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Sundin, Olof. *Information practices in professional life*. Keynote at the Annual Symposium at Research Center for Knowledge Community, University of Tsukuba, Japan, the 19th of February 2008.

Information Practices in Professional Life

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Abstract

This keynote concerns social aspects of information seeking and use in professional life and how these are made explicit in information practices. In particular, the keynote focuses on how professionals' activities in relation to information artefacts, as well as the artefacts in themselves, are socially constructed in context-bound practices. Arguments in favour of an interest in peoples' information practices rather than in their information seeking and use seen as a cognitive phenomenon are put forward. The LIS concept of cognitive authority is used in relation to the epistemological position of pragmatism. Examples are taken primarily from the author's empirical research on nurses. The presentation concludes with a call for an increased interest in the materiality of information seeking and use by proposing important research questions for the future.

Introduction¹

The world is full of different kinds of information activities, not least in the world of scholarly and professional communication. We “google” names we come across in our work. We search for introductions to new concepts in Wikipedia as well as in traditional encyclopaedias. We look up references in databases when writing a research paper. We assess the relevance of the references in relation to, among other things, what our article is about, who the author is and which journal it is published in. If we find an article interesting, we might recommend it to our colleagues. We write papers with the help of word processing programmes, we print drafts of papers and we write comments in the margins. All these activities are information practices of various kinds, social practices that are formed and carried out in different communities. The examples I have just given are some of the activities I engaged in when preparing this keynote, but information activities are not just carried out within academic disciplines; they are also carried out within corporations, schools, governments or virtual communities on the web.

In this talk, I will address the social aspects of information seeking and use in professional life from a theoretical perspective. I will do this by discussing a number of concepts central to my research. Attention to peoples’ information practices will be proposed as a way of addressing the social aspects of peoples’ interaction with information. In particular, I will focus on how our activities, in relation to information artefacts, as well as the artefacts in themselves, are socially constructed according to the sets of rules that form, and are formed by,

¹ The talk builds on two research projects and their publications. The first project concerns nurses’ information practices in a professional context (Sundin, 2002, 2003) and the second one concerns the mediation of information literacy and nurses appropriation of such literacy (Sundin, 2008; Sundin, Limberg & Lundh, in print). The talk also relates to an epistemological approach of pragmatism, adapted to LIS, that connects the two projects to each other (Sundin & Johannisson, 2005a, Sundin & Johannisson, 2005b; Johannisson & Sundin, 2007).

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the people acting in a particular community. By information artefacts I mean all those communication tools, or media, that we deal with; everything from printed books and articles to marked-up web-pages and interactive web-sites. I will claim that information, information seeking and other related concepts have no meaning in themselves, but are attributed with different meanings in different contexts. This explains why context is of such importance to our field and I will elaborate on context by using the concept of community of justification.

A community of justification is established by certain sets of rules, or discourses, that guide what can be said and done and I will use the practice of nursing to exemplify what I mean. In a community of justification some agents and artefacts are attributed more significance than others are. To discuss this, to make it clearer and to see how this actually works in practice, I will use the concept of cognitive authority. At the end of the presentation, I will also talk about the direction that my research will take in the future, a direction which pays particular attention to the materiality of information seeking and use.

Information practices

The research field of information seeking and use has paid much attention to optimizing access to quality information, that is, by finding ways to develop information systems and methods of mediation that better satisfy the information needs of individuals facing a problem to be solved. This is of course a valid reason for conducting empirical research and it is also the dominating research theme in the information seeking and use tradition. If the objective of research is to create better access, then the focus is typically on *transmission*. In this tradition, information is accordingly often treated and investigated as something that can be transmitted, either physically or cognitively, between a sender and a receiver.

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In actual fact, the field of information seeking and use is permeated by transmission concepts that emphasise the rationality of individual information seeking in situations of problem solving. This is visible not least in the recurring frequency of concepts like ‘information need’, ‘information barrier’, and even ‘information seeking’ itself. When people are confronted with a situation in which they cannot solve a task with their own cognitive resources, the research literature claims that the person experiences an ‘information need’. The idea that people have innate information needs indicates a primary interest in psychologising people and is manifested in research that attempts to discover explanations of peoples’ information needs, seeking and use in the workings of individual minds. In this framework, people who attempt to satisfy an information need through information seeking, usually have to contend with ‘barriers’. This pronounced interest in information transfer tends to overshadow other, social and more practice-oriented, aspects of information that take into consideration the material aspects of information artefacts and how these are given meaning in different contexts.

