



Pragmatism, neo-pragmatism and sociocultural theory

Communicative participation as a perspective in LIS

Sociocultural
theory

23

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Abstract

Purpose – To show that the neo-pragmatist position of Richard Rorty, when combined with a sociocultural perspective, provides library and information science (LIS) with a forceful epistemological tool.

Design/methodology/approach – Literature-based conceptual analysis of: historical development of pragmatism in relation to other epistemological positions; neo-pragmatism as a non-dualist, both purpose and communication oriented, epistemology; and a sociocultural perspective within pedagogy, originated from the Russian researcher Lev Vygotsky.

Findings – Brought together, a neo-pragmatist, sociocultural perspective contributes to a focus on people's actions through the use of linguistic and physical tools. As a tangible example of how neo-pragmatism can be applied as an epistemological tool within LIS, information seeking seen as communicative participation is discussed. This article unites a perspective on information seeking as communicative participation with the neo-pragmatist concepts of “tools” and “communities of justification”. The article is concluded by an assessment of neo-pragmatism as an epistemological position within LIS, including those research issues that arise from this position and that are introduced along the way.

Practical implications – In its focus on usability, the neo-pragmatist position provides a possible bridge between academic and other professional practices in the field of LIS.

Originality/value – Provides, through the means of neo-pragmatism, an argument for the necessity of epistemological argumentation within LIS.

Keywords Epistemology, Information searches, Pragmatism

Paper type Literature review

Introduction

This article aims to show that the neo-pragmatist position of Richard Rorty, combined with a sociocultural perspective, can be a forceful epistemological tool in library and information science (LIS). LIS has traditionally been oriented towards problem solving and

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applied research, carried out in relation to different professional fields. The discipline's orientation towards professional practice is a strength with regard to social relevance but it also carries with it a responsibility to balance applied research with a discussion of the basis of research as such. Although the discussion has led a somewhat obscure life within LIS, some researchers have emphasized the importance of epistemological issues for both LIS research and practice (e.g. Budd, 2001; Hjørland, 2002). Recently, *Library Trends* (Vol. 52, No. 3) also devoted a whole issue to the "philosophy of information". Despite these efforts, though, it would seem paradoxical if the knowledge domain of LIS, including both research and professional practice, where a large part of activities concerns the storage of, organization of, mediation of and search for different knowledge claims would not devote sufficient interest to the epistemological groundings of these knowledge claims. The neo-pragmatist approach that we present in this article is an epistemological position "beyond" the received view of epistemology where the latter, in Dewey's (1984, p. 19) words, represents "[a] spectator theory of knowledge".

We suggest that LIS may be understood from a focus on communication by arguing for the usefulness of the concept of communicative participation as an alternative, or complement, to the concept of information seeking. Knowledge is seen as something enacted through linguistic and physical actions whose significances and relevance are judged by the consequences of such actions rather than by a subjective or objective reality. As an alternative to a dualistic view of knowledge, neo-pragmatism argues for intersubjectivity, community and solidarity – concepts which focus on communication and on the importance of justification. A neo-pragmatist epistemology has consequences for research within a number of different LIS fields, for example: knowledge organization, information retrieval (IR), public libraries, cultural policy, information policy and research on information needs, seeking and use (INSU). Our examples in this article are derived mostly from INSU research in general and from INSU in professional life in particular. This is not a coincidence as questions that concern who and what determine the value of professional information and its usability are particularly suitable for studies from a neo-pragmatist perspective. In the article we adhere to the so-called anti-representational view of knowledge, represented primarily by Richard Rorty (e.g. Rorty, 1991); language and knowledge represent nothing in themselves, but are seen as tools through which people deal with their worlds. Central issues within user studies that concern information seeking, information needs and relevance are illuminated with a neo-pragmatist view of language, knowledge and action; a view that makes use of the so-called "linguistic turn" in philosophy and the social sciences.

The article opens with a presentation of our neo-pragmatist position. This position is established in pragmatism's historical development and essential criticisms against pragmatism and neo-pragmatism are dealt with. We also relate pragmatism and neo-pragmatism to other contemporary epistemological positions and discuss a selection of approaches inspired by pragmatism within LIS. This rather extensive introduction is motivated by the lack of a more general introduction to pragmatism, and especially neo-pragmatism, in an LIS context. However, it is important to note that our point of departure is in how pragmatism can be applied, rather than in the discussions on the pros and cons of pragmatism that occur in the philosophical community. Neo-pragmatism is a philosophical epistemological position and it requires more concrete analytical tools focusing on social aspects, which it will be afforded in the section below, which addresses a sociocultural perspective within

pedagogy inspired by the Russian researcher Lev Vygotsky. Here, the analytical focus is on people's actions as supported by linguistic and physical tools, which is particularly useful in our neo-pragmatist version of INSU research. This leads up to a discussion of information seeking seen as communicative participation where we offer our contribution to neo-pragmatism as an epistemological tool within LIS. The article is concluded by an assessment of neo-pragmatism as an epistemological position within LIS, including those research issues that arise from this position and that are introduced along the way.

From pragmatism to neo-pragmatism

In his preface to *Philosophy and Social Hope*, the American philosopher Rorty (1999, p. xiii) claims that the main contributions of the two pragmatist philosophers who have most influenced his way of thinking, that is William James and John Dewey, are negative in their expressions. In classifying these contributions as negative, Rorty wants to highlight them as ways of thinking in patterns that radically divert from the traditional Western philosophical thinking that emanates from Plato. Since Rorty's own neo-pragmatist approach can fruitfully be described in terms of anti-dualism, which expresses itself in his anti-representationalist and anti-essentialist assumptions, he can be said to carry on this tradition of two of the founders of pragmatism.

However, the negative quality of pragmatist thinking in no way signals a pessimistic attitude towards philosophy, humankind or the state of the world. On the contrary, optimism is common in pragmatist thinking, since one of its basic assumptions is that the world is not something found, but something made by humankind (Rorty, 1982, p. 165f., 1999, p. xxii). No state of affairs is predetermined or eternally stable, but can always be changed through human practices. Humans interact with their environment by using the tools that this environment offers, and to Rorty (1999, pp. 63f., 74, 2000, p. 14) language is the most useful tool available and it is also the only tool that is distinctively human. The focus on language, a consequence of the so-called linguistic turn in Western philosophy, is what, according to Rorty (1999, pp. 24, 35), separates his neo-pragmatism from classical pragmatism, which focuses on experience. This shift in focus implies that rather than concentrating on the experiences of individual minds, there is an emphasis on the communication of these experiences through language. Still, Rorty's line of reasoning builds on arguments put forward by classical pragmatists like James and Dewey, and therefore we turn to these arguments before we explore Rorty's approach further.

Classical pragmatism: an American tradition

Pragmatism can be thought of as a philosophical school created in an American context by three American philosophers: Charles Sanders Peirce (1839-1914), William James (1842-1910) and John Dewey (1859-1952). Peirce is usually referred to as the first spokesman of pragmatism, James as its translator to a wider audience, and Dewey as its most well-known advocate, due to his great influence on educational systems and pedagogical methods in the Western world. Peirce and James, both connected to Harvard University, developed their thinking in direct collaboration with each other, whereas Dewey, first at the University of Chicago and then at Columbia University, developed his approach at a physical, albeit not intellectual, distance from Peirce and James. Even though pragmatism was developed by Peirce and James in the 1880s, the

term “pragmatism” did not occur in print until 1898, and it was not until 1907 that James published *Pragmatism*, “[...] the book that spread pragmatism around the world” (Murphy, 1990, p. 33).

