Subject domain expertise of ISIC2018 reviewer community: a scoping review

Ina Fourie, Tumelo Maungwa and Theresa Dirndorfer Anderson

Introduction. The paper reports on the subject domain expertise of the ISIC2018 international programme committee (i.e., reviewers) to assess how the reviewer expertise reflects information behaviour research, related fields, trends in the information behaviour research landscape, and opportunities for collaboration.

Method. The paper is based on a scoping review of selected key publications of reviewers indexed in three proprietary databases covering library and information science and interdisciplinary research. References were exported to EndNote databases; one per reviewer.

Analysis. A thematic analysis of more than four thousand references (duplicates removed) identified the key focus areas of information behaviour. Titles and abstracts of mostly journal articles were analysed. Publications in non-English languages are included based on English titles and abstracts.

Findings. Reviewers published on eleven major information behaviour themes and subthemes, and a variety of topics other than information behaviour that can strengthen collaboration and the scope of information behaviour research.

Conclusion. The ISIC2018 international programme committee is well qualified to review papers within the scope of information behaviour, (i.e., the variety of target groups, contexts, demographic factors, and information activities). Representation of countries not typically attending ISIC conferences and benefiting from auxiliary research expertise must needs further investigation.

Introduction

Responsible and authoritative peer reviewing are essential requirements for intellectual growth and expansion in any scholarly community (Weller, 2002). Review processes are, however, also often met with scepticism, and concern about gatekeeper effects (Gould, 2013; Moran, 1998), inclusion and exclusion, but also with acknowledgement of its strengths and benefits (Schwartz et al., 2010).

Reviewers’ subject expertise and qualities such as willingness to share knowledge and develop a scholarly community are important when planning a programme committee. Timeliness in returning reviews, constructive feedback, acceptance of different schools of thought and methodologies, experience in research supervision and examination and editorial experience enhance the reputations of reviewers. Subject domain and multidisciplinary expertise are very important. Morris and Van der Veer Martens (2008, p. 213) explain: ‘Specialities are important in science because of their crucial role in the creation and validation of scientific knowledge’. We can map expertise in various ways (Ingwersen, Larsen and Noyons, 2001).
The ISIC2018 international programme committee had 69 reviewers. Their names appear on the ISIC2018 website (http://www.isic2018.com/programme/isic-2018-programme.html). More people were invited but some declined due to retirement, not being active in the field any more or due to other commitments. A few, did not respond. We analysed the research publications (mostly articles with a few books) of the reviewers indexed by four key proprietary databases. Reviewers were from a diversity of continents and countries, including Australia, Canada, Croatia, Denmark, Finland, France, Japan, Singapore, South Africa, Spain, Sweden, United Kingdom, and United States. Apart from English, some also publish in Finnish, French, Japanese, Polish, and Spanish. The paper is a first step in exploring reviewer expertise as a means to enrich the research community. Since the paper only considered output indexed by proprietary databases, findings do not represent the full spectrum of expertise such as supervisory and examination expertise, conference presentations, workshops, unpublished keynote addresses, and self-projecting as on websites, blogs and curriculum vitae’s. This belongs in a follow-up project.

This paper briefly explains the purpose of the project, role of the authors in terms of conceptualising the paper, literature searches and selection of references, the thematic analysis and expertise mapping, suggestions for further work and conclusion.

**Purpose of paper – knowledge map as boundary object**

The ISIC scholarly community of information behaviour and practice face many exciting developments and challenges: growing trends for interdisciplinary research (Case and Given, 2016) and pressure for research with value and impact for society. Reviewers serve as gatekeepers of the dissemination of ideas through publications, conferences and other scholarly venues. There is often the irony of differences of opinion on relevance for the research community and the challenge of evaluating established ideas versus new ones. The idea for the project was conceptualised by Theresa Anderson (third author), and it began with two simple questions:

- Who are our ISIC gatekeepers?
- How do we design a review process that maintains quality standards but remains open minded to new ideas?

To answer these questions we sought to build an expertise or knowledge map, initially based on the research output indexed in four proprietary databases. We intended to built a set of working matrixes of reviewer expertise as first round in an action research project on an ISIC reviewer knowledge map as boundary object (Huvila, Anderson, Jansen, McKenzie and Worrall, 2017).

**Literature searches, selection, and analysis**

Three key databases in library and information science, Library and Information Science Abstracts, Library and Information Source Index and Library and Information Science Technology Abstracts, as well as the interdisciplinary database, Thomson Reuters Web of Knowledge, were searched for different variations of reviewer names (e.g. Theresa Anderson, and Theresa Dirndorfer Anderson or for variations in initials). The first and second authors, Ina Fourie and Tumelo Maugnwa, did the literature
searching, selection, thematic analysis and mapping of expertise. We exported references to EndNote databases for each reviewer and removed duplicates, book reviews and incomplete references. We included references from sources in languages other than English; the titles and abstracts were in English and acknowledgement of expertise in languages such as Spanish, Polish and Japanese can strengthen the contribution of this paper. References were mostly for articles, with limited coverage of conference papers, chapters in books and books. In total, we worked through the titles and abstracts of more than four thousand references and therefore had to be selective. Some reviewers have extensive lists of publications and research collaborations, while others had much less. Although readers might not agree with all our choices, we tried to reflect core issues related to information behaviour with care. Although not a full review, we consider our knowledge mapping sufficient for a scoping exercise.

Mapping of topical expertise

Some reviewers have extensive experience in the field of information behaviour through their work as reviewers, journal editors, supervisors, examiners, and their own research. Names that stand out include Reijo Savolainen, Tom Wilson, Elena Macevičiūtė, Charles Cole and Andrew Cox. Some are widely acknowledged for conceptual and theoretical contributions, notably Reijo Savolainen (2016d, 2017a,b,c) and Peter Ingwersen (Ingwersen and Järvelin, 2005). Others for how their work relates to other fields that benefit from the understanding of information behaviour. Such fields include information literacy (Aharony and Bronstein, 2014b; Aharony et al., 2017; Julien, 2000; Limberg, 2009; Lloyd, 2010b), information retrieval and specifically interactive information retrieval (Ingwersen, 1992; Xie, 2007), and the learning sciences (Hansen and Rieh, 2016). Reviewers who developed widely cited models include David Ellis (1980b), Carol Kuhlthau (1988), Reijo Savolainen (2008b) and Tom Wilson (1999 a, b). Some reviewers have developed a reputation for their application of theories, such as David Allen for activity theory (2011) and Annemaree Lloyd (2010 a, c) and Sanna Talja (Talja, Keso and Pietiläinen, 1999) for practice theory and other theoretical issues. Christine Stilwell (2010) reviewed information behaviour research in the South African context, Charles Cole wrote on information behaviour in general (Spink and Cole, 2006), Theresa Anderson on information seeking research per se (Anderson and Orsatti, 2008) and Hester Meyer (2016) developed a model of building blocks of information behaviour to support novice researchers. Heidi Julien co-authored a review chapter for Annual Review of Information Science and Technology (Fisher and Julien, 2009). She and her co-workers have also reported on trends in information behaviour research (Julien and O’Brien, 2014; Julien, Pecoskie and Reed, 2011).

Expertise can be categorised in many ways and often scholars work in different fields of specialisation at the same time. Sanda Erdelez, an expert on information encountering and serendipity, has also done research related to Alzheimer’s disease (Erdelez, Howarth and Gibson, 2015), and Preben Hansen on collaborative information seeking (Hansen and Widén, 2017; Hansen, Shah and Klas, 2015). Lisa Given (2008a, b; 2015), an expert in qualitative research methods is also recognised for her work on photovoice and affordance theory (Julien, Given and Opryshko, 2013).
This paper discusses ISIC2018 reviewers' topical expertise under eleven subheadings derived from models of information behaviour (Case and Given, 2016; Ford, 2015; Johnson and Case, 2012) namely: context, components and elements of context; actors; information activities and information encounters; information carriers; information fields; antecedents, triggers and barriers; information needs; theories; models; methodologies; and cross-cutting expertise. Each are briefly discussed with examples of reviewer expertise and sub-divisions; the examples are not exhaustive although we tried to do justice to the extensive body of research output. Our focus is on the scope of expertise and not individual achievements, and often we keep to the author’s labelling of their work.

**Expertise according to context, components and elements of context**

The meaning and importance of context as a key focus in studies of information behaviour have been widely discussed and debated (Kari and Savolainen, 2004a; Lloyd, 2010b; Lloyd and Williamson, 2008; Savolainen, 2009e). Context is situated in a larger environment such as a country, society or organisation. Reviewer expertise reflects conceptual discussions with strong theoretical underpinnings, research in a wide variety of specific contexts, specific situations, situations in progress, and elements of contexts such as time, motivation and space Charles Cole (Cole and Leide, 2003), Makiko Miwa (Miwa and Kando, 2007), Reijo Savolainen (2006b,c); Kari and Savolainen (2007) and Sanna Talja (Talja and Hartel, 2007; Talja and McKenzie, 2007). Table 1 portrays expertise on context.

<table>
<thead>
<tr>
<th>Topical focus: context</th>
<th>Examples of reviewers with related expertise</th>
</tr>
</thead>
</table>
Alzheimers: Sandra Erdelez (Erdelez et al., 2015)  
Chronic illness e.g. HIV/AIDS: Ina Fourie and Heidi Julien (Julien and Fourie, 2015); Christine Stilwell (Ntombela, Stilwell and Leach, 2008); Tiffany Veinot (Flicker et al., 2004; Kaziunas, Ackerman and Veinot, 2013; Meadowbrooke, Veinot, Loveluck, Hickok and Bauermeister, 2014; Veinot, Caldwell, Loveluck, Arnold and Bauermeister, 2016; Veinot, Harris, Bella, Rootman and Krajnak, 2006)  
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**Health in general and health information needs:** Jannica Heinström (Ek and Heinström, 2011); Malgorzata Kisilowska (2004); Paloma Korycińska (Niedźwiedzka and Korycińska, 2016); Annemaree Lloyd (2014a); Pamela McKenzie (2002, 2010); Hester Meyer (Khayesi, Meyer and Machet, 2013); Tiffany Veinot (Hawkins, Costello, Veinot, Gibson and Greyson, 2017)

**Home care:** Hester Meyer (Khayesi et al., 2013); Christine Urquhart (Cooper and Urquhart, 2005, 2008)

**Mental disorders:** Paloma Korycińska (Niedźwiedzka and Korycińska, 2016)

**Obesity:** Maija-Leena Huotari (Enwald and Huotari, 2010)

**Obsessive compulsive disorder:** Jenny Bronstein (2014a)

**Pain:** Ina Fourie (Fourie and Nesset, 2017)

**Palliative care:** Theresa Anderson, Ina Fourie and Hester Meyer (Anderson and Fourie, 2015, 2017; Fourie, 2008, 2010; Fourie and Meyer, 2014)

**Pre-diabetic:** Maija-Leena Huotari (Enwald et al., 2013; Enwald et al., 2012)

**Sexuality education:** Tiffany Veinot (Kimmel et al., 2013; Veinot et al., 2016)

### Academic: including studies at institutions of higher education (universities), schools, types of education and learning such as distance education, virtual and e-learning, formal and informal learning.

