

How things fit together: a general model of the information behaviour field

Elke Greifeneder and Kirsten Schlebbe

Abstract

Introduction. *Anyone new to a research field may easily feel overwhelmed by the sheer number of new concepts and must struggle with how things fit together. The aim of this paper is to initiate a discussion about a new general model for information behaviour as a field, and to serve both as an introduction and as a tool to highlight understudied areas within the field.*

Methods. *The paper compares previous general models, textbooks, and a subject index with standard definitions of information behaviour. Based on the analysis, a new general model of the information behaviour field is developed.*

Analysis. *A comparative analysis was used.*

Results. *The paper argues that the existing general models of information behaviour do not reflect the breadth of the field as seen in community-accepted definitions of information behaviour. The analysis also shows that topics like information discovery and information seeking are overrepresented in textbooks and subject indices.*

Conclusions. *The new model illustrates the breadth of the field, explains how topics fit together and highlights research areas that are in special need of attention.*

Keywords: *information avoidance, information behaviour, information management, information seeking behaviour, information sharing, information use, personal information management, model*

Introduction

Anyone new to a field of research may easily feel overwhelmed by the sheer number of new concepts and must struggle to understand how things fit together. Information behaviour class syllabi are full of specialised terms, theories, frameworks, models, and paradigm shifts which are separately discussed and researched, but rarely put into one all-embracing picture that helps to understand what information behaviour encompasses and what it does not.

Information behaviour is defined as ‘*the many ways in which human beings interact with information, in particular, the ways in which people seek and utilize information*’ (Bates, 2017, p. 2074). Tom Wilson’s definition is also often cited: ‘*the totality of human behaviour in relation to sources and channels of information, including both active and passive information seeking, and information use*’ (Wilson, 2000, p. 49). Both authors use words like the ‘*many ways*’ or ‘*the totality of human behaviour*’ to describe what information behaviour research consists of: the field is about seeking, using, creating, and non-using information. While communication and media studies focus on the communication process as their object of interest, and psychology and ethnography focus on humans, it is the interaction with information that lies at the heart of information behaviour research. Or as Bates (1999) puts it: ‘*we study behaviour with the purpose of understanding information creation, seeking, and use. We do not just study people in general*’ (p. 1048).

The aim of this paper is to initiate a discussion about a new general model of the information behaviour field that can serve as an introduction for newcomers and as a tool to highlight understudied areas in the field. The paper offers a theoretical discussion about the multidisciplinary field of human information behaviour and the development of new general models. The remainder of this paper is structured as follows: after analysing how the field is depicted in previous information behaviour models and textbooks, a new general model is introduced and discussed.

Background

Models as ideal visualisations of reality help to establish order and to clarify relationships. The information behaviour field has an abundance of models: Fisher, et al.’s handbook on theories of information behaviour (2005) describes twenty-nine models and frameworks. Case and Given (2016) present twelve information seeking models and cite fifteen further models in a chapter called ‘*additional models*’ (p. 173). Despite the wealth of models, few models explain the field as a whole. Most models focus on one aspect of information behaviour, such as seeking (Kuhlthau, 1993), information practices (McKenzie, 2003), sharing (Friedrich, 2020), or sense-making (Dervin, 2015). There are only a few general models, of which seven will be discussed here.

Undoubtedly the most cited model is Wilson’s (1999) nested model, which depicts three interlinked circles. In the inner circle, Wilson puts information search, followed by an information seeking circle, surrounded by information behaviour as the outer circle. Compared to the definitions above, the model shows a restricted picture of the existing modes of information interaction, since it focuses on searching and seeking and is rather vague about the content of the outer information behaviour circle. Recently, Wilson (2020) revisited some of his research and added the concept of information discovery as a generic term for which information seeking is just one mode. A revised nested model might include a fourth circle called information discovery, but it would not address the vagueness of the outer circle. Bawden and Robinson (2022) take a similar approach, adding a fourth circle to Wilson’s (1999) nested model with the additional component of *information gathering*, which includes activities ‘*lying between information seeking and the broadest idea of information behaviour and covering a variety of means of information acquisition in addition to purposeful seeking*’ (Bawden and Robinson, 2022, p. 232).

In his book, Wilson presents an expanded model of discovery modes (Wilson, 2020, p. 42), which is depicted in Figure 1 below. This model differs significantly from his previous models because it brings accidental discovery, monitoring activities and mediated behaviour into the model of information behaviour activities.