The term “pragmatism” also provides a fruitful starting point when introducing the pragmatist approach in the condensed manner allowed by the scope of this article. In everyday use, to describe a person as “pragmatic” usually implies that this person is primarily concerned with the practical results of his/her actions, and this is a definition that to a large extent coincides with the definition of pragmatism as a philosophical approach. Still, many philosophers are reluctant to be labeled as pragmatists, even though their thoughts clearly resemble those of Peirce, James and Dewey. Several explanations can be given for this observation. One explanation is the aforementioned linguistic proximity to the term pragmatic, which in its everyday use tends to imply properties of a short-term, somewhat cynical nature. We will argue that this linguistic proximity in no way necessarily implies a philosophical one. Another, but related, explanation given by Rorty (1990, p. 1) himself, is that Western European philosophers reject philosophical ideas emanating from a nation which they regard as the result of short-term thinking, namely the USA.

Instrumental knowledge and a democratic standpoint

René Descartes (1596-1650), and the paradigm of Cartesianism, which has been one dominating influence on Western philosophy since the seventeenth century, is one of the prime targets in the pragmatist focus on experience instead of abstract thought. The classical pragmatists were all heavily influenced by Darwinian thinking, which helped them in their critique of Cartesian, idealist views on what knowledge is and how it is acquired. Descartes thought of knowledge as something that is attained through ideas, ideas being objects of thought in the individual mind and objects of thought being mental pictures reflecting objects in the outer world. In the Cartesian paradigm, ideas constitute a “veil” between the individual mind and the outer world, and it is the thought of this veil that, according to Rorty (1980, p. 48ff.), makes epistemology a central philosophical theme in this, hitherto dominating, paradigm. While rejecting idealism, the classical pragmatists were not satisfied with the empiricist strand, which followed the theories of Francis Bacon (1561-1626) and provided logical positivism with its epistemological groundings, since this tradition also implied a correspondence theory of truth. This theory of truth is what Dewey (1984) referred to as the spectator theory of knowledge; knowledge is something to be discovered, especially by the observant philosopher/scientist. In order to reject this notion, pragmatists “[...] start with a Darwinian account of human beings as animals doing their best to cope with their environment – doing their best to develop tools which will enable them to enjoy more pleasure and less pain” (Rorty, 1999, p. xxiif.). Pragmatists therefore reject the notion of abstract thought as having an intrinsic value and instead argue that “[...] the production of belief is the sole function of thought” (Murphy, 1990, p. 23). A belief is here defined as “[...] that upon which a man [*sic.*] is prepared to act” (Bain according to Peirce, 1955, p. 270), that is as an incentive to “cope with the environment”. Hence, beliefs are always to be considered in relation to their practical consequences, a basic pragmatist notion that is formulated by James (1975, p. 29) in the following manner:

And the tangible fact at the root of all our thought-distinctions, however subtle, is that there is no one of them so fine as to consist in anything but a possible difference of practice. To attain

perfect clearness in our thoughts of an object, then, we need only consider what conceivable effects of a practical kind the object may involve – what sensations we are to expect from it, and what reactions we must prepare. Our conception of these effects, whether immediate or remote, is then for us the whole of our conception of the object, so far as that conception has positive significance at all.

To judge the truth of an idea from a pragmatist standpoint is therefore to judge the extent to which the idea serves a certain purpose, that is: “[. . .] truth in our ideas means their power to ‘work’ [. . .]” (James, 1975, p. 34). “Instrumental truth”, which is Dewey’s term for his developed version of this theory of truth, is not about ascribing truth to the ideas that most accurately correspond to an external environment. Instead, people judge the truth of ideas in relation to what uses those ideas can be put in coping with that environment. Contrary to the correspondence theory of truth, ideas are not absolutely true or absolutely false, instead ideas help us attain our purposes to various degrees (Murphy, 1990, p. 51). Judging the truth of an idea becomes a question of whether the idea makes any difference to practice or not, whether the idea provides us with a useful tool or not. The sociocultural perspective, which we introduce further on, is one way of visualizing how tools are central to all human practices, including information needs, seeking and use. Our version of this perspective also joins Rorty in his rejection of the concept of truth, instrumentally interpreted or otherwise, as a fruitful concept in itself.

The instrumental notion, which runs through all pragmatism (classical or neo), is also one of the prime targets for its critics. Given that the correspondence theory of truth is disregarded, how does one judge the purposes or values that human actions intend to serve? Does not pragmatism provide a philosophical basis for a relativist, and therefore dangerous, “anything goes” attitude? This latter critique has for example been suggested by members of the LIS community (see Hjørland, 1997, p. 79, 2004a), and along the way we will provide examples of how it can be met. One way is to examine which notion of instrumentality is employed. In Western analytical moral philosophy, a distinction is traditionally made between intrinsic and instrumental values, a distinction that is based on an essentialist notion of values. This essentialist notion is inherent also in the correspondence theory of truth, namely, that there is a way that things “really are”, and that our ideas and values can more or less accurately represent this reality. Hence, intrinsic values are absolute values, values that can be identified as “real”, while instrumental values are merely means to attain the “real”, intrinsic values. However, if pragmatism means that the correspondence theory of truth is refuted, it also means that the distinction between the intrinsic and the instrumental is overridden. To a pragmatist, to be instrumental does not mean to violate intrinsic values by giving priority to instrumental ones, but to acknowledge all values and actions as instrumental – instrumental to human purposes. In order to accept this answer, one must of course accept the Darwinian, naturalist view of things, rather than the Cartesian, idealist view. And why should we do that? The pragmatist answer would – obviously – be that it is more useful for our purposes, that the pragmatist view is a more helpful tool.

Pragmatism is not only known for its insistence on transgressing the boundaries between philosophy, science, politics and morality, but it is also known to be a strong advocate for democracy as the goal towards which all human activity should strive. The breakthrough of pragmatism runs parallel with the breakthrough of democratic governance all over the Western world, with the heaviest emphasis on the American version of democracy. This version is nicely illustrated by the Declaration of

Independence of 1776, where it is stated “[...] that all men [*sic.*] are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness” (US National Archives & Records Administration, 2003). *Pace* the reference to God as the ultimate source of human rights, the statement coincides nicely with pragmatist philosophy. To pragmatists, judgments about values are “[...] judgments about that which should regulate the formation of our desires, affections and enjoyments” (Dewey, 1960, p. 265). And the pragmatist answer to what should decide “the formation of our desires, affections and enjoyments” is democracy, illustrating the point that the rejection of absolute values and absolute truth does not imply the acknowledgement of all values and all truths as equally desirable. Hence, while pragmatism shares the suspicion of absolute entities with poststructuralist thinkers, it diverts from poststructuralism in providing us with what is usually referred to as a “standpoint epistemology” (see Trosow, 2001). And the overall standpoint that pragmatism argues for is democracy.

The linguistic turn: Rorty’s neo-pragmatism

According to Rorty (1999, pp. 24, 35), Willard van Orman Quine, Andrew Goodman, Hilary Putnam and Donald Davidson are examples of philosophers who employ neo-pragmatism, and substitute the significance of language for that of experience. Since Davidson was a student of Quine’s, much of his writing can be seen as a response to his teacher. In the same manner, Rorty often uses Davidson’s writing as a point of departure and he is regarded by Rorty (1990, p. 5) as one of the most important contributors to neo-pragmatism, since:

[...] what Davidson added to Dewey is a non-representationalist philosophy of language that supplements, and in some measure replaces, Dewey’s non-representationalist account of knowledge. I have argued elsewhere that the “linguistic turn” in philosophy was a sort of last refuge of representationalism and that the dialectic that leads the later Wittgenstein and Davidson away from a picture theory of language is the same as that which led Dewey away from a spectator theory of knowledge.