Researchers within the field of information seeking and use have tried to capture how individuals think about their information needs, their information seeking and their information use. Their approaches have often been of a general nature and domain-independent in their ambitions; typically with the aim of creating models that can predict how individuals will behave in the future. Such models are numerous and include models of the information seeking process; often treated in the singular. Due to the generalist pretensions of these models, the context of the user is seldom considered in depth. Having said that, the biannual conference Information Seeking in Context (ISIC) initiated in 1996 is an attempt to emphasize how information seeking is embedded in situations and institutions. However, as Brenda Dervin (1997) so excellently illuminates in her paper to the first ISIC conference 1996, the call to consider context could well result in very diverse research approaches.

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Context is a difficult concept in Library and Information Science (LIS) in general, not the least in information seeking and use research. Few scholars would admit that they do not consider context in their research. Still, the concept of context is used in very different ways. Context is sometimes used to describe features within information systems, such as metadata, that make it easier for us to find a document and to assess its relevance. In a more sociological tradition, context could be used to describe the whole socio-political system that surrounds us, an external factor that effects the ways in which we handle information. In an individual perspective, on the other hand, context can be defined as the user's perceptions of the environment. Thus, context can sometimes be seen as properties in documents, as users' mental constructions, or as external variables on the macro level. In this presentation, I refer instead to context as constructing actions at the same time as the actions themselves construct the context. Brenda Dervin uses the same line of reasoning; namely that context is "the carrier of meaning" (1997, p. 15). (Sundin & Johannisson, 2005a; Talja et al, 1999)

With this understanding of context, the research task involves visualizing peoples' contextualised actions when investigating the social aspects of information seeking and use. One way of achieving this is by regarding information seeking and other information activities as *practices*. Such an approach makes it possible to investigate the social aspects of information seeking and use in an interesting way. The sociologist Theodore Schatzki (2000, p. 21) writes that "Since practices are almost always, as a matter of fact, social in the minimal sense of embracing multiple, to varying extents interacting participants, normativity, meaning, and language (of all sorts) are at bottom social phenomena". He continues by saying: "meaning and language, arising from and tied to continuous activity, cannot be telescoped into representations or mental contents, which themselves acquire the property of

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being about something by virtue of how people use and react to them” (p. 21). In other words, information practices, including peoples’ understandings of these practices, are always social and should thus be studied in action. Another feature within practice-oriented research is the interest in embodied action, mediated by artefacts surrounding us (Schatzki, 2000, p. 11). In this view, we act habitually in a man-made world full of artefacts, and these artefacts mediate at the same time the culture in which they are communicated. The latter point is, to say the least, important for our field. For example, how can we understand ‘science’ without an understanding of the material properties of the research journal (e.g. Frohmann, 2004)? Or, how closely related are peoples’ understandings of ‘information seeking’ to the various search engines on the web, such as Google? In other words, our embodied actions are shaped in relation to the artefacts that surround us and these artefacts vary between communities, thus constituting different practices.

Research within information seeking and use has attempted to investigate issues concerning the social aspects of information seeking, or, at least, to problematize the individual constructivist approaches that have dominated theory building since the late 1970’s. The individual-centred, or user-centred, research which grew out of this theoretical reorientation, criticized earlier research for taking its starting point in the information system rather than in the individual user. However, when the perspective was switched, the child was often thrown out with the bathwater. That is, information systems and contexts were viewed only from the perspective of the user and the role of the information artefact was not considered. Sanna Talja and Jenna Hartel (2007) show, among other things, how user-centred research has created a dichotomy between user-centred research and system-centred research. According to user-centred research, the starting point for research lies in the user and the user’s emotions, feelings and thoughts. Any interest in information systems, on the

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other hand, has in the user-centred tradition often been negatively viewed as system-centred research that fails to pay attention the users of the systems.