**E-and virtual learning:** Charles Cole (Wright, Park and Cole, 2011); Elena Macevičiūtė (2006); Eric Meyers (2009b); Trine Schreiber (2013, 2017a)

**Formal and informal learning:** Sanna Talja (2007)

**Higher education institutions:** Charles Cole (2000a,b)

**Schools:** Anna Lundh and Louise Limberg (Lundh and Alexandersson, 2012; Lundh and Limberg, 2008, 2012); Malgorzata Kisilowska (Galecka, Kisilowska and Jasiewicz, 2017); Paul Solomon (1994); Olof Sundin (Lundh, Francke and Sundin, 2015; Carlsson and Sundin, 2017)

### Organisations and institutions: e.g. workplaces often with specific aims and purposes.

**Digital workplaces:** Eric Thivant (Thivant and Bouzidi, 2008)

**Information collaboration in workplace:** Gunnilla Widén (Widén, Ahmad and Huvila, 2007; Han-Cheol et al., 2013)
<table>
<thead>
<tr>
<th>Research contexts: studies on research information behaviour cover a wide array of disciplines. There are two prominent issues: (i) the nature and essence of research and (ii) the requirements from the discipline as such.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social network context: Jutta Haider (2016a); Hester Meyer (Du Preez and Meyer, 2016); Olof Sundin (Kjellberg, Haider and Sundin, 2016)</td>
</tr>
<tr>
<td>Research: Steinerová and Hrckova (2014)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Leisure, hobbies, sport</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leisure and serious leisure: Andrew Cox (Cox and Blake, 2011; Cox, Griffin and Hartel, 2017; Hartel, Cox and Griffin, 2016); Jenna Hartel (2003, 2006, 2010; Hartel et al., 2016); Ian Ruthven (Albassam and Ruthven, 2018)</td>
</tr>
<tr>
<td>Hobbies: Jenna Hartel (2003)</td>
</tr>
<tr>
<td>Gourmet cooking: Jenna Hartel (2006, 2010)</td>
</tr>
<tr>
<td>Exercise: Maija-Leena Huotari (Hirvonen, Huotari, Niemela and Korpelainen, 2012)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Everyday life</th>
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<tbody>
<tr>
<td>Everyday life in general: David Ellis (Mawby, Foster and Ellis, 2015); Annemaree Lloyd (Lloyd and Wilkinson, 2016); Reijo Savolainen (1995, 2008b; Savolainen and Kari, 2004a); Ivanka Stričević (Kolarić and Stričević, 2016); Tom Wilson (2011)</td>
</tr>
<tr>
<td>Context of poverty: Charles Cole (Spink and Cole, 2001); Ian Ruthven (Hasler, Ruthven and Buchanan, 2014)</td>
</tr>
<tr>
<td>Weddings: Pamela McKenzie (McKenzie and Davies, 2010)</td>
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<td>Health: Reijo Savolainen (2007b)</td>
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<tr>
<th>Virtual contexts</th>
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<tr>
<td>Webometrics, informetrics, cybermetrics and other metrics</td>
</tr>
</tbody>
</table>
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(library, journal, alternative): Judit Bar-Ilan (2000b, 2002a; Greenberg and Bar-Ilan, 2017; Milojevic, Radicchi and Bar-Ilan, 2017; Shema, Bar-Ilan and Thelwall, 2014; Peter Ingwersen (Björneborn and Ingwersen, 2001, 2004); Ian Ruthven (Tombros, Ruthven and Jose, 2005)

Web user interaction: Peiling Wang (Berry, Wang and Yang, 2003; Wang, Hawk and Tenopir, 2000)

Other

Makerspaces: Ross Todd (Li and Todd, 2016)
Political protest: Lisa Given (Wallis and Given, 2016)
Self-development: Reijo Savolainen (Kari and Savolainen, 2004b)

Conceptualisation and theoretical issues of context

A deeper appreciation of context can add value to information behaviour studies in multi-contextual environments (Johnson, 2003). Interpretations and understanding of context influence what is studied. Many discussions and debates have been published (Case and Given, 2016).

Conversation in information-seeking contexts: Paul Solomon (1997a)
Discovering information in context: Paul Solomon (2002)
Meaning of context: Reijo Savolainen (2012a)
Task related context: Noa Aharony (2006)

Elements of context

These can include time, motivation, spatial and social.

Reijo Savolainen (2006b)

Situations in progress

The phrases person-in-situation and person-in-progressive situation refer to people in situations where information needs change due to the circumstances of the situation e.g. abuse getting worse

Abuse and neglected children: Julie Hersberger (Hersberger, Murray and Sokoloff, 2006)
Behavioural change in stages: Maija-Leena Huotari (Hirvonen, Pyky, Korpelainen and Huotari, 2015; Hirvonen et al., 2012)
Table 1: Reviewer expertise on context

<table>
<thead>
<tr>
<th>Occupational roles</th>
<th>Examples of reviewers with related expertise</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Artisan fisher folk:</strong></td>
<td>Dennis Ocholla (<a href="#">Ikoja-Odongo and Ocholla, 2003</a>).</td>
</tr>
<tr>
<td><strong>Designers:</strong></td>
<td>Ole Pilerot (2013, 2014a); Eric Thivant (<a href="#">Thivant, 2016</a>) (financial products).</td>
</tr>
<tr>
<td><strong>Early career workers and researchers:</strong></td>
<td>Carol Kuhlthau (1999); Marzena Świgoń (2017b).</td>
</tr>
<tr>
<td><strong>Government staff:</strong></td>
<td>Trine Schreiber (<a href="#">Berger, Hertzum and Schreiber, 2016</a>).</td>
</tr>
<tr>
<td><strong>Library and information professionals:</strong></td>
<td>Makiko Miwa (2012).</td>
</tr>
<tr>
<td><strong>Library users:</strong></td>
<td>Jela Steinerová (<a href="#">Steinerová and Šušol, 2005, 2007</a>).</td>
</tr>
<tr>
<td><strong>Newcomers:</strong></td>
<td>Camilla Moring (2017).</td>
</tr>
<tr>
<td><strong>Nurses:</strong></td>
<td>Ina Fourie and Hester Meyer (<a href="#">Fourie and Claasen-Veldsman, 2007, 2008</a>) (oncology); Fourie and Meyer, 2014 (palliative care); Anna Lundh, Olof Sundin and Louise Limberg (<a href="#">Sundin, Limberg and Lundh, 2008</a>).</td>
</tr>
<tr>
<td><strong>Teachers:</strong></td>
<td>Ina Fourie (<a href="#">Bitso and Fourie, 2011; Fourie and Krauss, 2011</a>); Eric Meyers.</td>
</tr>
</tbody>
</table>

**Actors featuring in information behaviour studies**

Actors, also referred to as role players, and target groups are the humans whose information behaviour is studied: they can be defined in terms of their roles such as student, patient, caregiver or a professional role such as lawyer, doctor or engineer ([Case and Given, 2016](#)), or in terms of positions of vulnerability. Tom Wilson (2008b) offers a valuable reflection on the past, present and future of the information user. Table 2 portrays reviewer expertise according to actors.
<table>
<thead>
<tr>
<th>Academic roles</th>
</tr>
</thead>
</table>
| **Children**: Lisa Given ([Given et al., 2014, 2016]; Anna Lundh (2016); Paul Solomon (1993, 1994); Peilang Wang ([Bilal and Wang, 2005])

**Faculty**: Anna Mierzecka ([Mierzecka, Kisilowska and Suminas, 2017])

**Mature students**: Lisa Given ([2000])


Carol Kuhlthau ([1988])

**Students (undergraduate and postgraduate)**: Charles Cole ([2000a,b]; Cole, Leide and Beheshti, 2005; Cole, Lin, Leide, Large and Beheshti, 2007; Leide, Cole, Beheshti, Large and Lin, 2007; Yi, Beheshti, Cole, Leide and Large, 2006);

Lisa Given ([Sadler and Given, 2007]); Jannica Heinström ([2005]; Heinström and Sormunen, 2016); Jela Steinerová ([Steinerová and Hrckova, 2014]); Olof Sundin ([Carlsson and Sundin, 2017])

<table>
<thead>
<tr>
<th>Professional and workplace roles</th>
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</table>
| (Khan, Meyers, Gowen and Bergman, 2014); Dennis Ocholla ([Durodolu and Ocholla, 2017]; Ross Todd (1997)

**Unemployed**: Reijo Savolainen ([2008a])

**Academic roles**: Lisa Given ([Given et al., 2014, 2016]; Anna Lundh (2016); Paul Solomon (1993, 1994); Peilang Wang ([Bilal and Wang, 2005])

**Faculty**: Anna Mierzecka ([Mierzecka, Kisilowska and Suminas, 2017])

**Mature students**: Lisa Given ([2000])


Carol Kuhlthau ([1988])

**Students (undergraduate and postgraduate)**: Charles Cole ([2000a,b]; Cole, Leide and Beheshti, 2005; Cole, Lin, Leide, Large and Beheshti, 2007; Leide, Cole, Beheshti, Large and Lin, 2007; Yi, Beheshti, Cole, Leide and Large, 2006);

