connecting with information sources, in that they occur when an agent other than the primary information seeker engages in active seeking or active scanning on the primary seeker’s behalf, or identifies the primary seeker as an information seeker through non-directed monitoring. This section outlines the most significant features of participants’ descriptions of making connections when the participant herself is not the agent. As such, it reconsiders much of what has been described above but from the perspective of a secondary, proxy information seeker.

Participants described three different kinds of proxy connections:

- (1) Identification of the information seeker by a potential source. Christine credited her visible abdomen as the catalyst for a contact with a mother of twins: “She looks at me and she says ‘I don’t want to scare but I

---

noticed some things about you a couple days ago'. She goes, 'I think you might be having twins'".

- (2) Interpersonal referrals to information sources. Holly explained how her mother "actually sent me a *Psychology Today* magazine and they had this great big section on twins".
- (3) Intermediaries or gatekeepers: friends or family members whom participants described as making *regular* referrals and as taking on the pregnant women's information seeking and incorporating pregnancy and parenting concerns into their own information practices. Donna described how her sister-in-law regularly scanned for relevant reading material to pass along. "She was at a book sale, and she saw this book on twins and picked it up for us, that kind of thing."

Consistent with the findings of other researchers, study participants described situations in which social ties (such as coworkers, friends and family members (Chu, 1995; Gross, 1995, 1998, 1999; Gross and Saxton, 2001; Metoyer-Duran, 1991, 1993)) and professional contacts (nurses, pharmacists, doctors (Pettigrew, 1999)) made referrals to other information sources. Interpersonal referrals were often used to explain how participants made contacts with other parents of twins when they had none within their social circles.

### *5.5 Context-specific characteristics of making connections*

Participants described using the four modes of information practice to make connections with potential information sources. Characteristics of the multiple pregnancy context formed part of accounts of all of these modes of connecting. First, as Browner and Press (1997) have argued, pregnant women are "supposed" to seek information. Second, in this culture, a twin pregnancy is for the most part a joyous thing, something to disclose. Third, a pregnancy (particularly a multiple pregnancy) generally discloses itself at some point in its duration. Likewise, infant twins are visible and identifiable when they are out in public, often riding side by side or front-to-back in a baby carriage where it is relatively straightforward to determine that they are the same age. Twins who look and/or dress alike are even more easily identifiable. These contextual factors combine to create an environment in which:

- pregnant women can ask, and are often expected to ask, questions about pregnancy, childbirth, and infancy;
- the pregnant woman's abdomen may make her an obvious and appropriate target for those who wish to offer her information;
- sources of information, in the form of other parents or caregivers of young twins, are often easily identifiable.

It is possible that proxy connections are facilitated by the pregnancy context, and that such patterns would not be described in the same ways or to the same extent in stories told by people in other contexts (McKenzie and Carey, 2000).

---

## 6. Information practices in accounts of interacting with information sources

Accounts of interacting with information sources included references to a wide variety of information practices, some initiated by the woman herself and others initiated by others. Gayle, who already had a son and daughter, was determined to find out the sexes of her unborn twins. Her account of her lengthy encounter with an ultrasound technician (“it took me an hour to befriend her”) and its successful outcome illustrates the variety of practices women described in interacting with information sources once a connection had been made. Gayle minimized her stake in finding out the answer by explaining that she would be content regardless of the outcome, and just needed to know which of her children’s baby clothes (boys’, girls’, or both) to prepare. The terms “Twin A” and “Twin B” are used to distinguish the fetuses by their positions, and Gayle knew which side of her abdomen corresponded to which letter.