User-centred research has dominated the information seeking research field for some decades now and resulted in a lack of interest in artefacts and the material properties of information – the sociotechnical aspects of information environments – and how these are contextually shaped in relation to different practices. A consideration of the social aspects of information seeking and use through the use of the concept of practice is a way of avoiding the split between the user and artefacts through which he or she contextually acts as well as a way of avoiding a split between macro and micro. In other words, the practice concept allows us to study people in their embedded and physical interactions with other people and artefacts in different communities.

Instead of regarding people as ‘users’ and trying to resolve their information ‘needs’, which is often defined as being a mental state, through information seeking, as much of the user-centred research has been attempting to do, it is possible to investigate peoples’ information practices as active participation in communities, or as *communicative participation* (Sundin & Johannisson, 2005a; Johannisson & Sundin, 2007). We participate in communities by reading and writing papers and by going to conferences and symposiums such as this one. The concept of communicative participation underlines participation in a community instead of focusing on information transmission between a sender and a receiver. Information seeking can then be investigated as activities, or practices, rather than as a mental quest for knowledge carried out by more or less isolated individuals. A research interest in information practices has gathered momentum in the field in recent years. For example, a similar interest in information practice appeared in a newly published theme issue of *Library Quarterly* (e.g. Johannisson & Sundin, 2007; Talja & MacKenzie, 2007; Veinot, 2007).

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The argument presented above for a ‘practice turn’ in information seeking and use research will now be followed by an elaboration of the concept of context. One way of dealing with context and its relation to practice is by using the pragmatist concept of *community of justification*. I will continue this presentation by introducing my research on the community of justification of nursing.

Nursing as a community of justification

I have empirically studied nurses and nursing in relation to professional information in two different projects (Johannisson & Sundin, 2007; Sundin, 2002; 2003; Sundin, Limberg & Lundh, in print). The reasons for this choice of empirical arena are many. First of all, nursing is an occupation that, at least in Sweden, has changed considerably during the second half of the 20th century. Nursing education has been transformed from vocational training to academic studies, and the multidisciplinary research discipline of nursing has been created. Nursing therefore stands as an example of the professionalization of occupational life in which information practices of various kinds are regarded as increasingly important. This is exemplified in the ways in which the infrastructure for professional and scholarly communication has been established through the emergence of a number of nursing research journals, libraries, databases and websites. Nursing is thus an example of an occupation that is increasingly becoming more formal knowledge, and thus information, intensive. In this sense, nursing exemplifies what Karin Knorr Cetina (2000, p. 186) means when she describes how knowledge practices in contemporary society influence to an increasing extent not just the scientific domain but also other areas in society. In Knorr Cetina's words: “In postindustrial societies, knowledge settings are now no longer limited to science” (p. 186).

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Nursing is interesting as an empirical field of investigation in information seeking and use for a number of other reasons as well. Members of the nursing profession, who are predominantly female, usually work literally under the same roof as the members of the powerful profession of medicine, which is, traditionally, male-dominated. Even if the numbers of female doctors and male nurses are increasing in Sweden, the two professions still have strong gender identities. Nursing, in particular, is seen as a female profession. Furthermore, nursing as an academic discipline is regarded differently in different parts of the world, but it is often seen as building upon a more holistic and human sciences-oriented epistemology compared to the natural science-oriented medical discipline. Nurses in their daily work have to relate to medicine, which underscores the power aspects of nurses' occupational practices in certain and interesting ways. From a practice perspective, it emerges clearly that phenomena such as information seeking and use can only be studied in specific situated practices.

If we regard the activities of information seeking and use as communicative participation, as I have suggested, it becomes important to understand the particular community in focus and how participants in this community *justify* certain practices in relation to information. The concept of community of justification, derived from the philosophy of pragmatism, allows me to make visible how the sets of rules which constitute the framework for our activities are negotiated by agents within a particular practice. Illustrating communities of justification with a profession such as nursing is particularly useful since professional expertise is formed by agents making certain claims about what constitutes the formal knowledge of the profession in relation to other professions. Professional knowledge and expertise is thus never stable and distinct, but elastic with shifting borders and continually in a state of change.