As Murphy (1990, p. 25f.) notes, classical pragmatism deals with the instrumental relations between beliefs, knowledge and actions, but it does not explicitly deal with the linguistic descriptions of these relations. With this said, it is important to note that Dewey held linguistic communication as one of the most important human practices to study through the means of scientific inquiry. Still, it is the linguistic turn that brings to pragmatism a focus on vocabularies, that is, how specific beliefs are communicated through language (Rorty, 1990, p. 3), rather than on the beliefs in themselves. But the basic principle remains: just as it is not useful to regard beliefs and knowledge as the more or less accurate representations of something in the “real” world, it is not useful to regard language in this way. Beliefs as well as linguistic communication can only be judged in light of the purposes they are intended to serve. Hence, Rorty’s neo-pragmatism offers an elaboration of pragmatist philosophy which fits well with Dewey’s conception of philosophy as ways “[...] to mediate between old ways of speaking, developed to accomplish earlier tasks, with new ways of speaking, developed in response to new demands” (Dewey according to Rorty, 1999, p. 66).

Rorty has been accused, especially by the philosophical community, of over-simplifying issues that philosophy has dwelled on for centuries. Rorty (1990, p. 1) himself sees these strong reactions as partly due to a European skepticism

towards anything American, but the observation remains that Rorty sometimes jumps from one conclusion to another and that it is not always easy to follow. We wish to emphasize that Rorty is considered a controversial philosopher, also within the pragmatist community. In an LIS context, Hjørland (2004a; see Budd, 2001, p. 219ff.) wants to make a distinction between what he considers to be the realism that characterizes classical pragmatism, and the anti-realism that he means characterizes Rorty's position. Hjørland (2004a, p. 503) goes so far as to refer to the philosopher Larry Laudan who argues that Rorty should not even be considered a pragmatist. However one chooses to label Rorty, we find his perspective fruitful.

Anti-dualism

Dewey's rejection of the spectator theory of knowledge, and Rorty's rejection of the picture theory of language, can be seen as consequences of their anti-dualist ambitions. Anti-dualism is also the epithet that Rorty (1999, pp. xix, xxii, 24) finds most appropriate when describing his version of pragmatism, and one of the most influential Platonic "binary oppositions" that he wants to override is the opposition between reality and appearance. The reference to the terminology of Jacques Derrida, the foremost spokesman of poststructuralist deconstructionism, exemplifies Rorty's continuous dialogue with poststructuralist thinkers, with whom he shares an interest in discursive aspects of social practices (see Mouffe, 1996). Another example of this dialogue is when Rorty explains that he has no problem with the Foucauldian idea of regarding the world as consisting of social constructions, provided that a "social construction" is thought of as the idea "[. . .] that our linguistic practices are so bound up with our other social practices that our descriptions of nature, as well as of ourselves, will always be a function of our social needs" (Rorty, 1999, p. 48). Rorty combines this with the nominalist notion, on a psychological level, that all human awareness is of a linguistic nature, and ends up with the following standpoint on the relation between language, knowledge and the world:

[. . .] all our knowledge is under descriptions suited to our current social purposes (Rorty, 1999, p. 48).

To Rorty, the distinction between what is real and what appears to be real therefore becomes unfruitful; it makes no difference to practice discussing what is inside us and what is outside us. If the distinction between reality and appearance is abandoned, so is the idea that language represents this reality, which of course also has bearings on Rorty's notion of truth. He carries the instrumental truth theory of classical pragmatism further, and claims that it is more useful to talk of the justification of beliefs through the use of specific vocabularies, than the truth of these beliefs; with reference to Davidson and the later Ludwig Wittgenstein, Rorty (2000, p. 15) says that "[. . .] there is no language-use without justification, no ability to believe without an ability to argue about what beliefs to have".

To Rorty (1991, p. 1), an anti-representationalist account is "[. . .] one which does not view knowledge as a matter of getting reality right, but rather as a matter of acquiring habits of action for coping with reality". This does not mean that reality does not exist; it simply means that the question of what is real and what is not is a question of no practical relevance. Here, we encounter another way in which the critique against neo-pragmatism's alleged relativism can be countered. According to Rorty (1991, p. 2),

the question of realism vs anti-realism only becomes an issue within the representationalist paradigm; from an anti-representationalist viewpoint, it becomes a non-issue. As Murphy (1990, p. 114) notes, in a representationalist paradigm realism means that the objective world is what makes our true statements true, an assumption that anti-realists reject. However, Rorty (1991, p. 2) goes further than this: in an anti-representationalist paradigm “[...] *no* linguistic items represent *any* nonlinguistic items”. Again, this line of reasoning does not question the existence of reality, but aims to implement Darwinian thinking more fully and substitute the notion of naturalism for that of realism. Naturalism, according to Rorty, means that relations between natural creatures and their natural world are entirely causal, that is, beliefs are caused by the world. However, a vocabulary is necessary in order for us to make any claims on the correctness of these beliefs, that is, the causation of beliefs is separated clearly from the justification of those beliefs (Brandom, 2000, p. xivf.; Rorty, 2000, p. 18f.). Justification can never be said to be caused by the world, that is, it can never find ultimate validation or falsification by reference to an independent reality, but is created in interaction between humans.

Rorty’s argument can be clarified further if we turn to his insistence on an anti-essentialist approach. As was shown in the paragraphs on classical pragmatism, one of its most important aims is to give priority to the ways in which humans use things rather than the ways in which they know them:

Starting from Bacon’s claim that knowledge is power, they [pragmatists] proceed to the claim that power is all there is to knowledge – that a claim to know X is a claim to be able to do something with or to X, to put X into relation with something else (Rorty, 1999, p. 50).

Rorty questions the distinction between “knowing” and “using” by refuting the idea that “to know” means to stand in an intrinsic relation to X, whereas “to use” means to stand in an extrinsic relation to X. From a neo-pragmatist viewpoint, we should think of all objects “[...] as resembling numbers in the following respect: there is nothing to be known about them except an initially large, and forever expandable, web of relations to other objects” (Rorty, 1999, p. 53). Hence, there is no such thing as the essence of a certain object; a conclusion that also encompasses human beings. With this line of reasoning, Rorty opens up to a view which focuses on the relational character of the construction of identity, both on an individual and a collective level, which is a theme that we come back to further on in the article. Again, this is an instance of Rorty’s kinship with poststructuralist theories.

Communities of justification

The consequences of naturalism carried to its logical extreme, is the abandonment of “reason” as an absolute authority concerning cognitive issues in the same manner that the Enlightenment brought with it the abandonment of “God” as an absolute authority concerning moral issues. This is another strong argument against those who accuse pragmatism of relativism. To Rorty, the purpose of pragmatism is to fulfill the project of humanism, which he takes to mean the abandonment of all other authorities than human consensus. The claim that cognitive relativism is inherent in this project is refuted by the observation that moral relativism did not follow from the secularization of the Western world (Brandom, 2000, pp. xi, xv). The full responsibility that humanism understood in this way implies, brings us back to the key roles that

justification – and hence, as we from an LIS perspective would like to emphasize, communication – have to play in order to carry out this responsibility. In this respect, the social philosopher Jürgen Habermas’ notion of justification as enacted through communicative rationality is interesting, and Rorty welcomes Habermas’ line of reasoning except for its universalistic tendencies.