Well when I was let into the room, she got me settled on the table and, I immediately asked about their [sex disclosure] policy. You know, how strict was it, and she said she’d been working there about six months, she was young. Early 20s . . . And, I just kept talking to her and befriending her and, um, mentioning what we had thought about having two boys or two girls or one of each and, uh, I think it was about an hour later and we got into talking about it again and I said that I had, you know, two bags of clothes in my garage, didn’t know which one to launder, didn’t know which one to throw out, or give away or what, and she had suggested at that point that keeping both of them would be extremely helpful to me . . . A few minutes later she also said, uh, they talk about Twin A and Twin B and she said, “Your twin B, the little guy [boy]” [laughs]. So, right there I knew, and she went “Whoops!” [laughs] Now I even know which one is which. So, I don’t think she meant to do that, but.

Gayle described the following interaction practices in her account:

- *Asking premeditated questions.* “I immediately asked about their policy. You know, how strict was it.”
- *Asking opportune questions.* Gayle’s disclosure about baby clothes served as a question: “I said that I had, you know, two bags of clothes in my garage, didn’t know which one to launder, didn’t know which one to throw out, or give away or what”.
- *Systematic observation and listening.* Gayle described making observations based on the sonographer’s physical appearance: “She was young, Early 20s”, and listening to the sonographer’s comments: “She said she’d been working there about six months”.
- *Overhearing/being told.* Gayle described hearing the sonographer’s possibly inadvertent disclosure of which fetus was the boy.

The next section gives an overview of these interaction practices. For a description of the discursive function these practices perform as counterstrategies in the face of communication barriers, see McKenzie (2002).

---

### 6.1 Active seeking in information encounters

Study participants provided several accounts of actively asking questions of interpersonal sources or of reading to answer specific questions. The premeditated questions women described most often came up in doctors' appointments or ultrasound exams, while the questions women described asking in interactions with friends, family, and other parents tended to be asked as opportunities arose, and are described below. Participants often described their plans for asking questions, both for what questions to ask, and for how to ask questions. Descriptions included such elements as:

- *List-making plans and strategies.* Olivia described keeping "a list in my purse and if I'm sitting here watching TV one night, I just kind of, jump up, go and write it down, put it back in my purse . . . So I mean if it's something that I think is appropriate for my doctor, I'll add it onto my list".
- *Premeditated strategies for actively asking questions.* Barbara described her plan for trying to find out the sexes of her fetuses: "My plan was to ask, so I thought, okay well I'm going to broach the subject in such a way that, I will ask generally. 'At this stage in the pregnancy, can you normally tell the sex?'"

Participants described a wide variety of active information practices over the course of encounters with information sources. What is interesting about these descriptions is not so much the subject matter of the questions planned and asked, but the manner in which women described planning, strategizing, and asking, and the functions the question asking performed.

### 6.2 Active scanning in information encounters

Descriptions of active scanning often formed part of accounts of planned encounters with some interpersonal information provider, during which one might be expected to find out something helpful, but which are not specifically intended to address a particular concern. Active scanning differs from non-directed monitoring in that active scanning occurs in a likely environment, whereas non-directed monitoring is by its very nature serendipitous. Women described three forms of active scanning:

- (1) *Recognizing opportunities to ask spontaneous questions in appropriate situations.* Jacquie was showing her neighbour the cribs she had set up: "I asked her, 'Well, what do you do when your baby wets the fitted sheet?' She goes, 'Oh, you've got to change it all'".
- (2) *Observing and listening to other people.* Karen provided an account of listening to a woman talking at a multiple birth association meeting: "I never actually talked to that mother so she must have said it to the group".
- (3) *Scanning print materials.* Frances described how she used the orienting information of pregnancy books, such as chapter and section headings,

to determine what she did and did not want to read. As soon as a pregnancy book began “getting into too many, like, [alters voice to mimic reading] ‘the risk factors involved with twins’ [laughs]. After a while, you know, I read a couple and after a while I just skip that section”.

