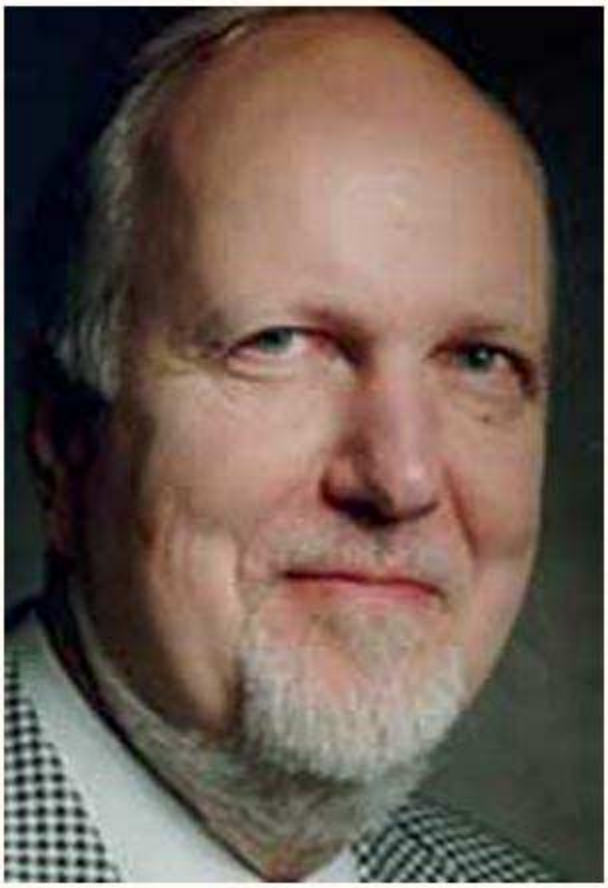
Birger Hjorland 101



Neil Pollock
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The Problems

(1) IS has been marginalised.

We draw our theories from 'bigger' sciences. Those theories don't work.

(2) A majority of so-called 'information scientists' are not really scholars/scientists but are people working with information technology or with practical problems without any ambition to formulate theoretical principles or seeking empirical justification for their decisions"

(AH97-138)

(3) Cognitivists Are Not Delivering

The dominance of cognitivists in info. seeking, representation & retrieval research has produced few results. Frameworks are normally atomistic.

Representing the problem:

Carol Kuhlthau

Amanda Spink

Nick Belkin

We need a holistic view of IS

The Solution

A Develop **epistemological discipline** within IS

B Apply an IS specific epistemology : **The Socio-Cognitive Viewpoint**

C Position IS within **Knowledge Domains**

'..the best way to understand information in IS is to study the knowledge domains as thought or discourse communities, which are parts of societiy's division of labor' (HA95-400)

A Epistemology

- IS must get serious about theoretical & philosophical studies.

> Implicit philosophical assumptions are always behind the behaviour of information producers, users, intermediaries, and the developers of systems. This kind of theory is very deep (H98, p608)

- IS must be built on more ecological, holistic and subjective theories within historical, cultural and social contexts.

- Not only are general theories about knowledge important but IS also needs to build specific theories related to knowledge domains

B Socio-Cognitive Viewpoint [Domain Activity Paradigm]

- **Discourse communities/domains are part of society's division of labour.**
- **Knowledge is historically, culturally and socially determined.**
- **Based on Activity Theory.**
- **Information needs exist at the collective level and not just in the individual's mind.**
- **Interested in individual cognition, but not from the isolated brain.**
- **The main problem for information systems is to reflect the domain not the individual users**
- **Is not concerned with 'mental models' but knowledge, (pre)understanding, theories, paradigms and epistemologies.**
- **Turns the Cognitive View upside down. It is outside looking in rather than inside looking out.**

(H02-259-261)

C Knowledge Domain Analysis

- We work in particular **discourse communities**. These domains have their own characteristics – philosophy, language, communication patterns, history etc. LIS needs to deeply understand these domains and the relationship between domains.

- Knowledge organisation, information needs, information structure, searching and relevance criteria are interrelated with the work of specific communities of people.

The central question is how to evaluate the knowledge domains of subject specialists.

- Subject analysis and classification and IR design must serve these discourse domains. Forget about trying to forge universalistic systems for everybody or a different system for each individual.

Activity Theory

- The individual-as-actor constructs internal knowledge of facts, values, and procedures through ongoing interaction between her internal knowledge and her participation in the external world.