Thus, the only guidance, in science as well as in morality and politics, is that of our fellow humans. Unlike classical pragmatists, and especially unlike Peirce, Rorty does not believe in an end to scientific inquiry, where a coherentist version of truth is to be achieved by a community of authoritative inquirers (Rorty, 1999, p. 32, 2000, p. 11). Like all human practices, science is enacted through its use of a specific vocabulary, developed within a specific community of justification. As a philosopher, Rorty provides us with little guidance concerning what particular methods applicable in the social sciences are preferable over others, but again: the only criteria by which to judge a method is that of judging its usefulness in relation to a particular purpose. Rorty’s lack of discussion concerning who should have the preferential right of interpretation regarding what should be considered a “useful purpose” is dealt with further on.

We accept Rorty’s arguments in favor of an anti-dualist account of the relation between language, knowledge and the world, and we thereby adhere to the standpoint that the absence of an absolute authority in no way leads to a relativist position. To us, the main problem of neo-pragmatism seems instead to be its insufficient discussion of power, that is, its inability to visualize which interests are allowed to dominate and which interests are excluded from different communities of justification. Like Habermas, Rorty can be criticized for giving a somewhat “romantic” impression of communication. While agreeing with Foucault, as Rorty (1999, p. 69) does, that power is not necessarily something bad, in this respect, Rorty allows his optimism too much latitude and seems to see everyone who is involved in power struggles as a copy of himself: a white, male university professor of philosophy in the Western world. We will now turn to how scholars in LIS have developed pragmatism as an epistemological position.

Examples of pragmatism in LIS

Despite the traditionally strong interest in applications within LIS, pragmatism has mostly been referred to in its everyday, pragmatic, sense rather than in its philosophical, pragmatist, sense. Even in texts that deal with metatheory, pragmatism is often referred to in a general manner without a discussion of its philosophical origins (e.g. Capurro, 1992). Pragmatism is used to label, for example, principles for knowledge organization that are built on individuals’ wishes and behaviors. In addition, semiotic pragmatism has, with reference to Peirce, been applied in IR (e.g. Blair, 1990). Furthermore, John Dewey has been referred to in research related to information seeking and learning (e.g. Kuhlthau, 2004), although not explicitly as positioned in a pragmatist framework. In the following section we will present and examine a couple of approaches that explicitly refer to a pragmatist position of interest for INSU research.

A central concept of neo-pragmatism is community of justification. This can be compared to Patrick Wilson’s concept of cognitive authority, which is no coincidence. Wilson’s explicit pragmatist view of knowledge permeates his writings, for example, “[h]aving knowledge, like having understanding, is shown by the exhibition of an ability to perform a wide variety of verbal and non-verbal actions” (Wilson, 1977, p. 8, 1968, 48ff., 1983, p. 202). Wilson takes an interest in questions concerning how the

value of knowledge is established, how people relate to the representation of such knowledge in media and information systems, and in the role that librarians and other information specialists have, or can have, for the relation between the production and the consumption of knowledge. A pervading theme in Wilson's writings is how, with regard to how society at large regards knowledge claims, knowledge authority is constructed within a social arena. The institutions, people or texts whose knowledge we believe in and rely on are, in Wilson's terms, our cognitive authorities. When we have access to a book shelf or a database, for example, we do not evaluate the books or the entries by their contents alone but also, and perhaps primarily, by other signifiers, for example; author, reputation, publisher, reviews and personal recommendations from people whose judgment we trust (Wilson, 1983, p. 166ff.). Wilson maintains that greater consensus concerning knowledge claims, and their representations in the artefacts of professional information, result in fewer opportunities for individual users to choose cognitive authorities. Within a more heterogeneous area, where statements exist in opposition to each other, there is greater uncertainty but also more freedom to choose between different information sources. Our independence as seekers and users of professional information is therefore limited within most areas because of our dependence on cognitive authorities. The concept of cognitive authority thus carries with it, according to Wilson (1983, s. 129), a certain, if not particularly accentuated, interest in issues of power. Wilson emphasizes that the artefacts of information are accorded value in a social, cultural and historical context. Here, as in much of Wilson's argumentation, there is a clear connection to neo-pragmatism's community of justification. Wilson's way of emphasizing that a prerequisite for people to regard something as knowledge is that this something is warranted as knowledge by the relevant cognitive authorities, has been criticized by Budd (2001, p. 224f.) for being relativist. This is a criticism that we have already dealt with.

Birger Hjørland argues for domain analysis in a manner similar to Patrick Wilson's, namely that the individual's thoughts and actions in judging the relevance of a document, for example, or an individual's information needs, ought to be studied from the collective level embodied by the knowledge domain rather than from individuals' actions or experiences. Consequently, domain analysis emphasizes that the creation of meaning, or meanings, of professional information is carried out not by single individuals but in collaboration with others within the knowledge domains where information appears. Therefore, Hjørland maintains that LIS research should, to a greater extent, study the epistemological points of departure for the development of knowledge within different knowledge domains (e.g. Hjørland, 2000, 2004b). The tool metaphor that characterizes a pragmatist epistemology is also found in Hjørland's (1997, p. 3) texts:

A non-idealistic view of knowledge and science inspired by a pragmatic philosophy understands knowledge as a tool shaped in order to increase man's adjustment to his physical, biological, and cultural environment, and sees knowledge as historically and culturally developed products organized in collective human organizations such as scientific disciplines.

Hjørland's starting point lies within a pragmatist view of knowledge, but, in contrast to Patrick Wilson, Hjørland (1997, p. 79) attempts to combine this view with realism: "A danger of the pragmatic viewpoint is a relativistic 'anything goes' or a narrow targeted analysis neglecting pure or autonomous inquiry". We have already met the criticism

against neo-pragmatism and will not repeat ourselves here. If the first part of the sentence is directed at Rorty's neo-pragmatism, then the second part is directed at research that Hjørland labels "short-term pragmatism". He identifies the latter with a lack of interest in the long-term development of knowledge where results need not necessarily be useful in an immediate way (Hjørland, 1997, p. 83). Even if we do not believe in the potential for or interest in "pure or autonomous inquiry", Hjørland's distinction of different kinds of instrumentalism within pragmatism is important.

Patrick Wilson is interested in the social character both of knowledge and of information seeking, but he does not explicitly question the role of cognitive authorities. Their social and non-essentialist nature is recognized and, partly, even the aspects of power that their existence entails. However, Wilson does not discuss the origins of cognitive authorities from a critical perspective in which certain groups' power, or lack thereof, is accorded interest. Hjørland calls attention to the knowledge domain's historical, cultural and institutional character in a more explicit way than Patrick Wilson does, but he has so far only to a limited extent shown an interest in questions that concern conflicts, power and the rival interests of different groups (Sundin, 2003). A promising development in this direction can, however, be found in Hjørland (2004b). Even so, from our point of view a weakness in both Hjørland and Wilson, one that they have in common with pragmatism, is their taking for granted and non-questioning of social authorities and expertise.

