

## CoLIS 9 paper and poster abstracts

The abstracts are ordered alphabetically by the (first) author's last name.

**Jack Andersen** | Genre, the organization of knowledge and everyday life

This paper argues from the point of view genre how we can understand the organization of knowledge as an articulation of everyday communication with and in digital media. I will be arguing that with genre a theoretical framing can be offered to the casting of the organization of knowledge as a communicative activity in everyday life. The paper will be a discussion of this argument. I will start out briefly with some reflections about digital media and communicative interaction. From here I will be looking into some steps already made toward understanding knowledge organization as everyday activity before going into some sketches of how we can understand the organization of knowledge in digital media as genre-based communication in everyday life. I will be ending with a concluding discussion about where my argument takes knowledge organization research and what kinds of questions, critiques and analyses seem to be consequential of the argument.

**Theresa Anderson and Simon Knight** | The anatomy of an analytic object

*Introduction.* This work-in-progress paper explores the intersection of theorising in human-data-interaction, information studies and learning analytics as part of a discussion about the role informative objects play as agents of learning.

*Method.* The artefacts crafted by learners through collaborative work in two different classroom context are considered both as representations of and representations about learning.

*Analysis.* Framing analytic objects crafted through collaborative work in these classroom examples as boundary objects draws attention to their

value as carriers and constructors of ideas within and beyond the classroom.

*Results.* The fluid, transient nature of the activities contributed to their value as informative artefacts in individual and collective sensemaking. Through the constant refreshment and reinvention of the material forms that students exchange with one another (and ultimately with their instructors) information is produced.

*Conclusion.* By playfully allowing for multiple means of interaction, the artefactual agents in the two examples create a range of multimodal action possibilities as material and informative objects. The paper invites further conversation about these possibilities and the valuable “social life” (Brown & Duguid, 1996) of analytic objects that shape the ways that learning is understood and enacted as objects of assessment.

**Cecilia Andersson** | The front and backstage: pupils’ information activities in lower secondary school

*Introduction.* This article reports on a study of how information activities are legitimized in a school setting. Digital tools (e.g.laptops, iPads) have been implemented in Swedish schools for some time now. Still many questions regarding how, why and when the tools should be used remains. This article investigates how pupils describe and carry out information activities in school as well as how these activities are legitimised.

*Method.* Focus groups and observations have been carried out with pupils in three lower secondary schools in Sweden.

*Analysis.* The study takes off from a socio-cultural perspective and Goffman’s concepts of front and backstage. A qualitative analysis was carried out to find patterns in the material.

*Results.* The findings were clustered into three themes; legitimate and non-legitimate information sources, Googling: a front and backstage activity, technology creating a new backstage in the classroom.

*Conclusion.* The pupils adjust their performance of information activities towards their understanding of proper conduct in school. Meanwhile, the pupils also sometimes search for information in non-legitimate ways backstage and report a legitimate source frontstage. Through an investigation of the interplay between front- and backstage it is possible to identify uncertainties that exist and ongoing negotiations in the school setting.

**Ragnar Andreas Audunson and Sunniva Evjen** | The public library: an arena for an enlightened and rational public sphere? The case of Norway

*Introduction.* Norway's revised public library act states that libraries should be independent meeting places and arenas for debate, linking libraries to public discourse and the public sphere. This paper investigates library directors' interpretation of the revision.

*Method.* Data was collected through an online survey tool, distributing the questionnaire to all public library directors in Norway. The response rate was 54 %.

*Analysis.* Quantitative analysis employed the statistical package SPSS.

*Results.* Data showed that a majority of library managers believe that the revision introduces a new aspect for library operations. Their interpretation of how to manage this change varies, but they do see the need for librarians developing new skills. The data suggest that directors educated as librarians tend to view themselves as independent editors, responsible for content and discussions in the library, while those with a different educational background view themselves more as facilitators, providing space for public discourse and debate.

*Conclusion.* There is reason to believe that the amendment will change services and programming in libraries. The directors' educational background could be one important factor, which suggest that recruitment policy in municipalities will be decisive for the interpretation and implementation of new mission statement.

**David Bawden and Lyn Robinson** | "A different kind of knowing": speculations on understanding in light of the philosophy of information

*Introduction.* The purpose of this short speculative presentation is to examine of the concept of understanding, and to outline an idea of it which may be useful for research and practice in the information sciences, and which is complementary to hermeneutic approaches.