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When investigating justifications of professional knowledge claims, communicated through information artefacts, I do not regard justifications as expressions of participants', or professional agents', unique intentions, but as their use of professional discourses. When I have studied nurses' information practices, I have analysed them as expressions of communicative participation in nursing. This community is seen as the sociocultural context in which nurses habitually act. The significance accorded to the reading and critical evaluation of research articles, as well as other questions concerning information seeking and use must be seen in relation to the field of tension constituted by the practice of nursing. In other words, through studying nurses' community of justification it is possible to render visible both the conditions that shape these actions as well as the results. The concept of community of justification highlights not only the context-dependent character of information practices, but also how a community of justification is constantly negotiated, shaped and reshaped by certain agents. A community of justification therefore simultaneously constructs and is constructed by the participants in the community and, of course, in relation to other practices and communities in society.

Theoretical concepts in LIS such as information seeking, information users or information literacy are often treated as if they have an inner essence; as if the meanings of the concepts are stable from domain to domain. Instead, from the theoretical perspective taken here, these and other concepts should be regarded as shaped and reshaped in communities of justification. I will give an example. In an article that will soon be published, two of my colleagues and I present a study of the expertise in information literacy attributed to librarians by nursing students. In the article, information literacy is defined in the following way:

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The appropriation of information literacy is here regarded as a process of being empowered in relation to various information practices within certain domains. (Sundin, Limberg & Lundh, in print, p. 21)

But perhaps it is more interesting to consider an empirical definition rather than the analytical definition given above; one that differs between and within certain communities and practices. Information literacy is then attributed with different meanings in different communities of justification and one task for research is to investigate these different meanings. In the case of nursing students' information literacy, the focus of the research is on how nursing students' give different meanings to information literacy in talk and action rather than on investigating their relation to a pre-defined description of this type of literacy as a list of decontextualised skills. With this perspective, the meanings of information literacy become the outcome of research rather than its departure point. Professionals, nurses as well as other professionals, have an set of rules – or rather sets of rules – that guide occupational practice.

Professional practitioners always relate to these rules which means that the research task is to study how these more or less formal rules are embodied and given meaning by people and how they relate to a more unspoken and ritualized behaviour. In my empirical research, the question of how formal rules are reshaped and followed in practice is central. The discrepancies that could be found between the formal rules and ritualized behavior which are illuminated then become something interesting in themselves.

This contests research that treats language as a neutral and unproblematic tool for the transference of messages between people. Instead, language is treated as something constructive that contributes to forming us as human beings in various practices, our views of ourselves and what we talk about. I build upon a discourse-oriented approach to information practices which emphasizes the sociocultural, context bound, practices in which they are used. Discourse, in my research, is defined as the sets of rules that govern what can be said and

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done, for example in relation to information practices. In Michel Foucault's words discourse can be understood as: "practices that systematically form the objects of which they speak" (cited in Mills, 2004, p. 15). The use of the concept of discourse is a way of illustrating the relation between individual professionals and the community of justification. Individual agents within the community use and shape discourses in their daily dealings. Therefore, discourse both governs and is governed by the agents using them. Accordingly, knowledge is treated as produced in social interaction from which the discursive and material aspects of practice cannot be separated. It is important to recognize that language is one aspect of practices. Thus, an interest in both materiality and discourse is not paradoxical.

I have now discussed how the concept of community of justification can be used in order to conceptualise context and communicative participation. I have also talked about how sets of rules – or discourses – create the affordances and limitations of practices in communities of justification. Let me now proceed to discuss how we can understand information practices in relation to professional knowledge claims and power.