Lisa Given ([Sadler and Given, 2007]); Jannica Heinström ([2005]; Heinström and Sormunen, 2016); Jela Steinerová ([Steinerová and Hrckova, 2014]); Olof Sundin ([Carlsson and Sundin, 2017])
<table>
<thead>
<tr>
<th>Roles related to illness</th>
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</tr>
</thead>
</table>
| **Economists and business analysts:** Eric Thivant *(Thivant, 2005)*  
**Engineers:** Ina Fourie *(Du Preez and Fourie, 2009)*; Hester Meyer *(Du Preez and Meyer, 2011, 2016)*  
**Government staff:** Trine Schreiber *(Berger et al., 2016)*  
**Healthcare professionals e.g. doctors, nurses:** Ina Fourie *(Fourie and Claassen-Veldsman, 2007 (oncology nurses and social workers)); Olof Sundin (2002; Johannisson and Sundin, 2007)*  
**Lawyers:** Carol Kuhlthau *(Kuhlthau and Tama, 2001)*; Christine Stilwell *(Lawal, Stilwell, Kuhn and Underwood, 2012; Lawal, Stilwell, Kuhn and Underwood, 2014)*  
**Librarians (reference librarians):** Christine Urquhart *(Urquhart and Tbaishat, 2016)*  
**Pharmacists:** Lisa Given *(Schindel and Given, 2013)*  
**Researchers (various disciplines):** Andrew Cox *(Al-Omar and Cox, 2016)*; Lynne McKechnie *(Goodall, Julien, Lajoie-Paquette and McKechnie, 2005)* |
| **Caregivers (formal, informal):** Theresa Anderson and Ina Fourie *(Anderson and Fourie, 2015, 2017)*; Dennis Ocholla *(Mnubi-Mchombu, Mostert and Ocholla, 2009)*  
**Early caregivers:** Marzena Świgoń *(Nicholas et al., 2017)*  
**Home-care:** Christine Urquhart *(Cooper and Urquhart, 2005, 2008)* |
| **Patients** | Charles Cole *(1998, 2011; Cole and Leide, 2003; Cole, Leide)* |
and Large, 2005); Ina Fourie (Fourie, 2008, 2010, 2012; Fourie and Nesset, 2017); Hester Meyer (Khayesi et al., 2013); Dennis Ocholla (Ikoja-Odongo and Ocholla, 2003; Matovu and Ocholla, 2009; Mnubi-Mchombu et al., 2009); Tiffany Veinot (Veinot, Mitchell and Ancker, 2018); Bosk, Veinot and Iwashyna, 2011; Veinot et al., 2018)

### Relationships

**Parental (father, mother, grandparent)**

First-time mothers: Ian Ruthen (Loudon, Buchanan and Ruthven, 2016)

Parents: Ivanka Stričević (Martinovic and Stričević, 2016)

### Actor networks

Trine Schreiber (2017a)

### Roles of vulnerability

**Heroin addicts:** Ross Todd (1999a,b)

**Homeless people:** Ian Ruthven (Muggleton and Ruthven, 2012)

**Intermediaries:** Ina Fourie and Hester Meyer (2014); Carol Kuhlthau (1996)

**People with disabilities:** Lisa Given (Saumure and Given, 2004); Anna Lundh (Lundh and Johnson, 2015); Christine Stilwell (Seyama, Morris and Stilwell, 2014)

**Orphans:** Dennis Ocholla (Mnubi-Mchombu et al., 2009)

**Refugees:** Ian Ruthven (Oduntan and Ruthven, 2017); Ole Pilerot (Lloyd, Pilerot and Hultgren, 2017); Annemaree Lloyd (2014a, 2015; Lloyd, Kennan, Thompson and Qayyum, 2013; Lloyd, Pilerot and Hultgren, 2017)

### Roles as users and people in

**Homebuyers:** Reijo Savolainen, 2009b)
Expertise in specific information activities and information encounters

A wide variety of information activities and encounters have been the focus of information behaviour studies (Case and Given, 2016; Fisher and Julien, 2009; Ford, 2015; Johnson and Case, 2012). In addition there are also researchers who distinguish between information behaviour and information practice (Savolainen, 2007c; Wilson, 1997). (A separate sub-heading addresses information practice.) Although the larger portion of information behaviour studies are on information seeking and information searching using a general or comprehensive interpretation, there are some expertise on finer detail such as the formulation of queries and other activities such as information sharing, information use, information processing, information encountering, information monitoring, and information transfer.

Information seeking and searching activities

Expertise on information seeking and searching range from a holistic view of the spectrum of activities, sometimes referred to as steps, phases or stages for example starting, browsing, changing, monitoring, differentiating, extracting, verifying and ending (Ellis, 1989b) to specific activities such as information monitoring or browsing. Table 3 provides more detail.

Table 2: Reviewer expertise on actors

<table>
<thead>
<tr>
<th>Everyday life</th>
<th>Library users: Jela Steinerová (Steinerová and Šušol, 2005)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic library users:</td>
<td>Judit Bar-Ilan (Greenberg and Bar-Ilan, 2017)</td>
</tr>
</tbody>
</table>

Topical focus: information seeking and searching

Examples of reviewers with related expertise

As idea generation: Trinke Schreiber (2017b)
Cross language information seeking behaviour: Allen Foster (Al-Wreikat, Rafferty and Foster, 2015)
Everyday life: Lisa Given (Given et al., 2016); Reijo Savolainen (1995); Christine Stillwell (Chilimo, Ngulube and Stilwell, 2011)
General: Charles Cole (Cole and Spink,
<table>
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<tbody>
<tr>
<td>Information seeking: David Ellis (Ellis, Cox and Hall, 1993)</td>
<td>Information process: Charles Cole (1997a,c)</td>
</tr>
<tr>
<td>Interactive information seeking: Nils Pharo (Isfandyari-Moghaddam and Pharo, 2011); Ian Ruthven (2012)</td>
<td>Online information seeking: Eric Meyers (Khan et al., 2015)</td>
</tr>
<tr>
<td>Seeking pictures: Anna Lundh (Lundh and Alexandersson, 2012)</td>
<td>Spectrum of information seeking activities/phases/stages: David Ellis (1989b); Allen Foster and Christine Urquhart (Foster, Urquhart and Turner, 2008); Carol Kuhlthau (2008)</td>
</tr>
</tbody>
</table>

Information monitoring

| Current awareness services: Fourie and Claassen-Veldsman (2007) |

Searching

<table>
<thead>
<tr>
<th>Exploratory search: Ian Ruthven (Ruthven et al., 2008)</th>
<th>Keywords: Judit Bar-Ilan (Barsky and Bar-Ilan, 2012)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Queries, strategies and process: Jutta Haider (2016b, 2017); Dennis Ocholla (Durodolu and Ocholla, 2017); Nils Pharo (Pharo, 2004; Pharo and Järvelin, 2006); Savolainen 2016e; Iris Xie (Xie, Soohyung and Bennett-Kapusniak, 2013)</td>
<td>Search styles: Jannica Heinström (2006a,b)</td>
</tr>
<tr>
<td>Web searching: Peter Ingwersen (Skov and Ingwersen, 2014); Makiko Miwa (Miwa and Takahashi, 2008); Iris Xie (Lin and Xie, 2013; Rieh and Xie, 2006)</td>
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</tr>
</tbody>
</table>

Table 3: Reviewer expertise on information seeking and
Information sharing and information transfer activities

Although studies on information sharing are fewer, it is gaining increased attention. Table 4 reflects expertise on information sharing and information transfer activities such as information communication, dissemination and exchange.

<table>
<thead>
<tr>
<th>Topical focus: information sharing and information transfer</th>
<th>Examples of reviewers with related expertise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information sharing:</td>
<td><em>Focusing on trust:</em> Ola Pilerot (2013)</td>
</tr>
<tr>
<td></td>
<td><em>Digital communication:</em> Trine Schreiber (<a href="http://www.informationr.net/ir/23-4/isic2018/isic1802.html">Berger et al., 2016</a>)</td>
</tr>
<tr>
<td>Information transfer</td>
<td>Meyer (1996)</td>
</tr>
</tbody>
</table>

Table 4: Reviewer expertise on information sharing and transfer activities
Information use and processing activities

Information use include decision-making, problem-solving and scholarly publishing. Personal information management is also included under information use. Table 5 shows examples of reviewer expertise.

<table>
<thead>
<tr>
<th>Topical focus: information use and Processing</th>
<th>Examples of reviewers with related expertise</th>
</tr>
</thead>
<tbody>
<tr>
<td>In general, not focusing on a specific reason for use</td>
<td>General: Charles Cole (Spink and Cole, 2006); Ian Ruthven (Ruthven and Lalmas, 2002; Ruthven, Lalmas and Van Rijsbergen, 2002); Savolainen (1998, 2000)</td>
</tr>
<tr>
<td></td>
<td>Use of health information: Tiffany Veinot (Barbarin, Klasnja and Veinot, 2016; Wolf and Veinot, 2015); Reijo Savolainen (2009a,c); Jela Steinerová (2012)</td>
</tr>
<tr>
<td>Decision-making</td>
<td>Cognitive authority decisions: Pamela McKenzie (2003b)</td>
</tr>
<tr>
<td></td>
<td>Everyday life: Ivanka Stričević (Kolarić and Stričević, 2016)</td>
</tr>
<tr>
<td></td>
<td>Relevance decisions / relevance in decision-making: David Allen (Mishra, Allen and Pearman, 2013, 2015); Theresa Anderson (2005); Charles Cole (Cole et al., 2017); Allen Foster (Stokes, Foster and Urguhart, 2009); Ian Ruthven (2007, 2014; Albassam and Ruthven, 2018; Baillie, Azzopardi and Ruthven, 2008; Balatsoukas and Ruthven, 2012; Beresi, Kim, Song and Ruthven, 2010; Beresi, Kim, Song and Ruthven and Baillie,)</td>
</tr>
<tr>
<td>Problem solving</td>
<td>Nils Pharo (1999)</td>
</tr>
<tr>
<td>-----------------</td>
<td>------------------</td>
</tr>
<tr>
<td>Scholarly publishing</td>
<td>E-book publishing and production: Elena Macevičiūtė (Gudinavičius and Macevičiūtė, 2015; Gudinavičius, Šuminas and Macevičiūtė, 2015) Open access and open access publishing: Jutta Haider (2007); David Nicholas (Huntington, Nicholas and Rowlands, 2004); Dennis Ocholla (2013)</td>
</tr>
<tr>
<td>Personal information management</td>
<td>Andrew Cox (Al-Omar and Cox, 2016); Ina Fourie (Fourie, 2011, 2012); Christopher Khoo (Khoo et al., 2007); Ian Ruthven (Elsweiler, Baillie and Ruthven, 2009; Elsweiler)</td>
</tr>
</tbody>
</table>
Table 5: Reviewer expertise on information use and processing activities

<table>
<thead>
<tr>
<th>Information processing</th>
<th>RUTHVEN AND JONES, 2007; MARZENA ŚWIGOŃ (ŚWIGOŃ, 2013; ŚWIGOŃ AND WEBER, 2014)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other</td>
<td>AMONGST HOMEBUYERS: REIJO SAVOLAÍNEN (SAVOLAÍNEN, 2009D)</td>
</tr>
</tbody>
</table>

**Information encountering as information activity**

Sanda Erdelez (1999, 2004; Erdelez, Basic and Levitov, 2011) is a leading researcher on information encountering also referred to as opportunistic discovery of information and accidental acquisition of information. These all relate to information serendipity. Table 6 reflects expertise on information encountering.
Information evaluation as an information activity

The evaluation of search results and information channels and resources is a very important component in information seeking; so is relevance assessment (Ingwersen and Järvelin, 2005). Reviewer expertise is portrayed in Table 7; it covers various contexts, information activities and related issues. (A later section covers criteria for source selection and trust in sources.)