In participants’ accounts, scanning the physical characteristics or behaviour of other people was a surprisingly common and effective strategy for finding certain kinds of information. Karen described observing a couple with infant twins at her first multiple birth association meeting:

They walked in and sat down and I looked at the woman next to me who was clearly pregnant. And I said, “So that’s how it’s going to be.” And we both sort of snickered. I haven’t seen anyone out there with twins since I’ve become pregnant with twins. And it was interesting because it took two of them [to manage the infants]. And I’m thinking, oh man! [laughs] . . . You know it, in your brain but you don’t *know* it. It was interesting to watch. I watched a lot.

### *6.3 Non-directed monitoring in information encounters*

Women sometimes reported observing informative behaviour or physical characteristics or overhearing conversations between other people “out of the blue”, in situations where one would not reasonably expect to find such information consistently. Such completely serendipitous occurrences were rare in participants’ accounts, and often involved no interpersonal communication between information seeker and information source. Gayle described watching a father attempting to negotiate a narrow department store check-out counter with the side-by-side baby carriage she was considering: “I didn’t talk to him. I didn’t need to . . . Just, he was right in front of me. I just watched him . . . do it and thought, I can’t do that, I know I can’t do that, I need a back-front. I just knew and he had no idea what information he’d given me”.

The visibility of infant twins and of pregnancy often facilitated the identification of sources, and the common understanding of pregnant women as active information seekers contributed to the ease with which pregnant women and strangers connected with one another. The commonly-asked question, “Are they twins?” or a comment on the size of a pregnant woman’s abdomen served the same function as the initial reference question: “Am I in the right place? Is this an appropriate source of information?” (Ross and Dewdney, 1998).

### *6.4 Interaction by proxy: being told*

Participants told of acquiring several types of information without asking, by being told by other people. Depending on the environment in which the advice or information was given, participants described this practice in different ways:

- *Informing through story or experience.* Participants told of being given advice or information through other people’s stories of their own or others’ experiences. Patty described her conversation with another mother of twins: “We talked and, you know, it was interesting talking to



---

her and getting her point of view on things and she was telling me about one of these multiple birth groups that she was involved in and they were having a garage sale and [laughs] how you can get toys and strollers and things like that at this place”.

- *Diagnosing.* Participants described receiving diagnostic information from both medical and social contacts, for example telling them what physical symptoms meant or what they could expect to happen physically as the pregnancy went on. Diagnoses were often accompanied by referrals or prescriptions, whether for a specific course of action, a standard medical treatment or a folk remedy. Karen told how her women friends gave their opinions on her physical state: “everyone talks to you about babies and pregnancy and what happened to them, and one woman said, ‘Well you’ll be getting into the varicose veins stage soon”.
- *Advising, instructing, directing, or prescribing.* Participants described advice they had received in the guise of informing, both from friends and family members and from professionals. Stacy noted that “people do have opinions on things. Like everybody knows somebody with twins. So they’ll say something, like, ‘Oh are you going to put them in the same crib?”

Proxy information exchanges of all four types figured in accounts in which the pregnant woman identified herself, either through her physical appearance or through disclosure, to a potential information source, who then provided specific information or advice related to her pregnancy. Holly explained how announcing her twin pregnancy to her babysitter led her to unexpected information about a bigger house: “She called me like three days later and said, ‘My next-door neighbour has given her notice and it’s a four-bedroom’. And I was like, ‘No way’. And she goes, ‘Are you interested?’ And I said, [emphatically] ‘Yeah”.

Accounts of interaction by proxy were much too complex to permit a clear-cut distinction between the three information-seeker-initiated forms of information practice and the agent-initiated “being told”. Participants often described being “told” things only after they had established an ongoing consulting relationship with the potential source. In addition, information and referrals were often described in a single exchange. The fluidity of the exchanges women described often made it difficult to isolate the individual elements, and considering the individual elements out of the context of the entire account brings with it the risk of missing some of the interactions that occur between and among modes of information practice and stages of the information-seeking process.