Professionalism, knowledge claims and power

In my research, the profession of nursing is an example of a community of justification. In one of my projects, I have conducted a number of interviews with specialist nurses within anaesthesia, theatre nursing and intensive care (Johannisson & Sundin, 2007; Sundin, 2002). The nurses worked together with their colleagues as nurses at the same time as they had a particular responsibility on their wards for working with knowledge development. Many of them took courses in nursing at the university and in general, they were interested in the professionalization of nursing, but in different ways. Within the professional project of nursing, information and nurses' reading of it has been attributed a certain value. I have shown how nursing research articles and

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nurses' practices in seeking and using them can be seen as expressions of professionalism in nursing (Sundin, 2002, 2003; Johannisson & Sundin, 2007). That is, being able to search for literature and read it is a sign of professionalism. Thus, information practices are in my research related to professionalism at an analytical level.

When investigating nurses' information practices it is of interest to study how these sets of rules, or discourses, are expressed both at the workplace and in the course of ongoing conversation within the occupation, for example in journals, in mailing-lists or at conferences. The particular discourse at play shapes the ways information practices are talked about and carried out. At the occupational level the "nursing" discourse dominates, but at the workplace level the "medical" discourse dominates. In the nursing discourse, formal nursing knowledge is regarded as an important and independent knowledge domain on an equal footing with medical knowledge but with a different focus and content. In the nursing discourse, nurses are active and independent and information seeking is attributed an important role. An article from a nursing journal, for example, is treated as the source of legitimate and useful research although it might not be seen as legitimate within a medical discourse. In the same way, information use at work is regarded as a professional obligation and it is expected of a professional nurse that she or he actually uses nursing research in occupational practice. The nursing discourse can be summed up by its attempt to strive for independence from medicine and is characterised by its strategy to professionalize by building a formal nursing knowledge foundation for occupational practice.

The medical discourse, on the other hand, positions nursing knowledge as a part of medical knowledge. In the same line of reasoning, nurses are hierarchically positioned below physicians. A qualified nurse becomes in this discourse merely a staff member who knows not quite as much as a physician.

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In the medical discourse, information practices are governed by physicians and the profession of medicine. Articles are passed on to nurses by physicians and not independently looked for by the nurses themselves. An article in a nursing journal is then never regarded as equally good as an article in a medical journal. In the medical discourse, nurses in general are not seen as professionals that seek, read and use research articles independently; they do so at the order or recommendation of physicians. In other words, in the medical discourse nurses and their practices are governed and regulated by physicians and nursing as a profession is subordinate to the medical profession. To sum up, the two competing discourses within nursing, seen as a community of justification, have direct consequences for peoples' information practices as they are carried out in both linguistic and physical action.

From a pragmatist position, the distinction between true and false knowledge is not of interest. Instead, we gain by focusing on knowledge in action and how knowledge claims are judged in different discourses as one part of that action. This is a kind of post-epistemological instrumentalism in which a knowledge claim is judged by its ability to work within certain communities of justification for reaching certain goals and not by its reference to an objective reality. Seen from this perspective, a scientific knowledge claim is no different than other knowledge claims. A theoretical concept developed in library and information science is that of *cognitive authority*, coined by Patrick Wilson in his book *Second-Hand Knowledge* from 1983. Wilson's starting point is that our experiences of the world are often second-hand and mediated to us through other people, texts or institutions. Seeking and using information is one means of accessing second-hand knowledge. Similarly, the sociologist Anthony Giddens (1990) describes how people in late modern society to an increasing extent are dependent upon expert systems for their understanding and interpretation of the world. Acting upon others' expertise, implies trust and Giddens raises the question: "why do most people, most of the time, trust in

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practices and social mechanisms about which their own technical knowledge is slight or nonexistent?” (1990, p. 88). The issue that thus emerges for information seeking and use research concerns our trust for one person rather than for another and how this trust transpires. Why do we trust one research article more than another; and why do we trust the research conducted in one institute more than that carried out in another? I mean that the cognitive authority accorded to a text, such as a journal article, is constructed dialogically in communities of justification where different discourses compete for dominance.

Earlier, I defined discourse as the sets of rules that govern what can be said and done in a particular community of justification. I have also claimed that in nursing two competing discourses come into view in the community of justification; the discourse of “nursing” and the discourse of “medicine”. For example, the way an article in the highly regarded medical journal the *Lancet* is judged, depends on the discourse at play. Within medical discourse a *Lancet* article is likely to be attributed with high cognitive authority, while the same article, when figuring in nursing discourse, is not regarded as relevant. Thus, it is important to take into consideration that, although communities of justification are a useful concept for understanding context, these communities are rarely homogenous. Instead, they are constituted by discourses that are often in conflict with each other and that transgress the boundaries of different communities of justifications.