<table>
<thead>
<tr>
<th>Topical focus: information evaluation</th>
<th>Examples of reviewers with related expertise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relevancy</td>
<td>Charles Cole (Cole et al., 2017)</td>
</tr>
<tr>
<td>Source evaluation e.g. quality of sources</td>
<td>Debating reliability: Brendan Luyt (Luyt, 2015)</td>
</tr>
<tr>
<td></td>
<td>Digital library evaluation: Preben Hansen (Fuhr et al., 2007); Iris Xie (2006)</td>
</tr>
<tr>
<td></td>
<td>Evaluation of image databases: Elena Macevičiūtė and Tom Wilson (Eklund, Lindh, Macevičiūtė and Wilson, 2006)</td>
</tr>
<tr>
<td></td>
<td>Evaluation of specific sources: Brendan Luyt (Goh, Luyt, Chua, See-Yong, Kia- Ngoh and How-Yeu, 2008) (open source portals); Preben Hansen (Klas et al., 2006) (digital libraries); Martinez Mendez (Martinez-Mendez, J.,</td>
</tr>
</tbody>
</table>
Table 7: Reviewer expertise on information evaluation

<table>
<thead>
<tr>
<th>Source credibility and negotiation</th>
<th>Source credibility: Helana Francke and Olof Sundin (Francke and Sundin, 2012); Reijo Savolainen (2007e, 2010b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other</td>
<td>Crowd judgement in searching: Judit Bar-Ilan (Zhitomirsky-Geffet, Bar-Ilan and Levene, 2016)</td>
</tr>
<tr>
<td></td>
<td>Debating credibility: Helana Francke, Olof Sundin, Louise Limberg and Anna Lundh (Francke, Sundin and Limberg, 2011; Lundh et al., 2015; Sundin and Francke, 2009)</td>
</tr>
<tr>
<td></td>
<td>Web pages: Ian Ruthven (Jose et al., 2005); Iris Xie (Sabin-Kildiss, Cool and Xie, 2001)</td>
</tr>
<tr>
<td></td>
<td>Web portal: Sanda Erdelez (Wang et al., 2010)</td>
</tr>
</tbody>
</table>

**Information retrieval**

ISIC2018 reviewers with expertise in both information behaviour and information retrieval, specifically interactive information retrieval, are limited; Table 8 portrays expertise.
Table 8: Reviewer expertise on information retrieval

<table>
<thead>
<tr>
<th>Expertise</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peter Ingwersen</td>
<td>(1992, 1996; Ingwersen and Järvelin, 2005)</td>
</tr>
<tr>
<td>Christopher Khoo</td>
<td>(Khoo, Myaeng and Oddy, 2001) (precision)</td>
</tr>
<tr>
<td>Paul Solomon</td>
<td>(1993)</td>
</tr>
<tr>
<td>Iris Xie</td>
<td>(2006, 2009)</td>
</tr>
</tbody>
</table>

Table 9: Reviewer expertise on information practice

### Information practice as information activity

The terms information behaviour and information practice have been debated over time in the literature, specifically by Tom Wilson and Reijo Savolainen (Behaviour/practice debate..., 2009). Several reviewers have aligned their work with a specific focus on information practice. Table 9 portrays the reviewer expertise.

<table>
<thead>
<tr>
<th>Topical focus: information practice</th>
<th>Examples of reviewers with related expertise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge practices</td>
<td>Sana Talja (Franssila, Okkonen, Savolainen and Talja, 2012)</td>
</tr>
<tr>
<td>Information micro-practices</td>
<td>Sanda Erdelez (Doty and Erdelez, 2002)</td>
</tr>
</tbody>
</table>

Table 9: Reviewer expertise on information practice

### Information avoidance
Although most publications focus on active information seeking, deliberate information avoidance has also been reported, especially in health care (Case and Given, 2016). Table 10 portrays reviewer expertise.

Table 10: Reviewer expertise on information avoidance

<table>
<thead>
<tr>
<th>Topical focus: information avoidance</th>
<th>Examples of reviewers with related expertise</th>
</tr>
</thead>
<tbody>
<tr>
<td>General:</td>
<td>Reijo Savolainen (Sairanen and Savolainen, 2010)</td>
</tr>
<tr>
<td>Health information avoidance:</td>
<td>Jannica Heinström (Ek and Heinström, 2011)</td>
</tr>
</tbody>
</table>

Table 10: Reviewer expertise on information avoidance

Collaborative and social information seeking

There has been an increase in research on collaborative information seeking, retrieval, and behaviour and contexts of collaborative learning (Hansen and Järvelin, 2005). Interests have recently expanded to social information seeking and crowdsourcing. Table 11 reflects reviewer expertise.

Table 11: Reviewer expertise on collaborative and social information seeking

<table>
<thead>
<tr>
<th>Topical focus: collaborative and social information seeking</th>
<th>Examples of reviewers with related expertise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaborative information seeking</td>
<td>Ina Fourie (Fourie and Meyer, 2014); Preben Hansen (Hansen and Järvelin, 2005); Jannica Heinström (Heinström and Sormunen, 2016); Hester Meyer (Du Preez and Meyer, 2016); Preben Hansen and Gunilla Widén (Hansen and Widén, 2017; Widén and</td>
</tr>
</tbody>
</table>
Hansen, 2012)  
Collectivist information behaviour: Lisa Given (Given and Kelly, 2016) 
Group information seeking: Jette Hyldegård (2007)

Table 11: Reviewer expertise on collaborative and social information seeking

Mediated information seeking

Expertise on mediated information seeking is limited, mostly to librarians as information intermediaries seeking information on behalf of users. Table 12 shows expertise on mediated information seeking.

<table>
<thead>
<tr>
<th>Topical focus</th>
<th>Examples of reviewers with related expertise</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>Allen Foster (Spink, Wilson, Ford, Foster and Ellis, 2002a, b, c)</td>
</tr>
<tr>
<td>Proxy information seeking in other contexts and roles</td>
<td>Intermediation: Paloma Korycińska (2015) Mediated information seeking: Allen Foster (Spink et al., 2002a, b, c)</td>
</tr>
</tbody>
</table>

Table 12: Reviewer expertise on mediated information seeking

Information carriers and information communication technology (ICT)

Although different terminology is used in the literature, the interpretations by David Johnson and Donald Case (both with a background in communication) (2012) will be used to categorise expertise. Carriers are the ‘primary repositories of information available to individuals within their information fields’ (Johnson and Case, 2012, p. 31). There are three classes of information carriers, namely channels, sources and messages. Messages are the essential building blocks – the words, codes, symbols, pictures. Sources relate to an individual or institution originating messages (Johnson and Case, 2012, p. 33) and include books and articles. Sources are available in print and digital forma; they are available through different devices such as mobile technology and
through different channels where channels are the information transmission systems. Channels include mass and social media, social networks, and interpersonal communication. ISIC2018 reviewers have published on the preferences, use, selection and evaluation of a variety of information carriers. Table 13 portrays expertise on information carriers, using information channels, information sources and messages as key sub-themes. ICTs are included in this section. (Table 5 covers use and non-use of information sources.)

<table>
<thead>
<tr>
<th>Topical focus: information carriers</th>
<th>Examples of reviewers with related expertise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information channels (this includes the internet and social media platforms)</td>
<td>Google Scholar: Ian Ruthven (Balatsoukas and Ruthven, 2012)</td>
</tr>
<tr>
<td></td>
<td>Health care and Internet use: Elena Macevičiūtė (Hoglund, Macevičiūtė and Wilson, 2004)</td>
</tr>
<tr>
<td></td>
<td>Internet use: Reijo Savolainen (Savolainen and Kari, 2004b, 2006a); Kirsty Williamson (Williamson, 2006; Williamson, Jenkins and Wright, 2001)</td>
</tr>
<tr>
<td></td>
<td>Search engines: Judit Bar-Ilan (2002b); Charles Cole (Spink et al., 2004); Javier Martinez (Caceres, Mendez and Munoz, 2008; Carreno, Carreno and Mendez, 2009); Iris Xie (Sabin-Kildiss, Cool and Xie, 2001)</td>
</tr>
<tr>
<td>Social media: e.g. blogs, Facebook, Library 2.0, microblogging, Twitter, WhatsApp; this will also include information activities that are</td>
<td>Blogging: Noa Aharony (2009a); Gunilla Widén and Isto Huvila (Hall, Widén and Paterson, 2010; Huvila, Ek and Widén, 2014); Reijo Savolainen (2011c); Tom Wilson (2008b)</td>
</tr>
<tr>
<td></td>
<td>Emotional support blogs:</td>
</tr>
</tbody>
</table>
very important in the use of social media such as information disclosure, information exchange

| Information retrieval systems: e.g. databases, discovery systems, library catalogues, search engines | Databases: Reijo Savolainen (Iivonen and Savolainen, 1993); Miko Miwa (Hosono and Miwa, 1982); Christine Urquhart (2009)
| OPACs: Andrew Cox (Osborne and Cox, 2015); Lisa Given (Willson and Given, 2014); Paul Solomon (1993, 1994); Iris Xie (Xie and Wolfram, 2009)
| Information and information retrieval systems: David Ellis (1989 a,b); David Allen and |