## 7. Discussion

The previous summaries, while providing an overview of the specific information practices participants included in their accounts of information

seeking, have the disadvantage of obscuring the complex ways that the components interacted in participants' actual accounts. Some longer examples serve to show how fluidly the practices move from one to another within descriptions, and how a single connection/interaction can be described by a variety of information practices.

Karen described an information-seeking process that began with an account of non-directed monitoring to make contact with an information repository and then moved to a description of active scanning as a mode of browsing through identified sources within that repository. "I was out on an appointment and it was just right across the street from [shopping centre]." She noticed a book sale, although "I didn't go into the mall necessarily for that. I went in just to get out. You know? I just feel kind of out of touch. Housebound". Once she identified the book sale as a relevant information ground, she described active scanning and found a book that answered a question she had had: "I just went through, I just quickly scanned the, the tables for anything that might help me, and there it was. It was just, it was there for me".

This description included two iterative processes: scanning, then identifying. Karen described first scanning the shopping centre in a non-directed way, identifying the book sale and then scanning more systematically, finding the book, and finally scanning the contents to determine that it was helpful. At each stage, she described a more active mode of information seeking, moving from non-directed monitoring to active scanning. This account follows a pattern of "zeroing in" on an information source through systematic and increasingly more directed attention, and reflects the kinds of practices Choo *et al.* (1999, 2000) observed in browsing Web pages.

Not all accounts conformed to this "zeroing in" pattern, however. Holly described the back-and-forth electronic relationship she developed with an Australian woman she met "through looking up 'twins' on the Internet":

I met a girl, like she had her own Web site. She created her own Web site, her name's Suzanne and it's like a mother's journal of twins. And she's pregnant right now . . . So she's chronicled it week from week, how she'd felt about being pregnant. And all of her anxieties and her fears right down to accepting it, too. So I had read, not every one of them, but I had read quite a few and then she had an e-mail and she said, "You can e-mail me". So I e-mailed her . . . and then, in fact I got e-mail from her today. Because now we e-mail each other every couple of days about, "How are you feeling? Does your doctor - ?" You know, and just sort of like talking.

Holly described how Suzanne had "hooked me up with some other Web sites that were interesting that had a lot more information, like things that I didn't know about". In this case, Holly described making a connection with Suzanne through active scanning of the Web. Once the connection was made, however, Holly described several ways that Suzanne acted as a proxy searcher and became part of her information seeking network, both telling Holly things from her own experience and referring her to further sources. Placing the model components back into the context of participants' accounts serves to demonstrate the complexity of accounts of ELIS.

---

## 8. Conclusion

Recent models like Wilson's (1999a, b) uncertainty model represent successive searches for information on a single problem, but they do not account for the wide variety of information practices such as environmental scanning, chance encounters, lay referrals and connecting by proxy that coexisted in study participants' accounts of ELIS. Although the model described in this article shares much with Choo *et al.*'s (1999, 2000) model of Web browsing, the present model is capable of representing both Karen's account of a systematic search process, and Holly's story of a more idiosyncratic ongoing information and referral relationship with a woman she had never met.

While this article has described the information practices that comprised participants' descriptions of information seeking, it is important to remember that the original study focussed on the ways that the descriptions fulfilled discursive functions within the researcher-participant interaction, enabling participants to represent themselves in particular ways. For example, in representing themselves as information seekers, participants gave accounts that showed them to be active and on guard, attentively receptive, and surrounded by a supportive network of others like them (McKenzie, 2001b, 2002).

As is appropriate for a constructionist or naturalistic inquiry, findings are tentatively applied and context-bound (Lincoln and Guba, 1985). Many elements of these findings are related to the physical characteristics and social meaning of multiple pregnancy for participants and those around them. Further study in other contexts is necessary to determine whether and how the interrelations between the mode of information practice and the stage of the information process might be transferrable to accounts of information seeking in other contexts. Exploring the ways that these processes work together in other contexts might add to the development of a more general two-dimensional model of everyday-life information practices.