Let me now conclude the talk by indicating the direction that my research will take in the future.

Concluding remarks and future research

The social aspects of information seeking and use are important and an examination of information practices brings them to the fore. It is interesting to

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note that questions concerning social aspects in LIS research are considered to a much greater extent now than they were 10 years ago. Why this interest has arisen and increased cannot be traced back to one single cause or factor. Rather it is an amalgamation of various explanations, including an increased theoretical awareness of how knowledge is constructed socially and dialogically and, of course, the development of new technologies for information seeking and use play a significant role. This theoretical re-orientation has been touched upon in this presentation. The growing constructionist agenda in LIS is seen in disparate research fields, ranging from knowledge organisation and information seeking, to information and cultural policy. In addition to this, the development and proliferation of a number of new socially oriented technological tools are increasingly in evidence. The key word for many of these technologies is *collaboration* and the earlier rather stable boundaries between producers, mediators and users of information have become less distinctive. One of the best examples of this trend is the popular and successful collaborative online encyclopaedia, Wikipedia, but there are many other examples both used in professional life and outside.

Finding and using information is much more than a relation between you and the information, it is a question of an entire interrelated complex of people, information artefacts and practices carried out in communities of justification that are often characterised by competing discourses. The complexity of these processes is what makes the research field of information seeking and use, or information practices, so interesting, and so relevant, to participate in. A constructionist research agenda, such as the one presented here today, raises certain types of research questions, but that does not mean that other research questions are uninteresting. Information seeking and use research undertaken from a more individual and cognitive perspective is, of course, still relevant and, in all likelihood, will remain so also in the future. Therefore, I would like to argue for an increased interest in the social aspects of information activities

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without throwing out other aspects with the proverbial bath water, as happened when enthusiasm for user-centred research deflected attention from information artefacts and systems. By this I mean that we need to consider users, or rather people, and information artefacts in relation to each other and we need to take seriously how these interactions are shaped and given meaning within communities of justification.

I would therefore like to end this talk by arguing for increased awareness of the materiality of information, which has been a theme in this presentation. When the field of information needs, seeking and use took up digital information as its main focus, interest in the material aspects of information often got lost. Interestingly, the emergence of digital information came about at the same time as the user-centred research paradigm did, so that the two are juxtaposed in our research field, seen as community of justification constituted. It was all about information as seen by the user, it was claimed, and it did not matter if the information came in the form of a printed book or as a marked-up web-pages. Instead, from my perspective, the format contributes to the shaping of people as users at the same time as the format itself is shaped by humans. By considering the material properties of information, a better understanding of the interplay between information artefacts and practices could be created. We are now in the middle of a transition in the media landscape in which the interactive aspects of media come more and more into focus. Understanding this interplay from an information practices perspective allows us to consider the material aspects of information as they are seen within communities of justification.

Our information practices are formed in relation to the artefacts we deal with. When these artefacts change in formats and properties, they also change the practices of the people interacting with them. Having said that, when conducting research with an interest in information practices, it is important not to fall into the trap of technological determinism. Therefore, information

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artefacts should not be treated as naturally occurring, but as a result of social processes; as socio-technical. Important questions to be asked include, but are not restricted to, how cognitive authorities are constructed in web 2.0 environments? How do different information artefacts create different affordances and limitations for information practices? And also vice versa, how are the new tools for information seeking and use given meaning in different communities of practice? In a new research project my colleagues and I investigate the formation of expertise, authority and control on the Internet and particularly in Web 2.0 environments for learning.² Important questions for future research in the field of information seeking and use are how to understand the interrelation between people and information artefacts in web 2.0 environments and how this relation has bearing on important LIS concepts, such as the cognitive authority of information.

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² The name of the project is *EXpertise, Authority and Control on the Internet (EXACT)*: *A study of the formation of source credibility in Web 2.0 environments for learning*.

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