| General: Christopher Khoo (2014) |
| Information disclosure: Jenny Bronstein (2013) |
| Information exchange in virtual communities: Jenny Bronstein (2013), Julie Hersberger (Hersberger, Murray and Rioux, 2007) |
| Online platforms: Jenny Bronstein and Noa Aharony (Bronstein et al., 2016); Paloma Korycińska (Niedźwiedzka and Korycińska, 2016) |
| Question and answers (Q&A): Reijo Savolainen (2013b, 2014b, 2015e) |
| Scholarly communication: Allen Foster and David Ellis (Shehata, Ellis and Foster, 2015); Jutta Haider (Haider and Åström, 2017) |
| Social bookmarking: Andrew Cox (Taha, Wood and Cox, 2014) |
| Social media: Noa Aharony (2010); Theresa Anderson (Bawden et al., 2007); Lisa Given (Wallis and Given, 2016); Gunilla Widén (Gu and Widén-Wulff, 2011); Iris Xie (Xie and Stevenson, 2014a,b) |
| Twitter: Andrew Cox (Shah and Cox, 2017) |
| Virtual communities: Eric Meyers (Meyers, 2009a,b); Julie Hersberger (Hersberger, Murray and Rioux, 2007) |
| WhatsApp: Noa Aharony (Aharony and Gazit, 2016) |
| YouTube: Ian Ruthven (Madden, Ruthven and McMenemy, 2013) |
| Information sources (this includes source preferences and selection) | Source preferences: Reijo Savolainen (2008b, 2010b)  
Information source horizons: Reijo Savolainen (Kari and Savolainen, 2004b); Jenna Hartel (2017)  
Information landscapes: Annemaree Lloyd (Lloyd and Wilkinson, 2016) |
| --- | --- |
| Source scope and preferences | Scholarly publication in general  
Digitised scholarly resources: Eric Meyers (Eccles et al., 2012)  
Scholarly e-reading: Elena Macevičiūtė (2015); Sanna Talja and Tom Wilson (Tenopir, Wilson, Vakkari, Talja and King, 2010) |
| Scholarly publication in general | Books and journals (printed, e-books)  
Digital: Noa Aharony (2014); Iris Xie (2007)  
Encylopaedias: Olof Sundin and Jutta Haider (2013)  
Grey literature: Javier Martinez (Martinez-Mendez and Lopez-Carreno, 2011); Christine Stilwell (Kwanya, Stilwell and Underwood, 2014)  
Patents: Javier Martinez (Martinez-Mendez, Pastor-Sanchez and Lopez-Carreno, 2010)  
Web portals: Javier Martinez (Martinez-Mendez and Lopez-Carreno, 2012; Rodríguez, Martinez and Rodríguez, 2008)  
E-books: Anna Lundh (Lundh and Johnson, 2015) (digital talking books); David Nicholas (Nicholas, Huntington and Rowlands, 2007); Tom Wilson (2015) |
| Books and journals (printed, e-books) | Digital libraries and resources, including repositories  
Digital libraries: Allen Foster (2006, 2007); Carol Kuhlthau (1997b); Ola Pilerot (Pilerot, 2013); Reijo Savolainen and Sanna Talja (Savolainen et al., 2003); Jeila Steinerová (2003, 2007); Iris Xie (Babu and Xie, 2017; Xie, Babu, Joo and Fuller, 2015)  
Information repositories: |

<table>
<thead>
<tr>
<th>Subject domain expertise of ISIC2018 reviewer community: a scoping review</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning in digital libraries: Carol Kuhlthau (<a href="http://www.informationr.net/ir/23-4/isic2018/isic1802.html">1997b</a>)</td>
</tr>
<tr>
<td><strong>Internet e.g. portals, websites, web pages</strong></td>
</tr>
<tr>
<td><strong>Source selection</strong></td>
</tr>
<tr>
<td>(detail on evaluation and relevance assessment is covered under a separate heading; this point includes trust in sources, credibility, debating credibility and source negotiation)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Other</strong></td>
</tr>
<tr>
<td><strong>Messages e.g. email, microblogging, tweets</strong></td>
</tr>
<tr>
<td><strong>Technology (use of technology and challenges)</strong></td>
</tr>
</tbody>
</table>
Table 13: Reviewer expertise on information carriers and ICT

<table>
<thead>
<tr>
<th>Topical focus: information fields</th>
<th>Examples of reviewers with related expertise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humanities</td>
<td>Humanistic research: Charles Cole (1997c)</td>
</tr>
<tr>
<td></td>
<td>Music: Reijo Savolainen (Rousi, Savolainen and Vakkari, 2016)</td>
</tr>
<tr>
<td></td>
<td>History: Charles Cole (2000a,b; Cole et al., 2017; Leide et al., 2007; Yi et al., 2006)</td>
</tr>
<tr>
<td>Natural sciences</td>
<td>Agriculture: Hester Meyer (Meyer and Boon, 2003; Boon and Meyer, 2003); Christine Stilwell (Lwoga, Stilwell and Ngulube, 2011; Munyua and Stilwell, 2010, 2013)</td>
</tr>
<tr>
<td></td>
<td>Engineering: David Ellis (Ellis and Haugan, 1997); Ina Fourie (Du Preez and Fourie, 2009); Hester Meyer (Du Preez and Meyer,</td>
</tr>
</tbody>
</table>

Information fields

According to Johnson and Case (2012, p. 28) an individual’s information field provides the context for information seeking. It includes the carriers, information channels and information sources to which people are exposed and relates to concepts such as information pathways, information horizons and information infrastructures. It also relates to disciplines and the broad categories of science (natural, social and humanities) and sub-categories such as medicine, economics, engineering, and further specialisation such as nursing. Early day user studies found differences between preferences and information seeking according to the broad science. Table 14 presents three broad categories of science to group expertise on specific disciplines, as well as health science due to the large group in this field. Sanna Talja and Reijo Savolainen report on field differences in general (Talja, Savolainen and Maula, 2004).
Table 14: Reviewer expertise on information fields

<table>
<thead>
<tr>
<th>Topical focus</th>
<th>Examples of reviewers with related expertise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental information</td>
<td>Jutta Haider (2011, 2016a)</td>
</tr>
<tr>
<td>Physical sciences</td>
<td>David Ellis (Ellis et al., 1993)</td>
</tr>
<tr>
<td>Social sciences</td>
<td>David Ellis (Ellis et al., 1993)</td>
</tr>
<tr>
<td>Business</td>
<td>Heidi Julien (Julien, Detlor, Serenko, Willson and Lavallee, 2011); Eric Thivant (2003) (design of financial products)</td>
</tr>
<tr>
<td>Competitive intelligence</td>
<td>Sanda Erdelez (Erdelez and Ware, 2001)</td>
</tr>
<tr>
<td>Law</td>
<td>Sanda Erdelez (O'Hare and Erdelez, 2017)</td>
</tr>
<tr>
<td>Psychology</td>
<td>Charles Cole (Yi et al., 2006)</td>
</tr>
<tr>
<td>Political information sources</td>
<td>Anna Mierzecka (Šuminas and Mierzecka, 2014)</td>
</tr>
<tr>
<td>Health sciences</td>
<td>Jenny Bronstein (2014a; 2017a); Jannica Heinström (Ek and Heinström, 2011); Olof Sundin (2002); Tiffany Veinot (Valdez, Holden, Novak and Veinot, 2015, 2018; Veinot et al., 2018; Wolf and Veinot, 2015)</td>
</tr>
<tr>
<td>Sexual information seeking</td>
<td>Charles Cole (Spink et al., 2004)</td>
</tr>
<tr>
<td>Topical focus:</td>
<td>Examples of reviewers with related expertise</td>
</tr>
</tbody>
</table>

Antecedents and barriers

Johnson and Case (2012, p. 46) use the term antecedents to refer to factors influencing information behaviour and imperatives to motivate information seeking, while others such as Wilson (1999a,b) refer to intervening variables. Savolainen (2006b) refers to qualifiers of information seeking and Meyer (2016) to personal components of information behaviour. There are also activating mechanisms and triggers of information seeking, and barriers. Some researchers refer only to demographic factors. This section covers expertise where specific antecedents such as age or gender, as well as triggers of information seeking or barriers are the focus. Table 15 shows expertise on antecedents and barriers.

## Antecedents and Barriers

### Antecedents

#### Demographic influences: age, gender, socio-economic background, education, diversity, etc.

- **Affordances:** Jutta Haider ([2016a](http://www.informationr.net/ir/23-4/isic2018/isic1802.html))
- **Very old:** Kirsty Williamson ([Asla and Williamson, 2015](http://www.informationr.net/ir/23-4/isic2018/isic1802.html))
- **Self-control:** Jutta Haider ([2016a](http://www.informationr.net/ir/23-4/isic2018/isic1802.html))
- **Socio-economic status e.g. poverty:** Charles Cole ([Spink and Cole, 2001](http://www.informationr.net/ir/23-4/isic2018/isic1802.html); Jutta Haider and Bawden ([2006, 2007](http://www.informationr.net/ir/23-4/isic2018/isic1802.html))

#### Cognitive influences: knowledge, skills (literacy, information literacy, health or workplace literacy), expert versus novice, reading and e-reading skills, experience (in the field and in the situation e.g. genetic

- **Cognition:** Charles Cole ([1997b](http://www.informationr.net/ir/23-4/isic2018/isic1802.html))
- **Critical literacies in information practices:** Veronica Johannson ([Johansson and Limberg, 2017](http://www.informationr.net/ir/23-4/isic2018/isic1802.html))
- **Experience:** Carol Kuhlthau ([1999](http://www.informationr.net/ir/23-4/isic2018/isic1802.html)); Sanda Erdelez ([Moore, Erdelez and He, 2007](http://www.informationr.net/ir/23-4/isic2018/isic1802.html)) (search experience)
- **Expertise e.g. novice vs expert, domain expertise:** Charles Cole

(1997a, 2000a,b; Beheshti, Brooks, Cole, Large and Leide, 2005; Beheshti et al., 2015; Cole, Leide and Large, 2005); Carol Kuhlthau (2000)

Information seeking expertise: Olof Sundin (Sundin, 2008)

Information literacy: Sanda Erdelez (Erdelez et al., 2011); Ina Fourie (Fourie, 2008; Fourie and Krauss, 2010); Lisa Given (Given and Julien, 2003); Heidi Julien (2000, 2016; Detlor, Booker, Serenko and Julien, 2012; Detlor, Julien, Willson, Serenko and Lavallee, 2011; Julien et al., 2011; Julien and Williamson, 2011); Kirsty Williamson (Julien and Williamson, 2011); Paloma Korycińska (Cisek, Korycińska and Krakowska, 2017);

Annemaree Lloyd (2007, 2010a,b,c, 2012, 2014b; Lloyd et al., 2013; Lloyd and Williamson, 2008); Louise Limberg, Ina Fourie, Heidi Julien (Aharony, Limberg, Julien, Albright, Fourie and Bronstein, 2017); Jenny Lindberg (Pilerot and Lindberg, 2011); Anna Lundh (Sundin et al., 2008); Brendan Luyt (Foo et al., 2014; Guo, Goh and Luyt, 2017; Kusolpalin, Luyt, Munro and Lim, 2013); Eric Meyers (Addison and Meyers, 2013); Ola Pilerot and Jenny Lindberg (2011); Maria Próchnicka (Cisek and Próchnicka, 2012); Reijo Savolainen (Tuominen, Savolainen and Taija, 2005); Ola Pilerot (2014b, 2016a, b); Jela Steinerová (2010, 2012); Christine Stilwell (Lawal et al., 2012; Lwehabura and Stilwell, 2008; Zinn, Stilwell and Hoskins, 2016); Olof Sundin (2008; Sundin et al., 2008); Sanna Talja (Taija and Lloyd, 2010; Tuominen, Savolainen and Taija, 2005); Trine Schreiber (2013, 2014, 2017a); Kirsty Williamson (Lloyd and Williamson, 2008); Tom Wilson (Streatfield, Allen and Wilson, 2010)