- Knowledge is both:
  - **explicit** can be communicated through language; and
  - **tacit**, in that it can be embedded within particular activities

(JS98-142)

>> Users and Information Needs

The information needs are generally created in relation to theories within the domain.

‘Scientific IS must in my opinion presuppose that the user acquires the categories, terminology and classifications of science scholarship and information systems rather than the reverse’ (H97-66)

Subjective information needs may be different from users’ real or objective needs.


Hanne Albrechtsen

‘…uncertainty in searching is often the result of relative task uncertainty in the discipline itself [and]…may be a function of various social factors involved in the production of knowledge, such as the degree of interdisciplinarity or maturity within a domain’.

’Such uncertainties will not only be manifest in the searcher’s difficulty in formulating queries for IR-systems but will also be inscribed in the relative plasticity and variety of concepts and terminology applied within the domains’.
(AJ98-294)

>> Subject Analysis

'The subject of a document should be defined as the epistemological potential of that document' (HA-95)

'Subject analysis should neither be seen as universalistic or individualistic…' (H98-611)

'Because a document does have an infinite number of subjects, the process of subject analysis is a process of giving priority to those subjects which best serve the needs of the users of the information system in question' (H98-610)

The meaning of a term can only be understood from the context from which it appears

Gold

'The meaning of a term such as gold can only be understood by an interpretation of the discourse in which the terms appears'

Chemical – a heavy metal, difficult to dissolve by acids, electrical leading, etc.

Economic - convention economic measurement

Fictional – related to wealth, happiness… (HA95-413)

Q. How do we get the best intellectual background to analyse the subject of a document.
A. Subject expertise & background in epistemology. 'Subject analysis of documents is ultimately a political question: what kind of activities does the document want to strengthen…' (AH97-143)

> > Classification

Different documents have different meanings in different domains..they must be interpreted differently by different information systems. (H98-615)

Discourse communities often develop their own databases and classification systems according to their needs. If IS does not see its aim as that of providing theoretical knowledge which can facilitate the utilisation of knowledge in different domains, in my opinion, it has misunderstood its most basic lesson... **domain specific classification**. (H-M99-476)

'There exists no theoretical framework to compare the relative strengths and weaknesses in different approaches to classification.' (H98-611)

Elin Jacob

Jacob and Albrechtsen (1997) have shown how the American Psychiatric Association's construction of the international classification for mental disorders, used dialogue to create a device for marginalizing and eliminating the viewpoints of competing professions such as psychology.

Epistemic engineering of classificatory schemes can provide for **multidimensional classification schemes** where the concepts are represented in a variety of different conceptual structures, functioning to articulate the multiple discourses performed in different domains. (AJ98)

>> Documentation

'IS have invested too little time in studying documents, their typology, their composition, and their role in informing users' (H98-616)

'Different scientific, scholarly, or professional domains each have unique structures of communication and publication and unique types of documents. Each unique structure is an expression of an adaptation to the special needs in the domain'. eg. sheet music, maps, astronomical almanacs, psychology tests... (H97-127)

Marcia J. Bates

Bates Reviewing Hjorland

'A close analysis of [domain specific documents] actually give us a deep understanding of the activities of a field, and a sense of how these activities shape the forms. In a field dedicated to the study of information, we, of all people, should explore the social uses that shape the forms of information in human interaction' (BatRev-113)

'Not only do the content of documents, but also their sub-languages, their composition and whole system of documentation reflect epistemological presumptions' (H98-617)

>> Collection Development

It is better to base collection policy on the expertise of staff who read reviews & study the epistemological trends, than on user studies. IS specialists should evaluate the evaluations & be experts in the sociological study of knowledge production' (H98-618)

>> Relevance

Cognitivism has imposed a psychological rather than a sociological view of relevance.

Non-Cognitive Relevance

In looking at the literature of psychology in different journals Hjorland found that different philosophical viewpoints dominated in each journal. While the periodicals covered the same subjects, articles on the same subject where not relevant across all the journals. The journals worked for different discourse communities…relevancy was related to both subject and the philosophical approach.

"Mental models" which determine relevance can seen seen as "historical, cultural and social products". (H02-267)

If the subject is the information potential then this is very close to relevance. However docs. can have the same subject but different relevance.