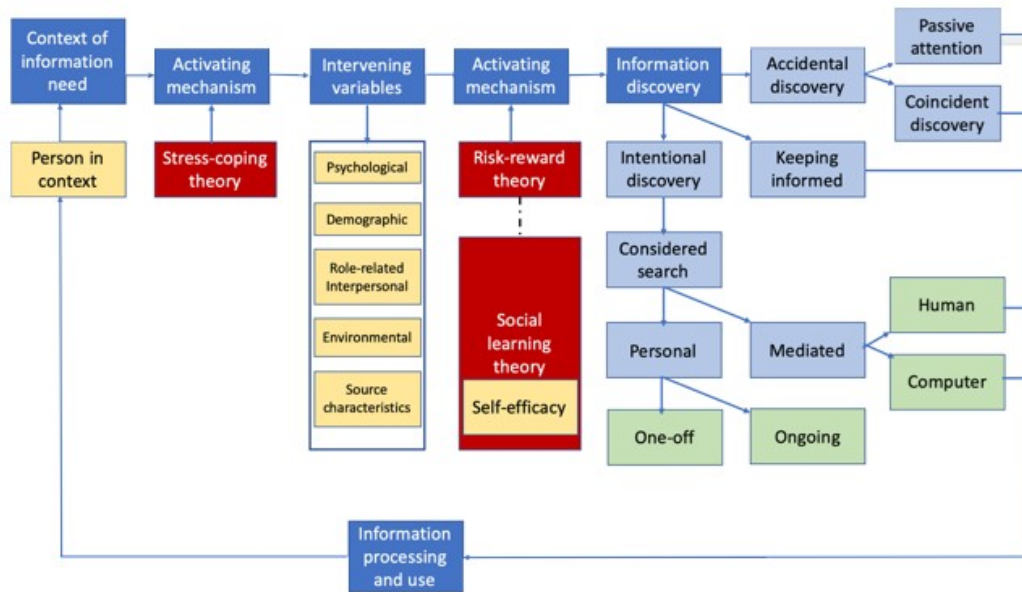


Figure 1: An expanded model of information discovery modes (Source: Wilson, 2020, Fig. 4.7, p. 42).

Niedzwiedzka's (2003) model is a critique of Wilson's (1997) earlier model of seeking processes and a note-worthy revision. However, although she calls it a general model of information behaviour, it focuses almost exclusively on information seeking. Robson and Robinson's (2013) model brings together information seeking and communication. This model at least mentions the use of information or its non-use, but again the focus of the model is on the process of information acquisition. Savolainen (2008) addresses information seeking as well as information use and sharing in his model of everyday information practices. However, the non-interaction with information is not part of this model.

Pohjanen and Kortelainen's (2016) model of information behaviour and information barriers is the only one that the authors know of that embraces the full breadth of information activities and represents best the definitions of the field. Figure 2 depicts this model, which lists active information seeking, scanning, non-directed monitoring, search by proxy, sharing and abstaining as potential information interactions. The focus of the model is, however, not on the relationships of those information interactions, but on barriers. While it is helpful to explain the breadth of the field, it gives no guidance about what belongs together.

Probably the most recent contribution to the development of a general model of information behaviour was made by Agarwal (2022). In his paper, he analysed numerous earlier models and combined them into a unified model of information seeking behaviour. However, as the name of the model already indicates and as Agarwal himself identifies as a limitation, the model focuses on information seeking behaviour, while phenomena such as information avoidance are mentioned only indirectly.