Language: Iris Xie (Sabbar and Xie, 2016)

Meta-cognitive skills: Dennis Ocholla (Durodolu and Ocholla, 2017); Ole Pilerot (2014b)

Reading ability (children): Åse Hedemark (2012)

Socio-cognitive approach: Charles Cole (2008)

Subject positions: Anna Lundh (2016)

User mental models: Charles Cole (Cole and Leide, 2003; Cole et al., 2007); Lisa Given (Willson and Given, 2014)

Workplace information literacy and learning: Camilla Moring (2017); Camilla
<table>
<thead>
<tr>
<th>Psychological influences: affective e.g. emotions, feelings, anxiety, intent, tiredness, self-efficacy</th>
<th>Moring and Annemaree Lloyd (2013); Ola Pilerot (2014b, 2016a, b); Christine Stilwell (Lawal et al., 2014)</th>
</tr>
</thead>
<tbody>
<tr>
<td>General psychological factors:</td>
<td>Jannica Heinström (2006c)</td>
</tr>
<tr>
<td>Self concept and self efficacy:</td>
<td>Jenny Bronstein (2014b); Lisa Given (Willson and Given, 2014)</td>
</tr>
<tr>
<td>Affect/emotion:</td>
<td>Ina Fourie and Heidi Julien (Fourie, 2008; Fourie and Julien, 2014a,b; Julien and Fourie, 2015); Jannica Heinström (Yadamsuren and Heinström, 2011); Heidi Julien and Lynn McKechnie (Julien, McKechnie and Hart, 2005); Carol Kuhlthau (1985); Ian Ruthven (Tinto and Ruthven, 2015, 2016); Reijo Savolainen (2014a, 2015a,c,d,f)</td>
</tr>
<tr>
<td>Library anxiety:</td>
<td>Marzena Świgoń (Świgoń, 2011c)</td>
</tr>
<tr>
<td>Self-concept:</td>
<td>Dennis Ocholla (Durodolu and Ocholla, 2017)</td>
</tr>
<tr>
<td>Beliefs: different from religion; this is more prominent in health information seeking than in other contexts</td>
<td>Reijo Savolainen (2012c)</td>
</tr>
<tr>
<td>Personality traits and styles</td>
<td>Noa Aharony (2009b); Jannica Heinström (2003, 2005, 2006 a,b,c); Jette Hyldegård (2009) (group based behaviour)</td>
</tr>
<tr>
<td>Noa Aharony and Jenny Bronstein (Amichai-Hamburger et al., 2016)</td>
<td></td>
</tr>
<tr>
<td>Location (geographic region e.g. country, remote vs urban)</td>
<td>Developed countries</td>
</tr>
<tr>
<td>Poland: Malgorzata Kisilowska (2000; Gallecka et al., 2017); Marzena Świgoń (2011b)</td>
<td></td>
</tr>
<tr>
<td>Slovakia: Jela Steinerová (2003; Steinerová and Hrckova, 2014)</td>
<td></td>
</tr>
<tr>
<td>Developing countries Africa: (South Africa, Tanzania): Christine Stilwell (Chilimo et al., 2011; Dansoh, Stilwell and Leach, 2007; Lawal et al., 2012; Lwehabura and Stilwell, 2008; Nzimande and Stilwell, 2008)</td>
<td></td>
</tr>
<tr>
<td>Rural: Hester Meyer (2002, 2003; Martins and Meyer, 2012; Meyer and Boon, 2003); Christine Stilwell (Chilimo et al., 2011)</td>
<td></td>
</tr>
<tr>
<td>Asia: Christopher Khoo (2011)</td>
<td></td>
</tr>
<tr>
<td>Information overload (can be seen)</td>
<td>Noa Aharony (Shachaf, Aharony and Baruchson, 2016); David Allen (Allen and Shorad, 2005; Allen and Wilson,</td>
</tr>
</tbody>
</table>
### Table 15: Reviewer expertise on antecedents and barriers

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning tasks: Jannica Heinström (Heinström, Sormunen and Kaunisto-Laine, 2014)</td>
<td></td>
</tr>
<tr>
<td>Motivators of information seeking: Reijo Savolainen (2013a)</td>
<td></td>
</tr>
<tr>
<td>Multitasking: Charles Cole (Spink, Cole and Waller, 2008)</td>
<td></td>
</tr>
<tr>
<td>Tasks: Charles Cole (Leide et al., 2007); Preben Hansen (Byström and Hansen, 2005); Peter Ingwersen (Ingwersen and Järvelin, 2004, 2005); Ian Ruthven (Jose, Ruthven and White, 2003); Iris Xie (2009)</td>
<td></td>
</tr>
<tr>
<td>Uncertainty: Theresa Anderson (2006, 2010); Carol Kuhlthau (1993, 1999); Ian Ruthven (Bailie et al., 2008); Reijo Savolainen (2012b)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Barriers</th>
<th>These are factors that inhibit or complicate information activities and include the digital divide, poverty and information poverty, information access, knowledge gaps, ignorance and avoidance (the latter was also discussed under information activities)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital divide: Ina Fourie (Fourie and Bothma, 2006); Sanda Erdelez (Houston and Erdelez, 2004); Julie Hersberger (2002); Brendan Luyt (2006a)</td>
<td></td>
</tr>
<tr>
<td>General: Eric Meyers (Meyers, Nathan and Saxton, 2007); Marzena Świgoni (2007, 2011a,b,c); Reijo Savolainen (2015b)</td>
<td></td>
</tr>
<tr>
<td>Information access: Brendan Luyt (2006a,b); Eric Nivant (2016)</td>
<td></td>
</tr>
<tr>
<td>Information avoidance as barrier: Jannica Heinström (Ek and Heinström, 2011); Maija-Leena Huotari (Hirvonen et al., 2015) Information poverty: Jenny Bronstein (2014a); Julie Hersberger (2002)</td>
<td></td>
</tr>
<tr>
<td>Library anxiety: Marzena Świgoni (2011b)</td>
<td></td>
</tr>
<tr>
<td>Socio-cultural barriers: Reijo Savolainen (2016a,b)</td>
<td></td>
</tr>
</tbody>
</table>

### Information needs

Information needs have been approached from various points of view in the information behaviour literature starting with the widely cited work of Dervin and Nilan (1986), Taylor (1968) on question negotiation, Belkin, Oddy and Brooks (1982) on anamolous state of knowledge, and Shenton (2007) for suggestions on the use of the Jahori...
Window (developed from psychology). Reviewers who have taken a more holistic approach are Tom Wilson ([1999a,b]) noting dormant information needs and that information needs are often primary and not secondary needs, and Charles Cole who published a book on information needs ([2012]). Table 16 reflects the reviewer expertise.

### Table 16: Reviewer expertise on information needs per se

<table>
<thead>
<tr>
<th>Topical focus: information needs</th>
<th>Examples of reviewers with related expertise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anomalous states of knowledge hypothesis</td>
<td>Charles Cole ([Cole, Leide and Beheshti, 2005])</td>
</tr>
<tr>
<td>Children</td>
<td>Charles Cole ([Large, Beheshti and Cole, 2002])</td>
</tr>
<tr>
<td>Homebuyers</td>
<td>Reijo Savolainen ([Savolainen, 2009b])</td>
</tr>
<tr>
<td>Question-negotiations</td>
<td>Anna Lundh ([2010])</td>
</tr>
</tbody>
</table>

### Expertise in theories supporting studies of information behaviour and related information interactions and practices

All ISIC2018 reviewers are aware of key theories, some with more knowledge and experience than others are. Theories noted in their research output include theory of interaction and Goffman’s theory ([Ikeya, 1991]), Reijo Savolainen and Sanna Talja on constructivism, collectivism and constructionism ([Tuominen, Talja and Savolainen, 2003; Talja, Tuominen and Savolainen, 2005]) and numerous others reported in *Theories of information behaviour* ([Fisher, Erdelez and McKechnie, 2007; McKechnie and Pettigrew, 2002; Pettigrew and McKechnie, 2001]). Table 17 notes only researchers where theories pertinently featured in titles of articles.

### Table 17: Examples of reviewers with related expertise

<table>
<thead>
<tr>
<th>Topical focus: theories</th>
<th>Examples of reviewers with related expertise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific theories</td>
<td>Activity theory: David Allen ([Allen, Karanasios])</td>
</tr>
</tbody>
</table>
Table 17: Reviewer expertise on theories supporting studies of information behaviour

<table>
<thead>
<tr>
<th>Expertise in models supporting studies of information behaviour</th>
</tr>
</thead>
<tbody>
<tr>
<td>and Slavova, 2011; Karanasios et al., 2013; Karanasios and Allen, 2014); Tom Wilson (2008a)</td>
</tr>
<tr>
<td>Affordance theory: Lisa Given (Sadler and Given, 2007)</td>
</tr>
<tr>
<td>Appraisal theory: Christopher Khoo (Khoo et al., 2012)</td>
</tr>
<tr>
<td>Kintsch's discourse comprehension theory: Charles Cole (Cole and Mandelblatt, 2000)</td>
</tr>
<tr>
<td>Information ecology: Jela Steinerová (2010, 2012)</td>
</tr>
<tr>
<td>Information grounds: Jenny Bronstein (2017b); Paloma Korycińska (Cisek, Korycińska and Krakowska, 2017)</td>
</tr>
<tr>
<td>Information worlds: Maija-Leena Huotari (Kansakoski and Huotari, 2016)</td>
</tr>
<tr>
<td>Practice theory: Annemaree Lloyd (2010a; Lloyd et al., 2013); Camilla Moring and Annemaree Lloyd (2013); Sanna Talja (Talja and Nyce, 2015)</td>
</tr>
<tr>
<td>Spatial justice theory: Lisa Given (Croft-Piggin and Given, 2013)</td>
</tr>
<tr>
<td>General discussion of theories</td>
</tr>
<tr>
<td>Sandra Erdelez and Lynn McKechnie (Fisher, Erdelez and McKechnie, 2007)</td>
</tr>
<tr>
<td>Information retrieval: David Ellis (1984)</td>
</tr>
</tbody>
</table>
There is a wide variety of models. Some are theoretical models and others developed from empirical work. Some are general models of information behaviour, and others focus more on specific information activities such as information seeking (Kuhlthau, 1991) or information and interactive information retrieval such as Peter Ingwersen (Ingwersen and Järvelin, 2005) and Iris Xie (2006). Apart from models developed by reviewers (see Table 18), there are reviewers who reviewed information behaviour models in a more holistic manner, such as Hester Meyer on building blocks of information behaviour (2016). Allen Foster and co-workers (Foster et al., 2008) consider models in general. Savolainen (2017a) reports a theoretical reflection on revisiting the Ellis model, on the Kuhlthau and Nahl models (Savolainen, 2015d) and in general on conceptual growth in models (Savolainen, 2016c), while Carol Kuhlthau and co-workers revisited the value of her information search process model (Kuhlthau et al., 2008).