## Notes

1. Two women were admitted to hospital after the initial interview and were therefore unavailable for the follow-up.
2. Participants are identified by pseudonyms throughout. Italics in excerpts indicate words emphasized by participants.

## References

- Browner, C. and Press, N. (1997), "The production of authoritative knowledge in American prenatal care", in Davis-Floyd, R.E. and Sargent, C.F. (Eds), *Childbirth and Authoritative Knowledge: Cross-cultural Perspectives*, University of California Press, Berkeley, CA, pp. 113-31.
- Choo, C.W. and Auster, E. (1993), "Environmental scanning: acquisition and use of information by managers", in Williams, M.E. (Ed.), *Annual Review of Information Science and Technology*, Vol. 28, Learned Information, Medford, NJ, pp. 279-314.
- Choo, C.W., Detlor, B. and Turnbull, B. (1999), "Information seeking on the Web: an integrated model of browsing and searching", *Knowledge: Creation, Organization, and Use*:

---

*Proceedings of the 62nd Annual Meeting of the American Society for Information Science*, Information Today, Medford, NJ, pp. 3-16.

- Choo, C.W., Detlor, B. and Turnbull, B. (2000), "Information seeking on the Web: an integrated model of browsing and searching", *First Monday*, Vol. 5 No. 2, available at [www.firstmonday.dk/issues/issue5\\_2/choo/index.html](http://www.firstmonday.dk/issues/issue5_2/choo/index.html) (accessed 21 July 2002).
- Chu, C.M. (1995), "Immigrant children mediators (ICM): bridging the literacy gap in immigrant communities", paper presented at the 65th IFLA Council and General Conference, Bangkok, 20-28 August, available at: [www.ifla.org/IV/ifla65/papers/109-145e.htm](http://www.ifla.org/IV/ifla65/papers/109-145e.htm) (accessed 21 July 2002).
- Ellis, D. (1993), "Modeling the information-seeking patterns of academic researchers: a grounded theory approach", *Library Quarterly*, Vol. 63 No. 4, pp. 469-86.
- Ellis, D., Cox, D. and Hall, K. (1993), "A comparison of the information seeking patterns of researchers in the physical and social sciences", *Journal of Documentation*, Vol. 49 No. 4, pp. 356-69.
- Erdelez, S. (1996), "Information encountering on the Internet", *17th National Online Meeting*, Information Today, New York, NY, pp. 101-7.
- Erdelez, S. (1997), "Information encountering: a conceptual framework for accidental information discovery", in Vakkari, P., Savolainen, R. and Dervin, B. (Eds), *Information Seeking in Context: Proceedings of An International Conference on Research in Information Needs, Seeking, and Use in Different Contexts, 14-16 August, Tampere, Finland*, Taylor Graham, London, pp. 412-20.
- Erdelez, S. (1999), "Information encountering: it's more than just bumping into information", *Bulletin of the American Society for Information Science*, Vol. 25 No. 3, pp. 25-9.
- Erdelez, S. and Rioux, K. (2000), "Sharing information encountered for others on the Web", *New Review of Information Behaviour Research*, Vol. 1, pp. 219-33.
- Gross, M. (1995), "The imposed query", *RQ*, Vol. 35 No. 2, pp. 236-43.
- Gross, M. (1998), "The imposed query: implications for library service evaluation", *Reference and User Services Quarterly*, Vol. 37 No. 3, pp. 290-9.
- Gross, M. (1999), "Imposed queries in the school library media center: a descriptive study", *Library & Information Science Research*, Vol. 21 No. 4, pp. 501-21.
- Gross, M. and Saxton, M.L. (2001), "Who wants to know? Imposed queries in the public library", *Public Libraries*, Vol. 40 No. 3, pp. 170-6.
- Jacobs, N. (2001), "Information technology and interests in scholarly communication: a discourse analysis", *Journal of The American Society for Information Science and Technology*, Vol. 52 No. 13, pp. 1122-33.
- Julien, H. and Michels, D. (2001), "Source selection among information seekers: ideals and realities", *Canadian Journal of Information and Library Science*, Vol. 25 No. 1, pp. 1-18.
- Krikelas, J. (1983), "Information seeking behavior: patterns and concepts", *Drexel Library Quarterly*, Vol. 19, pp. 5-20.
- Kuhlthau, C.C. (1993), *Seeking Meaning: A Process Approach to Library and Information Science*, Ablex, Norwood, NJ.
- Lincoln, Y.S. and Guba, E.G. (1985), *Naturalistic Inquiry*, Sage, Newbury Park, CA.
- McKechnie, E.F. (1996). "Opening the 'preschoolers' door to learning': an ethnographic study of the use of public libraries by preschool girls", unpublished doctoral dissertation, University of Western Ontario, London.
- McKenzie, P.J. (2001a), "Justifying cognitive authority decisions: discursive strategies of information seekers", *Partners and Connections, Research and Practice*, Library Research Seminar II, College Park, MD, 2-3 November.