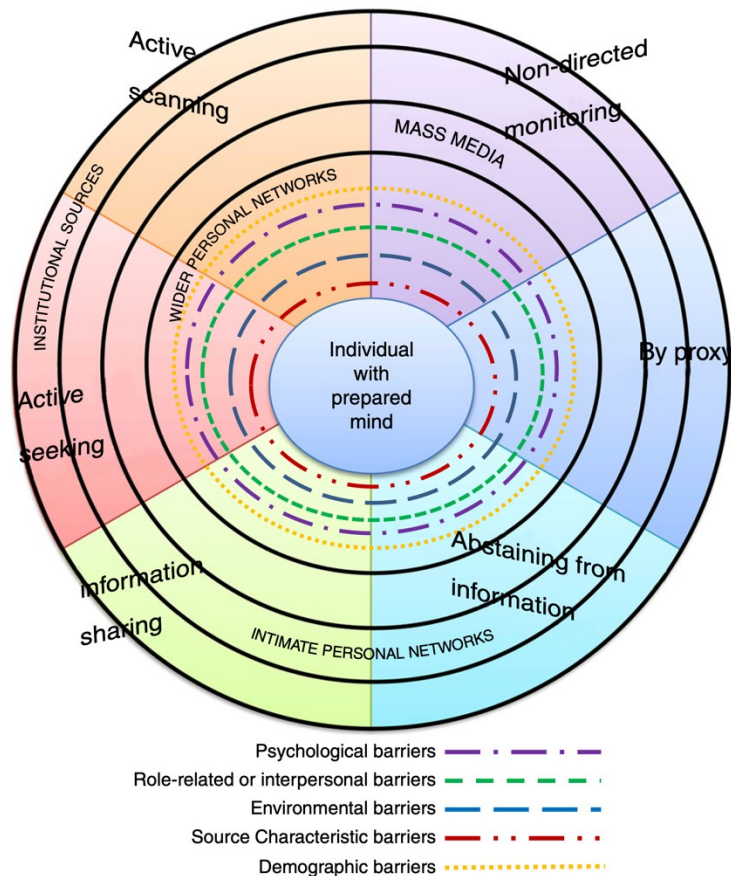


Figure 2: A model of information behaviour and information barriers (Source: Pohjanen and Kortelainen, 2016, Fig. 1, p. 184).

The focus on information seeking behaviour is not only evident in general information behaviour models, but also in information behaviour textbooks. Case and Given's (2016) excellent and de facto standard textbook on information behaviour offers a single page on *information use*, that mainly discusses how researchers have defined information use in many ways (p. 93). There are twelve pages on *information exposure* but only a single page on *information avoidance* (p. 117). *Personal information management* is entirely missing as an information behaviour topic in the textbook.

The subject index of the journal *Information Research* (2022) links to thirty-seven studies with the keyword *information use*, fourteen studies on *personal information management*, four studies on *information avoidance*, two papers on *information creation* (with no explicit subject index for information creation), forty-six papers on *information sharing*, and 165 papers on *information seeking and retrieval*. The dominance of information seeking as a topic in information behaviour is undeniable.

In summary, previous models of information behaviour have focused heavily on the topic of information seeking, with no or only indirect mention of information non-use or other types of information behaviour. Consequently, there is no general model of information behaviour that depicts the various human interactions with information and puts those in relationship to each other.

Conceptualization of a model

A new model of information behaviour needs to encompass the 'many ways', as Bates (2017) put it, in which people interact with information. Wilson's (2000) definition also points out the non-seeking activities that ought to be included. Note that non-use activities imply a decision to not seek information. One could argue in favour of Wilson's (2020) work that the activating mechanisms in Figure 1 represent hidden non-use activities, because stress reduction can be one reason for

information avoidance. However, non-use activities are still hidden and ought to be represented with a box, as is information discovery.

Based on these observations, a general model of the information behaviour field, as shown in Figure 3, can be divided into the areas of *information non-use* and *information use*. Both areas are part of the information behaviour field and represent the totality of the (non-)interactions of humans with information. As with all models, this is an ideal-typical representation. Indeed, the classification of the forms of information behaviour is not always as clearly hierarchical as presented. The term *information use*, for example, is considered an umbrella term for various forms of interaction with information, and at the same time, as an activity that takes place after the discovery of information (Kari, 2010). The areas mentioned are also not complete but represent only a selection of existing and future topics.