<table>
<thead>
<tr>
<th>Topical focus: models</th>
<th>Examples of reviewers with related expertise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building blocks of information behaviour</td>
<td>Hester Meyer (2016)</td>
</tr>
<tr>
<td>Cognitive model of information retrieval</td>
<td>Peter Ingwersen (1992; Ingwersen and Järvelin, 2005)</td>
</tr>
<tr>
<td>Ellis model</td>
<td>David Ellis (1989b); Reijo Savolainen (2017a)</td>
</tr>
<tr>
<td>General models of information behaviour</td>
<td>Tom Wilson (1999a, b)</td>
</tr>
<tr>
<td>Information seeking process model</td>
<td>Carol Kuhlthau (1988, 1991, 1999, 2000, 2008; Kuhlthau and Tama, 2001); Charles Cole (Beheshti et al., 2015); Reijo Savolainen (2015d; in this paper he also considers the model of Nahl)</td>
</tr>
</tbody>
</table>

Table 18: Reviewer expertise on models of information behaviour and related information activities

Research methodologies

Research methodology is key to any research. Reports are mostly on quantitative, qualitative and mixed methods studies, surveys, case studies, questionnaires, interviews and focus group interviews. Table 19 only notes expertise in research methodology if explicitly stated in the titles of papers. (It would be a too extensive task to categorise all reviewer methodological expertise.) Peilang Wang (2001) gives a good general overview of methodologies and methods in information behaviour research.
<table>
<thead>
<tr>
<th>Topical focus: methodologies</th>
<th>Examples of reviewers with related expertise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autoethnography</td>
<td>Theresa Anderson and Ina Fourie (2015, 2017)</td>
</tr>
<tr>
<td>Citation analysis</td>
<td>Heidi Julien and Lynn McKechnie (Goodall et al., 2005)</td>
</tr>
<tr>
<td>Coding</td>
<td>Christine Urquhart (Foster et al., 2008)</td>
</tr>
<tr>
<td>Content analysis</td>
<td>Judit Bar-Ilan (2000a, b); Heidi Julien and Ina Fourie (2015; Heidi Julien, 1996); and Heidi Julien and Lynn McKechnie (Julien, McKechnie and Hart, 2005)</td>
</tr>
<tr>
<td>Delphi</td>
<td>Noa Aharony and Jenny Bronstein (Aharony and Bronstein, 2014a)</td>
</tr>
<tr>
<td>Discourse analysis, user discourse and discussion</td>
<td>Lisa Given (Given, Hicks, Schindel and Willson, 2014; Hicks and Given, 2013; Schindel and Given, 2013); Jutta Haider (Haider and David Bawden, 2006, 2007); Åse Hedemark and Jenny Lindberg (2017); Christopher Khoo (Khoo, Na and Jaidka, 2011); Olof Sundin (Hedemark, Hedman and Sundin, 2005); Sanna Talja and Pamela McKenzie (2007)</td>
</tr>
<tr>
<td>Ethnographic observation</td>
<td>Lynne McKechnie (2000)</td>
</tr>
<tr>
<td>Eye-tracking</td>
<td>Makiko Miwa (Takaku et al., 2009); Ian Ruthven (Balatsoukas and Ruthven, 2012; Clark, Ruthven and Holt, 2010)</td>
</tr>
<tr>
<td>Literature reviews</td>
<td>Christopher Khoo (Khoo, Na and Jaidka, 2011)</td>
</tr>
<tr>
<td>Mental mapping</td>
<td>Andrew Cox (Cox and Benson, 2017)</td>
</tr>
<tr>
<td>Observation (participant, non-participant)</td>
<td>Christine Urquhart (Cooper, Lewis and Urquhart, 2004)</td>
</tr>
<tr>
<td>Naturalistic inquiry</td>
<td>David Ellis and Allen Foster (Shehata et al., 2015)</td>
</tr>
<tr>
<td>Philosophical underpinning/intellectual history perspectives: constructivism, collectivism and constructionism</td>
<td>Domains (ontological, epistemological and sociological dimensions): Jenna Hartel (Hartel and Hjørland, 2003)</td>
</tr>
<tr>
<td>Qualitative methodology</td>
<td>Lisa Given (2006, 2008a, b, 2015; Croft-Piggin and Given, 2013)</td>
</tr>
<tr>
<td>Sentiment analysis</td>
<td>Christopher Khoo (Khoo et al., 2015)</td>
</tr>
</tbody>
</table>
Table 19: Reviewer expertise on models of information behaviour and related information activities

Cross-cutting expertise

Reviewers also have expertise in various other fields related to information behaviour that can benefit from information behaviour studies or strengthen such studies. Table 20 is very selective in portraying the extensive scope of expertise other than information behaviour.

<table>
<thead>
<tr>
<th>Topical focus: expertise in related fields</th>
<th>Examples of reviewers with related expertise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment</td>
<td>Anna Lundh (<em>Lundh et al.</em>, 2015)</td>
</tr>
<tr>
<td>Bibliotherapy</td>
<td>Andrew Cox (<em>Brewster, Sen and Cox</em>, 2012); Christine Urquhart (<em>Fanner and Urquhart</em>, 2008)</td>
</tr>
<tr>
<td>Censorship (children)</td>
<td>Lynne McKechnie (<em>Isajlovic-Terry and McKechnie</em>, 2012)</td>
</tr>
<tr>
<td>Cluster analysis</td>
<td>Christopher Khoo (<em>Khoo, Higgins and Foo</em>, 2004)</td>
</tr>
<tr>
<td></td>
<td>Informal scientific communication: David Ellis and Allen Foster (<em>Shehata, Ellis and Foster</em>, 2015, 2017)</td>
</tr>
<tr>
<td></td>
<td>Shannon’s mathematical theory: Charles Cole (1997a)</td>
</tr>
<tr>
<td>Communities of practice</td>
<td>Andrew Cox (2015)</td>
</tr>
<tr>
<td>Complexity</td>
<td>Cole (1997b)</td>
</tr>
<tr>
<td>------------</td>
<td>--------------</td>
</tr>
<tr>
<td>Consumer health informatics</td>
<td>Tiffany Veinot (Valdez, Holden, Novak and Veinot, 2015; Veinot, Campbell, Kruger and Grodzinski, 2013)</td>
</tr>
</tbody>
</table>
| Country specific expertise – holistically | Croatia: Ivanka Stiričević (Stiričević and Cunovic, 2013; Stiričević and Pehar, 2015)  
South Africa: Christine Stillwell (Stillwell, Bats and Lor, 2016) |
| Current awareness services | Ina Fourie (Fourie, 1999, 2003a; Rossouw and Fourie, 2007) |
| Data play | Theresa Anderson (Anderson, Knight and Tall, 2017) |
| Digital images | Zinaida Manžuch (2009a) |
| Digital Science | Jela Steinerová (2016) |
| Distance education | Ina Fourie (2001, 2003b) |
| Evidence-based librarianship | Lisa Given (2006); Ross Todd (2009) |
| E-book publishing, production and acquisition | Publishing: Elena Macevičiūtė (Gudinavičius et al., 2015; Macevičiūtė and Borg, 2013; Macevičiūtė, Wallin and Nilsson, 2015; Macevičiūtė, Wilson, Gudinavičius and Šuminas, 2017)  
Production: Elena Macevičiūtė (Macevičiūtė, Borg, Kuzminiene and Konrad, 2014) |
| Embedded librarianship | Christine Stilwell (Kleinveldt, Schutte and Stilwell, 2016) |
| Entity recognition | Makiko Miwa (Han-Cheol et al., 2013) |
| Environmental information | Jeta Haider (2012) |
| Ergonomics | Reijo Savolainen (Franssila et al., 2016) |
| Evaluation (hard core) of information retrieval and information retrieval systems (e.g. cognitive interpretation, cognitive elements of information retrieval) | Evaluation of information retrieval systems: Peter Ingwersen (Borlund and Ingwersen, 1997); Ian Ruthven (Borlund and Ruthven, 2008)  
Search engine performance: Judit Bar-Ilan (2002b) |
<p>| Facet analysis | David Ellis (Ellis and Vasconcelos, 1999) |</p>
<table>
<thead>
<tr>
<th>Gay and lesbian fiction</th>
<th>Lynn McKechnie ([Rothbauer and McKechnie, 1999])</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guided inquiry</td>
<td>Charles Cole ([Cole et al., 2017; Cole et al., 2015; Lamoureux et al., 2013]); Carol Kuhlthau ([Kuhlthau, Maniotes and Caspari, 2007])</td>
</tr>
<tr>
<td>Indexing</td>
<td>David Ellis ([Ellis, Ford and Furner, 1998]); Niel Pharo ([Soba and Pharo, 2017]); Sanda Erdelez ([Wang et al., 2012])</td>
</tr>
<tr>
<td>Indigenous knowledge</td>
<td>Jeta Haider ([Lindh and Haider, 2010]); Christine Stilwell ([Elia, Mutula and Stilwell, 2014]; [Lwoga, Ngulube and Stilwell, 2010])</td>
</tr>
<tr>
<td>Information and mind</td>
<td>Maria Próchnicka ([1991]); Reijo Savolainen ([Harviainen and Savolainen, 2014])</td>
</tr>
<tr>
<td>Information as process</td>
<td>Charles Cole ([1997c])</td>
</tr>
<tr>
<td>Information ethics education</td>
<td>Dennis Ocholla ([2009, 2013]; [Ndwandwe, Ocholla and Dube, 2009]; [Ocholla and Bothma, 2006]; [Ocholla and Britz, 2013])</td>
</tr>
<tr>
<td>Information and knowledge organisation</td>
<td>David Ellis ([Ellis and Vasconcelos, 1999]); Lisa Given ([Given and Olson, 2003])</td>
</tr>
<tr>
<td>Information system strategies</td>
<td>David Allen and Tom Wilson ([Allen and Wilson, 2003b]; [Codington and Wilson, 1994])</td>
</tr>
<tr>
<td>Informetrics</td>
<td>Ian Ruthven ([2004])</td>
</tr>
<tr>
<td>Institutional information</td>
<td>Maria Próchnicka ([2016])</td>
</tr>
<tr>
<td>Non-profit organisations: Lisa Given ([Rathi and Given, 2017])</td>
<td></td>
</tr>
<tr>
<td>Interfaces</td>
<td>Lisa Given ([Given et al., 2007]); Ian Ruthven ([White and Ruthven, 2006]; [Mohd, Crestani and Ruthven, 2012])</td>
</tr>
<tr>
<td>International research teams</td>
<td>Lisa Given ([Ward and Given, 2017])</td>
</tr>
<tr>
<td>Interprofessional</td>
<td>Heidi Julien ([Latham, Julien, Gross and...])</td>
</tr>
<tr>
<td>Collaboration</td>
<td>Witte, 2016</td>
</tr>
<tr>
<td>--------------</td>
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</tr>
<tr>
<td>Journal publishing</td>
<td>Jela Steinerová (Suchá and Steinerová, 2015)</td>
</tr>
<tr>
<td>Knowledge as a commons</td>
<td>Jutta Haider (2008)</td>
</tr>
<tr>
<td>Knowledge construction</td>
<td>Andrew Cox (Li, Cox and Ford, 2017)</td>
</tr>
</tbody>
</table>
| Learning and teaching | Curricula: Ross Todd (2006)  
E-learning: David Nicholas (Gunter, Nicholas and Williams, 2005)  
Inquiry-based learning: Charles Cole (Cole et al., 2017; Cole et al., 2015; Lamoureux et al., 2013); Carol Kuhlthau (2004; Kuhlthau et al. 2007)  
Learning analytic devices: Theresa Anderson (Anderson and Knight, 2017)  
Learning in libraries: Brendan Luyt (Heok and Luyt, 2010)  
Library and information science education: Dennis Ocholla (Ocholla and Bothma, 2006); Ross Todd (Kallenberger and Todd, 2001)  
Teacher education: Ross Todd (Dow and Todd, 1997)  
Teaching information seeking: Olof Sundin (Limberg and Sundin, 2006)  
Training of library users: Hester Meyer (2010a,b) |
| Librarians | Children: Ivanka Stričević (Martinovic and Stričević, 2013)  
General: Ina Fourie (2013; Fourie and Meyer, 2016)  
Children’s librarians: Åse Hedemark and Jenny Lindberg (2017)  
Emotion in work: Heidi Julien (Julien and Genuis, 2009)  
Teaching roles: Heidi Julien (Julien and Genuis, 2011) |
| Libraries and related institutions (archives, museums) | Academic and scientific libraries: Anna Mierzecka (Mierzecka et al., 2017); Nils Pharo (Frank and Pharo, 2016); Jela Steinerová (2003); Ivanka Stričević (Rubinic and Stričević, 2011); Kirsty Williamson (Bannister and Williamson, 2003; Burstein, Schauder, Williamson and Wright, 2003; Stayner and Williamson, 1980)  
Access: Christine Stilwell (Lwoga et al., 2011)  
Archives: Lisa Given (Given and McTavish, 2010)  
Children's libraries: Ivanka Stričević (2009b; Stričević and Jelusic, 2010)  
(young adults)  
Digital libraries: Elena Macevičiūtė (Macevičiūtė, 2014)  
Faculty-librarian relationships: Lisa Given (Given and Julien, 2003)  
General: Lisa Given (Given and McTavish, 2010); Brendan Luyt |
Subject domain expertise of ISIC2018 reviewer community: a scoping review