- 
- McKenzie, P.J. (2001b), "Negotiating authoritative knowledge: information practices across a life transition", unpublished doctoral dissertation, The University of Western Ontario, London.
- McKenzie, P.J. (2002), "Communication barriers and information-seeking counter-strategies in accounts of practitioner-patient encounters", *Library & Information Science Research*, Vol. 24 No. 1, pp. 31-47.
- McKenzie, P.J. and Carey, R.F. (2000), "What's wrong with that woman? Positioning and information seeking", *The Diverse Domain of Information: Canadian Association for Information Science; Proceedings of the 28th Annual Conference of the Canadian Association for Information Science, School of Library and Information Studies, University of Alberta, Edmonton, 28-30 May*, available at: [www.slis.ualberta.ca/cais2000/mckenzie.htm](http://www.slis.ualberta.ca/cais2000/mckenzie.htm) (accessed 21 July 2002).
- McKenzie, P.J. and Davies, E. (2002), "Time is of the essence: social theory of time and its implications for LIS research", in Howarth, LC., Cronin, C. and Slawek, A.T. (Eds), *Advancing Knowledge: Expanding Horizons for Information Science, Proceedings of the 30th Annual Conference of the Canadian Association for Information Science, Toronto, 30 May-1 June, 2002*, Faculty of Information Studies, University of Toronto, Toronto, pp. 1-13.
- Metoyer-Duran, C. (1991), "Information-seeking behavior of gatekeepers in ethnolinguistic communities: overview of a taxonomy", *Library & Information Science Research*, Vol. 13, pp. 319-46.
- Metoyer-Duran, C. (1993), "Information gatekeepers", in Williams, M.E. (Ed.), *Annual Review of Information Science and Technology*, Vol. 28, Learned Information, Medford, NJ, pp. 111-50.
- Millar, W.J., Wadhwa, S. and Nimrod, C. (1992), "Multiple births: trends and patterns in Canada, 1974-1990", *Health Reports*, Vol. 4 No. 3, pp. 223-43.
- Pettigrew, K.E. (1997), "The role of community health nurses in providing information and referral to the elderly: a study based on social network theory", unpublished doctoral dissertation, The University of Western Ontario, London.
- Pettigrew, K.E. (1999), "Waiting for chiropody: contextual results from an ethnographic study of the information behaviour among attendees at community clinics", *Information Processing and Management*, Vol. 35, pp. 801-17.
- Potter, J. (1996), *Representing Reality: Discourse, Rhetoric and Social Construction*, Sage, Thousand Oaks, CA.
- Potter, J. and Wetherell, M. (1987), *Discourse and Social Psychology; Beyond Attitudes and Behaviour*, Sage, London.
- Rosenbaum, H. (1993), "Information use environments and structuration: towards an integration of Taylor and Giddens", in Bonzi, S. (Ed.), *Proceedings of the 56th Annual Meeting of the American Society for Information Science*, Vol. 30, Learned Information, Medford, NJ, pp. 235-45.
- Ross, C.S. (1999), "Finding without seeking: the information encounter in the context of reading for pleasure", *Information Processing and Management*, Vol. 35, pp. 783-99.
- Ross, C.S. and Dewdney, P. (1998), "Negative closure: strategies and counter-strategies in the reference transaction", *Reference & User Services Quarterly*, Vol. 38 No. 2, pp. 151-63.
- Rothbauer, P.M. (2002), "Michel de Certeau and everyday life information seeking", paper presented at Connections 7: Information Odyssey: The 7th Great Lakes Information Science Conference, The University of Western Ontario, London, Ontario, 11-12 May.
- Savolainen, R. (1995), "Everyday life information seeking: approaching information seeking in the context of 'way of life'", *Library & Information Science Research*, Vol. 17, pp. 259-94.