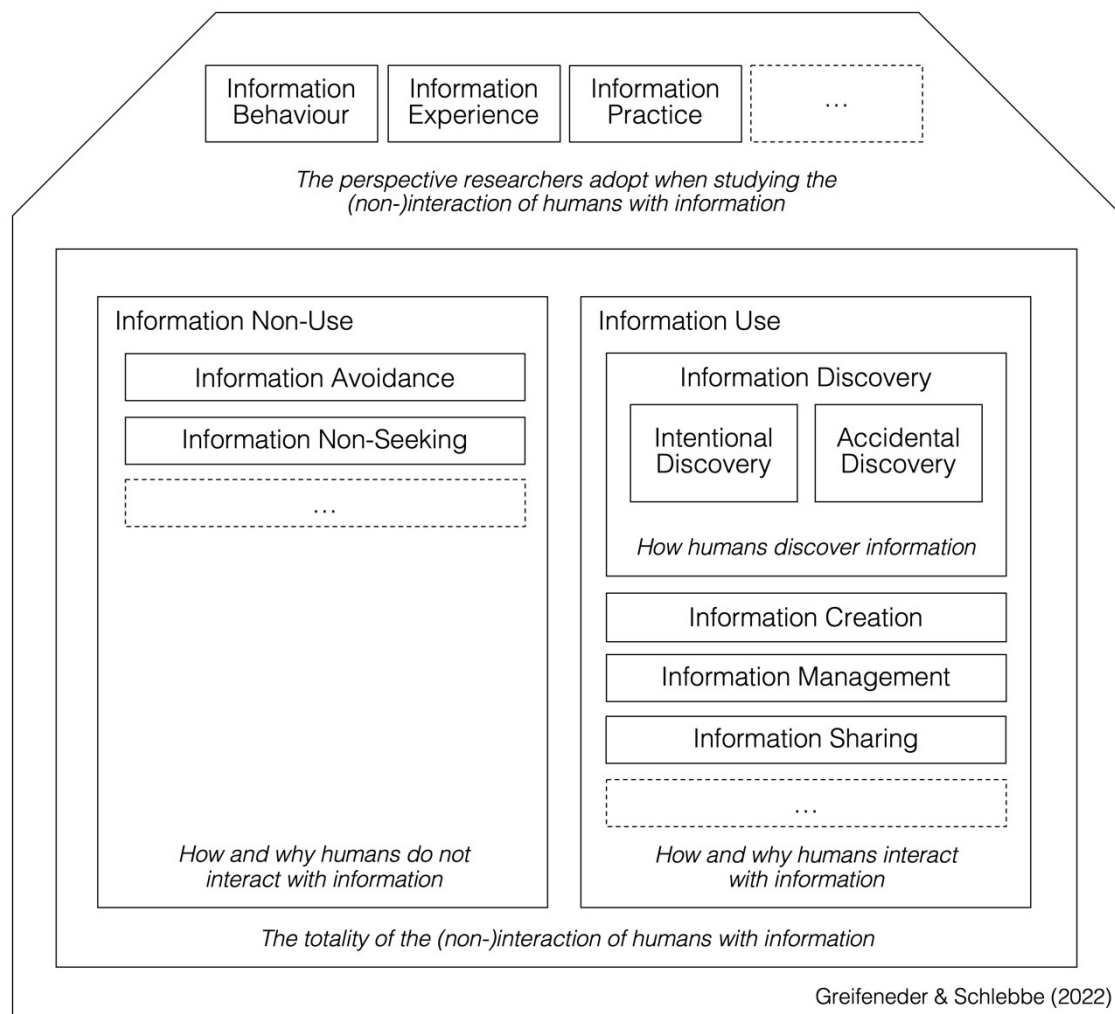


Figure 3: A general model of the information behaviour field.

Information non-use

In the area of *information non-use*, researchers examine how and why humans do not interact with information. There is a veritable dearth of research on information non-use within the information behaviour field, and research from other disciplines, especially psychology and economics, has dominated so far. The most studied topic in this area is *information avoidance*, which is defined as the intentional avoidance of relevant information (Golman, et al., 2017). *Information overload* is not defined as an information behaviour, but an overload may lead to information avoidance, which is why avoidance and overload are usually considered together (Bawden and Robinson, 2009). The research topic of *information non-seeking* behaviour also belongs to this area (Manheim, 2014).

Coping with information, selective exposure and dealing with disagreements are also assigned to the area of non-use (Case, et al., 2005).

Information use

Information use includes all activities related to the use of information. The term encompasses multiple areas that examine how and why people interact with information. In the model presented in this paper, *information use* is defined as an umbrella concept that covers a wide range of activities and is, therefore, positioned at a higher level than the concept of *information discovery*. As noted, this definition is controversial, because some researchers consider information use to be a secondary aspect of information discovery (Kari, 2010).

In terms of the various information use activities, the most studied activity in information behaviour research is *information discovery* (Greifeneder, 2014; Julien, et al., 2011). Much less frequently, information behaviour research explores *information management*, *information creation*, *information sharing* or other forms of information use.

Information discovery includes established areas of information behaviour such as *information searching* and *information seeking*. According to Wilson (2020), Figure 1 shows the central research areas that can be subordinated to the field of information discovery. Compared to earlier versions of the model (Wilson, 1997), *information discovery* replaces *information seeking* as the generic term, since the term *discovery* encompasses both intentional and unintentional encounters with information, whereas the term *seeking* implies an intentional behaviour.