Even if it has not been made clearly visible by Wilson or Hjørland it is possible to regard their perspective on information needs and relevance from an interest in power; to examine how norms, values and expectations are created and maintained within Rorty's communities of justification around information needs and relevance. In connection to this we wish to briefly discuss the normative viewpoint that reoccurs in both Patrick Wilson's writing and in Hjørland's version of domain analysis. This view of users' information behavior is not limited to studying, understanding and explaining information-seeking behavior, but also entails judgments of how this behavior "should" be. Pragmatism could, of course, be used to contend for a normative perspective on, for example, democracy. We would therefore like to emphasize the difference between being normative in the sense of asserting a certain perspective and normative in the sense of asserting that this perspective is the only one possible. Therefore, in the next two sections we argue that a neo-pragmatist epistemology should be complemented by taking power issues into a more serious account. We start by presenting a sociocultural perspective used in pedagogy.

A sociocultural perspective

A pragmatist epistemology is, like other epistemological positions developed in a philosophical tradition, an abstract view of knowledge that is of limited practical use in an empirical study. Therefore, in this section we will discuss a theoretical framework taken from pedagogy and known as the sociocultural perspective (e.g. Sundin, 2002; Säljö, 2000; Wertsch, 2002). This framework is of course not the only one through which a pragmatist epistemology may be used and another possible example is provided by the sociological tradition of symbolic interactionism. However, the sociocultural perspective is fruitful in that it helps elucidate the meaning of peoples' information seeking, thereby providing us with a social perspective and therefore more specific methods in the identification and analysis of those communities of justification

that all information seeking is part of. In this manner, it contributes to making visible how and why certain ways of carrying out information seeking may work in one community of justification, while not at all in another. The sociocultural perspective, broadly defined, has been related to pragmatism by Hjørland (1997, p. 79 ff.). It refers to a theoretical approach that has its point of departure in the writings of the Russian psychologist Vygotsky (1978). Lev Vygotsky (1896-1934) was contemporary with John Dewey and, as the American pragmatists do, regularly makes use of the tools metaphor.

As it is used here, the sociocultural approach focuses on people's actions as they are assisted by mediating tools that have developed historically out of a context that has at the same time been formed by those actions. The use of the sociocultural perspective in this article is close to the way it has been outlined by the pedagogical researchers Säljö (1996, 1999a, b, 2000) and Wertsch (1991, 1998, 2002). The concepts of community and learning of identity have also contributed to our understanding and use of the sociocultural perspective (e.g. Brown and Duguid, 2000; Wenger, 1998). In addition, Hjørland (1997, 2000) has, by applying an activity theoretical perspective on LIS, been significant. This has entailed an open interpretation of the sociocultural perspective within pedagogy where we want to benefit from its interdisciplinary nature.

Tools and mediation

A sociocultural perspective is based on the idea that a social practice, such as occupational activities, is developed on a collective level through the ability of the practice's physical and linguistic tools to deal with the world that its members work in (Säljö, 2000, p. 20ff.). To exemplify from LIS: theories concerning IR are linguistic tools that are used to develop information systems while physical tools might be just those information systems seen as artefacts. In contrast to Rorty, Vygotsky (1978, p. 52ff.) makes a distinction between "tool systems" and "sign systems", but regards the linguistic tools as more significant. A central idea within the contemporary sociocultural perspective is, in accordance with neo-pragmatism, that linguistic and physical tools are integrated with each other (Säljö, 2000, p. 20ff.), which, using the exemplification above, can be understood in the following way: theories from IR are built into an information system and these determine the system's functionality and, accordingly, the user's position. Physical-material tools are, in other words, not only material, but also have linguistic and discursive elements built into them. By emphasizing that what people do is always enacted with the help of historically and institutionally developed tools it is clear that actions should not be studied in isolation from these tools.

A basic assumption in a sociocultural perspective is that the tools we use to help us act, mediate perspectives and viewpoints. By this we do not mean that the tools represent the world; rather that they put it into perspective. The reality we experience is, in other words, such as it is mediated to us with the tools we act through (see Wertsch, 1998, p. 40; Säljö, 1996, p. 84). To exemplify: a web-based tutorial on information seeking and use does not only create a learning opportunity around this phenomenon, but it also mediates a particular theoretical perspective on learning that is built into the construction of the tutorial and its contents, whether this is explicit or not. An interesting and important research topic is, thus, to illuminate these theoretical perspectives and the subject positions they form. People act in social practices through using the tools provided, which both facilitate and limit what can be done. One way of

understanding sociocultural tools in different practices is to view them in relation to the concept of discourse (see Säljö, 2000, p. 208ff.; Säljö and Bergqvist, 1997; Wertsch, 1991, p. 78ff.). Linguistic and physical tools are developed within discourses that give them meaning, and these same tools can have different meanings within different discourses, or, in neo-pragmatist terms, communities of justification. The most central tool for the Western world is the written language and those artefacts that mediate it, such as digital or printed media and the information systems where they are represented. The role of the written language differs in different social practices, but there is a tendency towards an increasing dependency by social practices on written language.

Learning and appropriation

A central theme in a sociocultural perspective is how the collective development of knowledge in different social practices defines the prerequisites for individual learning. Learning can be regarded as individual's appropriation of the physical or linguistic tools within different practices (Säljö, 1996, p. 91). Appropriation refers to how individuals adopt tools through communication with their surroundings. In this way, socially-formed tools can be said to pre-empt the individual's learning even if the individual, by using these tools is, at the same time, their joint creator. Different practices, such as occupations, can come into conflict with each other concerning the interpretation of one and the same phenomenon and suggest different solutions where one particular knowledge system is given priority over another. Furthermore, there may be conflicts within a social practice where different discourses work side by side, but in competition with each other. When one discourse takes up a dominant position in relation to others it potentially means that marginalized groups within, for example, an organization are forced to use tools that have been created to further the interests of other more "powerful" groups (Sundin, 2003; Wertsch, 1998, p. 147f.). Sociocultural tools within the sphere of LIS, such as web-based user education or classification systems, can therefore be said to have a socializing role created by rival knowledge systems within which people, as a rule, use them without reflecting on their perspectivization of social reality. Tools tend to be seen as natural and self-evident rather than socially construed and their mediating function is invisible for most users. They mediate a view of knowledge, given truths and values that the user is not always aware of.

Sometimes the use of existing tools is resisted, which Wertsch (1998, p. 54ff.) calls a "friction" between the individual and the mediated action. For example, classification systems embedded in information systems are often built on the established knowledge interests and these can come into conflict with the interests of other groups (see Bowker and Star, 1999). The LIS researcher Maj Klasson has shown how established views of knowledge are given precedence in information systems and what happens when groups of people with alternative or competing knowledge interests interact with these. Klasson (1995) describes how new social movements develop new communication routes alongside the official ones, based on the assumption that the established information channels do not make room for their voices. In order to emphasize that it is one thing to be able to use a tool and another to claim it as your own, Wertsch (1998, p. 56ff.) distinguishes between mastery and appropriation. In contrast to appropriation, mastery signifies that people can consciously use the potentially rival tools that exist without accepting what they carry with them. In a LIS context, for example, psychologists with an interest in psychodynamics have to master

the classification of medical diagnoses in order to collaborate in a medically dominated workplace, while at the same time this classification system is not in accordance with the view of knowledge held by psychodynamic psychologists. Inversely, psychiatrists do not have the same need (or rather interest) to master a psychodynamic use of language. Earlier in this article we demonstrated a weakness in pragmatism, including neo-pragmatism, and how it has been applied in LIS in its view on issues of power. In this section, we have shown how power can be a central part of an analysis from a sociocultural perspective.