Library and information science

Jetta Haider (Weller and Haider, 2007); Christopher Khoo (Khoo and Na, 2006); Annemaree Lloyd (2007; Huvila, Lloyd, Budd, Palmer and Toms, 2016); Małgorzata Kisilowska (2000); Ross Todd (1999a)

Library and information science education

Theresa Anderson (Bawden et al., 2007); Hester Meyer (2010a, b)

Health librarian education: Christine Urquhart (Petricin and Urquhart, 2007)

Health informatics education: Christine Urquhart (Petricin and Urquhart, 2007)
<table>
<thead>
<tr>
<th>Subject domain expertise</th>
<th>Researchers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literary communication</td>
<td>Paloma Korycińska-Huras (2006)</td>
</tr>
<tr>
<td>Linguistic analysis, tools</td>
<td>Paloma Korycińska (Niedźwiedzka and Korycińska, 2016); Anna Lundh (Garden, Francke, Lundh and Limberg, 2014)</td>
</tr>
<tr>
<td>Marketing</td>
<td>Noa Aharony (2009c, 2010)</td>
</tr>
<tr>
<td>Mental health services</td>
<td>Christine Urquhart (Fanner and Urquhart, 2008)</td>
</tr>
<tr>
<td>Mentoring circles</td>
<td>Lisa Given (Given and Kelly, 2016)</td>
</tr>
<tr>
<td>Metaphors (pictorial)</td>
<td>Pictorial metaphors for information: Jenna Hartel (Hartel and Savolainen, 2016)</td>
</tr>
<tr>
<td>Multiculturalism</td>
<td>Ivanka Stričević (2009b)</td>
</tr>
<tr>
<td>Networked information</td>
<td>Ross Todd (2000, 2008)</td>
</tr>
<tr>
<td>Online media and privacy</td>
<td>Eric Meyers (Greyson, Agosto, Meyers, Subramaniam and Abbas, 2014)</td>
</tr>
<tr>
<td>Ontology construction</td>
<td>Judit Bar-Ilan (Zhitomisky-Geffet, Erez and Bar-Ilan, 2017); Christopher Kho (Khoo, Na, Wang and Chan, 2011)</td>
</tr>
<tr>
<td>Performance measurement</td>
<td>Allen Foster (Foster, Ferguson-Boucher and Broady-Preston, 2010)</td>
</tr>
<tr>
<td>Philosophy of information</td>
<td>Charles Cole (Cole and Spink, 2004)</td>
</tr>
<tr>
<td>Portfolio analysis and power positioning</td>
<td>Andrew Cox (2005)</td>
</tr>
<tr>
<td>Privacy (online media)</td>
<td>Eric Meyers (Greyson et al., 2014)</td>
</tr>
<tr>
<td>Poverty, social exclusion</td>
<td>Christine Stilwell (2011a,b)</td>
</tr>
<tr>
<td>Preservation and digitisation</td>
<td>Zinaida Manžuch (2006, 2009b)</td>
</tr>
<tr>
<td>Professional communication</td>
<td>Zinaida Manžuch (2010a,b); Lynn McKechnie and Heidi Julien (McKechnie, Julien, Genuis and Oliphant, 2008)</td>
</tr>
<tr>
<td>Reader development, reading</td>
<td>Anna Lundh (Lundh and Dolatkhah, 2016); Ivanka Stričević (2009a, c)</td>
</tr>
<tr>
<td>Reference interviews</td>
<td>Christine Urquhart (Price, Urquhart and Cooper, 2007)</td>
</tr>
<tr>
<td>Research cultures (impact of library 2.0)</td>
<td>Sanna Talja (Talja et al., 2007)</td>
</tr>
<tr>
<td>Researchers – individuals</td>
<td>Marcia J. Bates: Jenna Hartel (2013)</td>
</tr>
<tr>
<td>Scientific collaboration</td>
<td>Paul Solomon (Hara, Kim, Solomon and Sonnenwald, 2003)</td>
</tr>
<tr>
<td>Scholarship</td>
<td>Zinaida Manžuch (2008)</td>
</tr>
<tr>
<td>Semantic relations</td>
<td>Christopher Khoo (Khoo and Na, 2006)</td>
</tr>
<tr>
<td>Specific library</td>
<td>Adolescents: Ivanka Stričević</td>
</tr>
</tbody>
</table>
Table 20: Reviewer expertise in related fields

<table>
<thead>
<tr>
<th>Tagging (images)</th>
<th>Judit Bar-Ilan (Bar-Ilan, Zhitomirsky-Geffet, Miller and Shoham, 2010)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Text analysis</td>
<td>Christopher Khoo (Khoo, Dai and Loh, 2002)</td>
</tr>
<tr>
<td>Thesauri</td>
<td>Charles Cole (Cole et al., 2007; Yi et al., 2006); Javier Martinez (Pastor-Sanchez, Mendez and Rodríguez-Muñoz, 2009)</td>
</tr>
<tr>
<td>User ranking</td>
<td>Judit Bar-Ilan (Bar-Ilan, Keenoy, Yaari and Levene, 2007)</td>
</tr>
<tr>
<td>User studies</td>
<td>Olof Sundin (2002d) (health information); Zinaida Manžuch and Elena Macevičiūtė (2014)</td>
</tr>
<tr>
<td>Visualiation</td>
<td>Theresa Anderson (Anderson, Knight and Tall, 2017); Charles Cole (Leide et al., 2007); Ian Ruthven (Beresi, Kim, Song and Ruthven, 2010a)</td>
</tr>
<tr>
<td>Web analytics</td>
<td>Sanda Erdelez (Paul and Erdelez, 2013)</td>
</tr>
<tr>
<td>Web archiving</td>
<td>Eric Meyers (Dougherty and Meyer, 2014)</td>
</tr>
<tr>
<td>Web, portals</td>
<td>Andrew Cox (Cox and Yeates, 2003)</td>
</tr>
<tr>
<td>Website mapping</td>
<td>Judit Bar-Ilan (Bar-Ilan and Azoulay, 2012)</td>
</tr>
</tbody>
</table>

**Discussion**

The analysis shows expertise in a variety of ISIC related matters. A finer granular analysis would reveal even more on the expertise especially if we triangulated findings form other resources as suggested in the conclusion and steps forward. Apart from showing expertise on eleven major themes selected from models of information behaviour and seeking, pointing to key authors, as well as sub-themes, Tables 1-20 reflect areas where the ISIC2018 international programme committee is not actively involved e.g. studies on religion and information behaviour and in formation transfer.

**Conclusion**

With this first step of our knowledge mapping, we intended to collate the evidence of expertise as reflected in the literature, specifically articles in peer-reviewed journals. Subsequent steps will involve building a map of reviewer expertise after this initial literature search and content analysis by:

- exploring publically available listings of publications, presentations, talks and grey literature via curriculum vitae’s, websites, and blogs
• drawing on self-defined areas of expertise (topics) as presented by our reviewers in response to a questionnaire survey
• using co-constructing and ranking of expertise via Google forms.

As for designing a review process that maintains quality, the ISIC2018 international programme certainly covers a spectrum of expertise. As for ability to remain open minded to new ideas, we will only be able to answer this question after completion of 2018 reviews, and insight into the list of topics submitted and feedback from authors.

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