As part of information discovery, *intentional discovery* describes research that assumes that a conscious need for information exists, and that people pursue the information actively. In this context, Wilson (2020) makes a distinction between a *personal search* for information, conducted by the person with the information need, and a *mediated search*, where another person or a machine takes over the search for information. *Monitoring*, or as Wilson (2020) calls it, *keeping informed*, is concerned with the purposeful tracking of events in an area of interest (Ellis, 1989). This field is less research intensive but is increasingly entering the information science community as a service provided by information specialists. *Accidental discovery*, in contrast, is classified as the unstructured or unplanned discovery of information and refers to the accidental but useful finding of information. In this context, Wilson (2020) distinguishes between the discovery by *passive attention* and the *coincident discovery* of information. The three most popular concepts in this area are *information encountering*, *incidental information discovery*, and *serendipity* (for an overview, see Agarwal, 2015).

Information management is mainly studied in the field of personal or organisational information and knowledge management. In personal information management, researchers investigate how people create, find, store, organise, and retrieve information (Jones, 2010). This definition clearly shows that personal information management combines many topics of information use such as information creation, information sharing or information discovery. Although the guiding questions of personal information management are clearly related to topics of information behaviour, the topic is mostly studied by researchers outside the information behaviour community, with a few exceptions (*e.g.*, Hartel, 2010). Therefore, the focus of personal information management research is mainly on questions of knowledge organisation (for an overview see Dinneen and Julien, 2020) or the typification of behaviour. Research on organizational information and knowledge management deals with the processing of information in work and business-related contexts (Detlor, 2017). This research also has strong overlaps with the field of information behaviour, but again, many of the studies are conducted by researchers from other research communities.

Besides research on discovering and organizing information, there has been an increase in the study of *information creation* in recent years (Gorichanaz, 2019), especially in the context of participatory culture (Koh, 2013). *Information sharing* also plays an increasingly important role, especially since the growth of social media use. An example of a framework for information sharing is Fisher, et al.'s (2007) *information grounds* which examines how information places must be constituted for

information exchange to occur. The information sharing behaviour of data communities (Friedrich, 2020) is also a growing area of research. However, much of the research on information sharing in social networks has been conducted outside the information behaviour community in fields like interactive information retrieval, economics, or scientometrics (e.g., Osatuyi, 2013; Ranzini, et al., 2020). Other forms of information use not explicitly listed in the model and represented by an ellipsis, include, for example, the evaluation of information (Savolainen, 2011).

Also closely related to various aspects of information use is the topic of *information literacy*. However, even though there are undoubtedly numerous overlaps between information behaviour and information literacy research (Julien and Williamson, 2011), we consider information literacy to be an independent field of research, so we decided not to integrate it into the presented model of information behaviour.

Perspectives on information interactions

The different forms of human interaction with information visualised in Figure 3 are not viewed from the same perspective by all researchers and are conceptualised differently. Three currently dominant parallel meta-perspectives on information behaviour are *information behaviour*, *information practice*, and *information experience*.

The most popular research perspective, *information behaviour*, focuses on the interactions of individuals and their motivations and needs (Bates, 2017). The approach of *information practices*, on the other hand, focuses on people in situations, their context, and on the social and cultural influences that affect information behaviour (McKenzie, 2003; Savolainen, 2007). The *information experience* perspective has existed for some time but is still under development as an explicitly named theoretical construct. This perspective conceptualises information behaviour as the experiences people have when dealing with information (Bruce, et al., 2014; Gorichanaz, 2017).

Conclusion

This paper argues that the existing general models of information behaviour do not reflect the breadth of the field as it has been marked out by community-accepted definitions of information behaviour. The paper shows further that the overrepresentation of the topics of information discovery and information seeking is manifested in textbooks and subject indices. The misrepresentation of certain information behaviour topics in general information behaviour models is dangerous for a research field because over time it leads to an even greater imbalance since new studies are influenced by those models. It is also very difficult for newcomers to find orientation in a continuously growing and diverse field.

To address these issues, this paper presents a new general model of the field of information behaviour that distinguishes between *information use* and *information non-use* and different meta-perspectives on information interactions. It must be noted that even such an extended general model can only reflect reality in a simplified form and, therefore, will not be able to address every single potential aspect of human information behaviour. Thus, the model presented is not to be considered complete or final. Instead, the aim of this model is to illustrate the breadth of the field, to explain how topics fit together and to highlight research areas that need special attention.

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