Communicative participation

The link between the collective development of knowledge in different social practices and individual learning processes is maintained through different forms of communication and depends on accessible tools and the individual's ability to use them. In the previous section we showed how it is possible, with the help of a sociocultural perspective, to see communication as participation in these social practices – a theme which we will develop further below. The members of a social practice may or may not have a personal relation to each other and in the latter case they will act in outspread networks in a more or less institutionalized form (e.g. Wenger, 1998, p. 122ff.; see Brown and Duguid, 2000, p. 141f.; Hjørland, 1997, p. 125; Talja, 2002). Communication in these communities takes place, among other ways, with the help of different tools for the mediation of formal professional information; traditionally, for example, through newsletters, books and journals and recently with the help of e-mail lists, web pages and databases. Below, we will discuss the symbolic nature of information seeking and its consequences for the development of identities.

The symbolic role of information

In a neo-pragmatist and sociocultural perspective information does not have an objective value, that is, information is not a representation of facts that are to be mediated between a “sender” and a “receiver”. Within LIS a standard sender/receiver model can be traced to information theory such as it was formulated around 1950. Day (2001) demonstrates how this transmission metaphor has since influenced the way in which much of “information” has been viewed by the LIS research community and by the profession as a transmittable neutral medium (see Tuominen *et al.*, 2002). Instead, we emphasize the symbolic role in communication between members of a social practice (Sundin, 2003). Such a perspective illuminates how information is given meaning in different – sometimes competing – communities, each with their own potential identities. The focus on meaning is well in line with the linguistic turn that neo-pragmatism embraces. How information is given meaning should be seen in relation to those interests that contribute in creating and maintaining these meanings. Within LIS this can be exemplified by how the transmission metaphor is maintained by identifying the discipline as primarily technical.

The pragmatist-oriented media researcher Carey (1989, p. 14ff.) makes a similar distinction between two perspectives of communication. In the transmission perspective, communication is seen as a process where information is transmitted between people at a geographical distance from each other. In a ritual perspective, on the other hand, communication is primarily seen as a tool with which common norms

and values can be created, maintained and transformed. Carey (1989, p. 18) formulates it in the following way:

A ritual view of communication is directed not toward the extension of messages in space but toward the maintenance of society in time; not the act of imparting information but the representation of shared beliefs.

Both perspectives are necessary in INSU research, but up to now the transmission perspective has dominated. In a ritual perspective, information is seen as a sociocultural tool whose meaning and relevance are created in those practices where people use it (see Capurro and Hjørland, 2003; Cornelius, 2002). For example, to visit a web site regularly can be seen, in a ritual perspective, more as a participation in a virtual community consisting of visitors of the same web site rather than as a way of acquiring “new” information, granted that it is even possible to separate the two phenomena. In the same vein, Burnett (2000) suggests that the distinction between information and social activities in virtual communities is somewhat blurred:

It may be possible that social activities, however “trivial”, are used in online environments to exchange information of various sorts, and that information sharing itself is a fundamentally social act.

Information seeking is, thus, much more than the seeking of facts. We even claim that LIS concepts, such as information seeking, dissemination and information use could be problematic since they often connote a transmission perspective; information is often described as “facts” that can be “collected” for use. It would be more theoretically adequate, from a neo-pragmatist and socio-cultural perspective, to treat people’s interaction with information and information systems as communicative participation in different social practices.

Accordingly, an understanding of people’s information seeking, from this perspective, should start in an understanding of the communities of justification they participate in. Communication within different communities can be described as the production, mediation and use of mediating tools with the help of which our view of reality is created, maintained and changed (Carey, 1989, p. 23ff.). Communicative participation may not be understood by studying individuals seen as independent subjects or by studying individuals’ information behavior and/or experiences of it in isolation. Instead, the main focus shifts from the individual’s behavior and experiences as isolated units of analysis to the relation between a collective level and the individual’s actions. The following quote from Wilson (1983, p. 150) is taken here to represent an interest in the normative role of the surrounding world in relation to information behavior and relevance that we agree with:

What one needs to know also depends in part on what others expect one to know. What one needs to know in order to perform an occupational role or to fulfill one’s obligations as a citizen participant in public affairs is set only in part, often a very small part, by technical requirements. What can be ignored and what must not be ignored are matters settled by collective agreements (tacit or overt) as much as, or more than, by the actual indispensability or dispensability of knowledge to performance. And finally, what one wants to know will reflect what one thinks others do know – what there is to know about.

In this way the image of the independent and rational information seeker is problematized and instead the user emerges, active in a social and cultural situation,

although partly steered by the norms, values and expectations of that situation. A methodological consequence of such a viewpoint is that a study of individuals' use of mediating tools should be complemented with a study of how these tools have developed together with that of the institutional context that they are used within. Applied to empirical user studies that focus on people's interaction with information systems as a way of negotiating meaning, it requires that consideration is taken to the communicative structure and its development within the social practices people participate in. In addition, the specific view of knowledge, its epistemological foundation and its relation to other cognitive authorities and mediating tools in a specific social practice must be taken into consideration.

The formation of identities

Communicative participation in social practices contributes to the formation of identities. Identities are seen here as socially created, maintained and changed through individuals' and groups' identification of themselves in relation to how they are categorized by others (e.g. Jenkins, 1996). The concept of identity makes it possible to relate individuals to the communities they participate in. The learning of an occupation, for example, has to do not only with the learning of a number of intellectual or practical skills, but also with participating in a community – a community of justification – where norms, values and expectations concerning the occupation are included. It is not until a social practice has been analyzed that it is possible to bring issues of power into full view. This may be one reason why such issues are often invisible in Rorty's texts, since he usually argues at an abstract level. We will therefore continue with the example occupational identity as it provides a clear illustration of how such identities create the conditions for our actions in social practices.

The norms, values and expectations of an occupational identity are expressed in individuals' actions and how these are explained in working life. Attitudes to information seeking and use can be seen as one of several expressions of an occupational identity. The members of an occupational community share an identity that also makes it possible to share the interpretation of professional information within the group (Brown and Duguid, 2000, p. 222). However, information seeking and use seen as communicative participation also has the potential to create meanings that can be put to use in different social practices and to strengthen the identities of the members (Brown and Duguid, 2000, pp. 189, 196; see Carey, 1989). By mediating a stance towards for example, professional knowledge and methods for problem solving, communicative participation can be regarded from the perspective of identity production.

This is exemplified in Sundin's (2002, 2003) study of nurses' information strategies in relation to their occupational identities. Here, the relation between changes within the nurses' knowledge domain and the nurses' information seeking is made visible. The academicization of nurses' education, the institutionalization of nursing research and the scientification of work practice is, in Sundin's study, regarded as part of the professional project of nurses (see Traynor, 1996, 1999). The professional discourse that this project is a part of, formed out of prevailing interests, thereby exerts a disciplinary logic that influences individual practitioners' information seeking and use by mediating a suitable collective occupational identity (Evetts, 2003; Fournier, 1999). By these means, in a sociocultural tradition, the mediating function of professional

information is focused. Communicative participation can therefore, in a dialogic process, be seen both as a result of an occupational identity and as a contribution to the maintenance of that occupational identity. Different occupational identities connote different information behavior. With this line of reasoning in mind, Sundin and Hedman (forthcoming) have suggested that the concept of information needs should be complemented with the concept of information interests. Thereby it is stressed that information behavior should be regarded not only as expressions of individuals' subjective demands, but also should be treated as something that is negotiated and formed on a social arena.