The overlooked elements of relevance

Irrelevance - 'We should not try to develop a theory of what kind of documents people find relevant. We should be more specific annd uncover what different kinds of mechanisms influence the production of nonrelevant output' (H-BC01-777)

Relationship to practice within a domain – As opposed to truth the relevance of knowledge results from its relationship to practive' (H97-172)

More Friends >> Information Ecology

Bonnie Nardi

Bonnie Nardi and those forging ideas related to information ecology share the use of Activity Theory and an interest in the Socio-Cognitive Viewpoint.

Nardi and O'Day introduced the concept of "diverse information ecology" to describe the socio-technical network of heterogeneous materials, people, and practices that constitutes a modern library. The notion of an information ecology also implies a collective view of information systems as striving to meet heterogeneous community goals rather than the goals of a single agency or individual. (AJ98).

Also closely related is the work of Susan Leigh Star on **'boundary objects'**.

Susan Leigh Star

In an information ecology, a classification system should function as a boundary object, supporting coherence and a common identity across the different actors involved. In its role as boundary object, a classification would be weakly structured in common use, while remaining open to adaptation in individual communities.

Star's exposition of the communicative and integrative functions of classificatory structures in knowledge production is closely related to Hjorland's (1997) discussion of the epistemological positions adopted in classification research and his argument for following a more pragmatic philosophy of classification. [MARC is a boundary object]

Both argue that classifications always serve pragmatic purposes in the same way that science serves human action. (AJ98)

What Hjorland has shown me…

Everything we do as information professionals is governed by theory – whether we know it or not. We then need to do 3 things.

1. Develop the knowledge to understand what theories are operating when we do something.

2. Start adopting some theories (epistemologies) – that will ***really*** establish IS as a robust science and deliver for our clients.

3. Integrate theory and practice. Unless you know why and how you are doing something – and where it fits in the broader scheme of things – you are working blind.

The Future of IS

Hjorland believes we should become experts in knowledge organisation within discourse communities. Here are:

Some Things To Do

- **Show how specific theories have had unfruitful consequences – and replace them** (HA95-417).
- **Study & compare info. systems & info. seeking behaviour is different knowledge domains** (H98-619).
- **Define the communication structures & language patterns in knowledge domains**
- **Become expert in the publication practices & trends in the sciences.**
- **Produce text books on the 'theory of knowledge' & handbooks & journals relevant to different knowledge domains** (HA95-417,419)
- **Develop general & domain-specific principles & strategies in IR** (HA915-417)
- **Investigate 'the problem of relative info. value of different subject access points such as titles, abstractors, descriptors etc in different domains** (HA95-417)
- **Diagnose & repair malfunctioning information systems** (H98-619)

Read some Birger

Code represent references in poster

Hjorland, B. (1992) The concept of 'subject' in information science. Journal of Documentation 48: 172-200

HA95: Hjorland, B. & Albrechtesen, H. (1995). Toward a new horizon in information science: domain analysis. Journal of the American Society for Information Science 46: 400-425

AH97: Albrechtsen, H. & Hjorland, B. (1997) Information seeking and knowledge organisation: the presentation of a new book. Knowledge Organisation 24: 136-144

H97: Hjorland, B. (1997) Information seeking and subject representation : an activity-theoretical approach to information science. Westport, CT : Greenwood.

H98: Hjorland, B. (1998) Theory and metatheory of information science: a new interpretation. Journal of Documentation 54: 606-621

HA99: Hjorland, B. & Albrechtesen, H. (1999). An analysis of some trends in classification research. Knowledge Organisation 26: 131-138

Hjorland, B. (2000). Library and information science: practice, theory and philosophical basis. Information Processing and Management 36: 501-531.

HL00: Hjorland, B. (2000). Letter to the editor: relevance research, the missing perspective(s). Journal of the American Society for Information Science 51: 209-211

HBC01: Hjorland, B. (2001). Towards a theory of aboutness, subject, topicality, theme, domain, field, content…and relevance. Journal of the American Society for Information Science and Technology 52: p. 774-778

H02: Hjorland, B. (2002). Epistemology and the socio-cognitive perspective in information science. Journal of the American Society for Information Science and Technology 53: p.257-270.

Related Works

AJ: Albrechtsen, H. and Jacob, E. (1998). The dynamics of classification systems as boundary objects for cooperation in the electronics library. Library Trends 47: 293-312

BatRev: Bates, M.J. (1999). [Review of] Information seeking and subject representation : an activity-theoretical approach to information science. Library Quarterly 69: 112-113

JS: Jacob, E.K & Shaw, D. (1998). Sociocognitive perspectives on representation. Annual Review of Information Science and Technology: 33: 131-185

<<Take one>>