- Statistics Canada (1999), *Profile of Census Divisions and Subdivisions in Ontario*, Industry Canada Census of Canada, Ottawa.
- Statistics Canada, Health Statistics Division (1999), *Births and Deaths, 1997: Shelf Tables*, Statistics Canada, Ottawa.
- Toms, E. (1998), "Information exploration of the third kind: the concept of chance encounters", paper presented at the Making the Impossible Possible, Association for Computing Machinery Special Interest Group on Computer-Human Interaction Conference on Human Factors in Computing Systems, 18-23 April, Los Angeles, CA, available at: [www.fxpal.com/ConferencesWorkshops/CHI98IE/submissions/long/toms/Default.htm](http://www.fxpal.com/ConferencesWorkshops/CHI98IE/submissions/long/toms/Default.htm) (accessed 21 July 2002).
- Tuominen, K. and Savolainen, R. (1997), "A social constructionist approach to the study of information use as a discursive action", in Vakkari, P., Savolainen, R. and Dervin, B. (Eds), *Information Seeking in Context: Proceedings of An International Conference in Information Needs, Seeking and Use in Different Contexts, 14-16 August, Tampere, Finland*, Taylor Graham, London, pp. 81-96.
- Westbrook, L. (1996), "User needs", *Encyclopedia of Library and Information Science*.
- Williamson, K. (1997), "The information needs and information-seeking behaviour of older adults: an Australian study", in Vakkari, P., Savolainen, R. and Dervin, B. (Eds), *Information Seeking in Context: Proceedings of An International Conference on Research in Information Needs, Seeking and Use in Different Contexts, 14-16 August, Tampere, Finland*, Taylor Graham, London, pp. 337-50.
- Williamson, K. (1998), "Discovered by chance: the role of incidental information acquisition in an ecological model of information use", *Library and Information Science Research*, Vol. 20 No. 1, pp. 23-40.
- Wilson, P. (1977), *Public Knowledge, Private Ignorance*, Greenwood, Westport, CT.
- Wilson, T.D. (1997), "Information behaviour: an inter-disciplinary perspective", in Vakkari, P., Savolainen, R. and Dervin, B. (Eds), *Information Seeking in Context: Proceedings of An International Conference on Research in Information Needs, Seeking and Use in Different Contexts, 14-16 August, Tampere, Finland*, Taylor Graham, London, pp. 39-50.
- Wilson, T.D. (1999a), "Models in information behaviour research", *Journal of Documentation*, Vol. 55 No. 3, pp. 249-70.
- Wilson, T.D. (1999b), "Exploring models of information behaviour: the 'uncertainty project'", *Information Processing & Management*, Vol. 35 No. 6, pp. 839-49.
- Zimmerman, D. and Wieder, D.L. (1977), "The diary: diary-interview method", *Urban Life*, Vol. 5, pp. 479-98.