The idea of identity as a firm basis for viewing the individual as an autonomous unit of analysis has been criticized. In connection to a sociocultural perspective, people's ways of experiencing phenomena in the world can thus not be seen as the direct impressions of independent consciousnesses, but as partly created through the use of the different sociocultural tools that are available in the practices that individuals participate in. Identities in this perspective may not be understood as the essences of individuals, but rather as providing the conditions for multiple, sometimes competing, ways of regarding phenomena within one and the same context. As has been related earlier, Rorty (1999, p. 235; see Jenkins, 1996, p. 36) emphasizes, in a similar way, that identities should be seen as relations rather than as essences:

There is nothing which is vital to the self-identity of a being, independent of the descriptions we give of it.

Like Dewey, Rorty insists instead that "[...] the boundaries of the self are fuzzy and flexible", which we take to mean that the identity of an individual is created in interaction with other individuals (Rorty, 1999, p. 80; see Jenkins, 1996, p. 36). Thus, depending on the situation an individual can make use of several occupational identities with their accompanying norms, values and given "truths". In Wertsch's (1998) words, it is possible to master different occupational identities without fully appropriating them. Further, an occupational identity is naturally only one type of identity that people have. At the same time we have, for example, a family identity, a political identity, a gender identity and a class identity that together form our selves.

Concluding remarks

In this article we have presented and discussed pragmatism in general and neo-pragmatism in particular. In addition, a sociocultural perspective has been used to create a sturdier analytical tool by bringing a focus on the social to the framework of a neo-pragmatist epistemology. Further, we have endeavored to analyze the consequences of such a view of knowledge, primarily for research on INSU. Neo-pragmatism may be considered radical in its anti-representational position and, as we have shown, it has been criticized from different perspectives. One of the central criticisms is the accusation of relativism, put forward from a realist position. We do not regard this accusation as valid. Here, the discussion ends up in something of a blind alley; contentions between realism and anti-realism will not be solved with the help of criteria developed within the scientific community. We claim that the ontological issue of whether reality exists or not is seldom fruitful in LIS or other social sciences. Instead, we claim that the important epistemological issue is to develop the most useful

perspective in relation to a specific study and to anchor this choice in the relevant communities of justification.

Neo-pragmatism's weakness is, in our opinion, not its anti-representational view of knowledge but that it does not seem to analyze sufficiently the central concept of justification in relation to power. For example, Richard Rorty's texts give very little attention to a problematization of how the knowledge claims of certain groups are given precedence in society compared to that of others or why certain knowledge claims are excluded. We have also shown that an insufficient interest in power is more or less evident in the work of LIS scholars who have been using a pragmatist epistemology. Therefore, we would like to emphasize the importance of taking power into consideration when studying INSU. Neo-pragmatism and the linguistic turn in LIS can, thus modified, contribute to a fruitful epistemological base, on which ground a number of significant research questions can be formulated: "How is the relevance of information in, for example, an online virtual community negotiated and formed?"; "On what grounds are individuals' information needs identified?"; "How is the significance of information seeking shaped in different communities?". One of the most important contributions of this article is to unite a perspective on information seeking as communicative participation with the pragmatist concepts of "tools" and "communities of justification". At the same time we would like to point to the significance of problematising not only the homogeneity of communities but also the relations between them. It is therefore important that interests of different actors as well as central LIS concepts like "information needs" and "relevance" be set in relation to power.

With the question of power in mind, another issue that this article has partly concerned itself with may be illuminated. If we see LIS research as providing tools with which to manage information issues, then whose beliefs or interests are being promoted within LIS, regarded as a community of justification? Research is motivated by the pragmatist argument that it has the potential to contribute with tools that will help solve problems within different practices. Of course, herein lies a diversity of potential conflicts. Whose interests are, for example, promoted by this article? Within the LIS field there is a latent tension between research and education on the one hand and professional practice on the other. We argue that a neo-pragmatist epistemology will not lead to a one-sided focus on what Birger Hjørland calls "short-term pragmatism". Such a stance would jeopardize opportunities for reflection, critical illumination and consequently the prospects of long-term development for the discipline. It is not the only objective of research to serve as a basis for the development of better professional tools; research also comprises a community that needs to develop its own tools. This is not an argument for placing researchers in an ivory tower, but an argument for balance between practical research and research devoted to the development of theory.

In conclusion we would therefore like to argue for the necessity of epistemological argumentation within LIS – not instead of other research but as a complement. A research area that is heavily lop-sided towards practice-related research is no more neutral than theory-focused research. Librarians, documentalists and other information specialists operate on the basis of their own interests; anything else would be unreasonable. But a vibrant LIS discipline requires that it is also possible to examine these interests critically. In other words, neither the representatives of

researchers nor of professionals are neutral actors, but operate within their respective communities. These communities are all governed by specific rules regarding what is considered to be useful. An interesting research question would therefore be to study different aspects of the relations between education and professional practice within LIS. Olof Sundin and Jenny Hedman are involved in an ongoing research project concerning how “information literacy” is mediated, how it is received by future professional fields, and how the potentially varying knowledge interests that exist in academic and other professional practices are expressed.

References

- Blair, D.C. (1990), *Language and Representation in Information Retrieval*, Elsevier Science Publishers, Amsterdam.
- Bowker, G.C. and Star, S.L. (1999), *Sorting Things out: Classification and Its Consequences*, The MIT Press, Cambridge, MA.
- Brandom, R.B. (2000), “Vocabularies of pragmatism: synthesizing naturalism and historicism”, in Brandom, R.B. (Ed.), *Rorty and His Critics*, Blackwell, Malden, MA.
- Brown, J.S. and Duguid, P. (2000), *The Social Life of Information*, Harvard Business School Press, Boston, MA.
- Budd, J.M. (2001), *Knowledge and Knowing in Library and Information Science: A Philosophical Framework*, Scarecrow Press, Lanham, MD.
- Burnett, G. (2000), “Information exchange in virtual communities: a typology”, *Information Research*, Vol. 5 No. 4.
- Capurro, R. (1992), “What is information science for? A philosophical reflection”, in Vakkari, P. and Cronin, B. (Eds), *Conceptions of Library and Information Science: Historical, Empirical and Theoretical Perspectives: Proceedings of the International Conference Held for the Celebration of 20th Anniversary of the Department of Information Studies*, University of Tampere, Finland, 26-28 August 1991, Taylor Graham, London, pp. 82-96.
- Capurro, R. and Hjørland, B. (2003), “The concept of information”, *Annual Review of Information Science and Technology*, Vol. 37, January, pp. 343-411.
- Carey, J.W. (1989), *Communication as Culture: Essays on Media and Society*, Unwin-Hyman, Boston, MA.
- Cornelius, I.V. (2002), “Theories of information”, *Annual Review of Information Science and Technology*, Vol. 36, pp. 393-425.
- Day, R.E. (2001), *The Modern Invention of Information: Discourse, History, and Power*, Southern Illinois University Press, Carbondale, IL.
- Dewey, J. (1960), *The Quest for Certainty: A Study of the Relation of Knowledge and Action*, Capricorn Books, New York, NY.
- Dewey, J. (1984), *The Later Works, 1925-1953. 4 (1929): [The Quest for Certainty]*, Southern Illinois University Press, Carbondale, IL.
- Evetts, J. (2003), [“The sociological analysis of professionalism: occupational change in the modern world”](#), *International Sociology*, Vol. 18 No. 2, pp. 395-415.
- Fournier, V. (1999), [“The appeal to ‘professionalism’ as a disciplinary mechanism”](#), *The Sociological Review*, Vol. 47 No. 2, pp. 280-307.
- Hjørland, B. (1997), *Information Seeking and Subject Representation: An Activity-Theoretical Approach to Information Science*, Greenwood Press, Westport, CT.

- Hjørland, B. (2000), "Information seeking behaviour: what should a general theory look like?", *The New Review of Information Behaviour Research: Studies of Information Seeking in Context*, Vol. 1, pp. 19-32.
- Hjørland, B. (2002), "Domain analysis in information science: 11 approaches – traditional as well as innovative", *Journal of Documentation*, Vol. 58 No. 4, pp. 422-62.
- Hjørland, B. (2004a), "Arguments for philosophical realism in library and information science", *Library Trends*, Vol. 52 No. 3, pp. 488-506.
- Hjørland, B. (2004b), "Socio and cultural awareness and responsibility in library, information and documentation studies", in Rayword, B. (Ed.), *Aware and Responsible: Papers of the Nordic-International Colloquium on Social and Cultural Awareness and Responsibility in Library, Information, and Documentation Studies (SCARLID)*, Scarecrow Press, Lanham, MD, pp. 71-91.
- James, W. (1975), *Pragmatism*, Harvard University Press, Cambridge, MA.
- Jenkins, R. (1996), *Social Identity*, Routledge, London.
- Klasson, M. (1995), "Lifelong learning and information strategies among women in social movements and female networks", in Alheit, P. (Ed.), *The Biographical Approach in European Adult Education*, Verband Wiener Volksbildung, Wien, pp. 330-47.
- Kuhlthau, C.C. (2004), *Seeking Meaning: A Process Approach to Library and Information Services*, 2nd ed., Libraries Unlimited, Westport, CT.
- Mouffe, C. (1996), "Deconstruction, pragmatism and the politics of democracy", in Mouffe, C. (Ed.), *Deconstruction and Pragmatism*, Routledge, London, pp. 1-12.
- Murphy, J.P. (1990), *Pragmatism: from Peirce to Davidson*, Westview Press, Boulder, CO.
- Peirce, C.S. (1955), *Philosophical Writings of Peirce*, Dover Publications, New York, NY.
- Rorty, R. (1980), *Philosophy and the Mirror of Nature*, Blackwell, Oxford.
- Rorty, R. (1982), *Consequences of Pragmatism: Essays 1972-1980*, University of Minnesota Press, Minneapolis, MN.
- Rorty, R. (1990), "Pragmatism as anti-representationalism", in Murphy, J.P. (Ed.), *Pragmatism: From Peirce to Davidson*, Westview Press, Boulder, CO, pp. 1-6.
- Rorty, R. (1991), *Philosophical Papers. 1, Objectivity, Relativism and Truth*, Vol. 1, Cambridge University Press, Cambridge.
- Rorty, R. (1999), *Philosophy and Social Hope*, Penguin Books, London.
- Rorty, R. (2000), "Universality and truth", in Brandom, R.B. (Ed.), *Rorty and His Critics*, Blackwell, Malden, MA, pp. 1-30.
- Säljö, R. (1996), "Mental and physical artifacts in cognitive practice", in Reimann, P. and Spada, H. (Eds), *Learning in Humans and Machines: Towards an Interdisciplinary Learning Science*, Pergamon, Oxford, pp. 83-96.
- Säljö, R. (1999a), "Kommunikation som arena för handling", in Säfström, C.A. and Östman, L. (Eds), *Textanalys: Introduktion till Syftesrelaterad Kritik*, Studentlitteratur, Lund, pp. 76-94.
- Säljö, R. (1999b), "Learning as the use of tools: a sociocultural perspective on the human-technology link", in Littleton, K. and Light, P. (Eds), *Learning with Computers: Analysing Productive Intervention*, Routledge, London, pp. 144-61.
- Säljö, R. (2000), *Lärande i Praktiken: ett Sociokulturellt Perspektiv*, Prisma, Stockholm.
- Säljö, R. and Bergqvist, K. (1997), "Seeing the light: discourse and practice in the optics lab", in Reznick, R., Säljö, R. and Pontecorvo, C. (Eds), *Discourse, Tools, and Reasoning: Essays on Situated Cognition*, Springer Verlag, Berlin, pp. 385-405.

-
- Sundin, O. (2002), "Nurses' information seeking and use as participation in occupational communities", *The New Review of Information Behaviour Research: Studies of Information Seeking in Context*, Vol. 3, pp. 187-202.
- Sundin, O. (2003), "Towards an understanding of symbolic aspects of professional information: an analysis of the nursing knowledge domain", *Knowledge Organization*, Vol. 30 No. 2/3, pp. 170-81.
- Sundin, O. and Hedman, J. (forthcoming), "Theory of professions and occupational identities", in Fisher, K., Erdelez, S. and Mckechnie, L. (Eds), *Theories of Information Behavior: A Researcher's Guide*, Information Today, Medford, NJ.
- Talja, S. (2002), "Information sharing in academic communities: types and levels of collaboration in information seeking and use", *New Review of Information Behaviour Research*, Vol. 3, pp. 143-60.
- Traynor, M. (1996), "Looking at discourse in a literature review of nursing texts", *Journal of Advanced Nursing*, Vol. 23 No. 6, pp. 1155-61.
- Traynor, M. (1999), "The problem of dissemination: evidence and ideology", *Nursing Inquiry*, Vol. 6 No. 3, pp. 187-97.
- Trosow, S.E. (2001), "Standpoint epistemology as an alternative methodology for library and information science", *Library Quarterly*, Vol. 71 No. 3, pp. 360-82.
- Tuominen, K., Talja, S. and Savolainen, R. (2002), "Discourse, cognition, and reality: towards a social constructionist metatheory for library and information science", in Bruce, H., Fidel, R., Ingwersen, P. and Vakkari, P. (Eds), *Emerging Frameworks and Methods: Proceedings of the 4th International Conference of Conceptions of Library and Information Science (CoLIS4)*, Libraries Unlimited, Greenwood Village, CT, pp. 271-83.
- US National Archives & Records Administration (2003), "The Declaration of Independence: a transcription", available at: www.archives.gov (accessed 1 May 2004).
- Vygotsky, L.S. (1978), *Mind in Society: the Development of Higher Psychological Processes*, Harvard University Press, Cambridge, MA.
- Wenger, E. (1998), *Communities of Practice: Learning, Meaning, and Identity*, Cambridge University Press, Cambridge.
- Wertsch, J.V. (1991), *Voices of the Mind: A Sociocultural Approach to Mediated Action*, Harvard University Press, Cambridge, MA.
- Wertsch, J.V. (1998), *Mind as Action*, Oxford University Press, Oxford.
- Wertsch, J.V. (2002), *Voices of Collective Remembering*, Cambridge University Press, Cambridge.
- Wilson, P. (1968), *Two Kinds of Power: An Essay on Bibliographical Control*, University of California Press, Berkeley, CA.
- Wilson, P. (1977), *Public Knowledge, Private Ignorance: Toward a Library and Information Policy*, Greenwood Press, Westport, CT.
- Wilson, P. (1983), *Second-hand Knowledge: An Inquiry into Cognitive Authority*, Greenwood Press, Westport, CT.