*Method.* Close reading of a selection of philosophical writings on the concept of understanding leads to the proposal of an outline conception of understanding, related in particular to Floridi's Philosophy of Information.

*Results.* Based largely on a synthesis of the perspectives of Floridi and of Kvanvig, an account of understanding is proposed, rooted in formal philosophy of information while allowing for the messiness of real world knowledge collections.

*Conclusions.* A careful formal account of what we mean by understanding, of which the tentative proposal presented here is intended as a starting point, will help in the development of information systems and services to support the gaining of understanding, and also support studies of relevant information practices and literacies. It will be particularly useful to examine this approach as a complement to the hermeneutic approaches, particularly associated with Gadamer.

**Jenny Bronstein and Ora Nebenzahl** | The development of scales for the identification and classification of library and information science skills and competencies

*Introduction.* We report on the development of a survey tool for the identification and classification of the skills and competencies needed to work in the library and information science profession.

*Method.* The survey was distributed in Israel amongst members of two librarians and information science listservers. The final sample included 183 valid questionnaires.

*Analysis.* The study tested the viability of a typology comprised of 46 skills and competencies as items in multi-items scales using factor analysis and Chronbach's Alpha tests

*Results.* Findings from the factor analysis resulted in four factors: technology skills, information skills, personal competencies and traditional librarianship skills and show that 27 factors out of 46 original factors contribute to the explanation of the total variance.

*Conclusion.* The study contributes to the literature on the subject by proposing updated scales that examine practitioners' views and opinions of which skills and competencies they need in information work. The typology that resulted from the study ascertains that regardless of the rapid changes that the profession has confronted in the last decades, the professional skills and personal competencies that have been at the core of the profession, are still relevant alongside with technological skills related to online environments.

**Katriina Byström, Ian Ruthven and Jannica Heinström** | Work and information: which workplace models still work in modern digital workplaces?

*Introduction.* In this paper, we outline some theoretical background for workplace studies in LIS to facilitate an understanding of what is new in the phenomena and how early frameworks may inform us about the modern digital workplaces.

*Method.* We first characterise modern workplaces and discuss why new digital workplaces raise important questions for in relation to information-related activities in workplace. We explore significant, earlier frameworks on workplace information issues to question their utility in researching digital workplaces.

*Analysis.* Our approach is to analytically examine the major trends and themes in early frameworks to present a discussion of which features may still be relevant to studying modern workplaces.

*Results.* We see the continuance of this broad understanding of workplace information as a fruitful base for present and future studies of digital workplace information. This richness of views on workplace information leads to different understandings of information-related activities, which can create deep understandings but also conceptual confusion.

*Conclusion.* Our workplaces have changed radically since the early frameworks; whilst some aspects may provide the underpinning for research in modern workplaces there is a need for further conceptual analyses and clarifications to facilitate future research and compile their findings.

**Lisa Börjesson** | Research outside academia? An analysis of resources in extra-academic report writing

*Introduction.* A significant part of all research takes place in extra-academic organisations. Practitioner researchers often present their results in publications different from those in academia, e.g. in reports, a.k.a. “grey literature”. Grey literature is increasingly available online. However, availability does not mean that reports are exploited to their full potential in research. Disciplines, like archaeology, have substantial problems with the scholarly communication and knowledge sharing between extra-academic and academic research.

*Method.* This paper approaches this problem from a report user perspective. For the benefit of potential report users’ grey literature literacies, report-writing practices are analysed by means of practice theory. Qualitative interviews with six practitioner researchers in Swedish archaeology firms make up the material.

*Analysis.* The analysis focuses on how report writers draw on regulative, institutional, and infrastructural resources in their practices.

*Results.* Based on the findings about the practices in which reports are written and become informative, the paper presents seven suggestions supporting report users’ possibilities to critically analyze and use report content.

*Conclusion.* The results contribute to the information science field with insights into extra-academic information practices, and as an input into a wider critical discussion of the information related conditions for research outside academia.

**Shannon Crawford Barniskis** | To what ends, by which means? The development of the library faith from moral uplift to makerspace

*Introduction.* This paper explores the historical development of the “library faith” as a sociotechnical imaginaire necessary to the development and support of public libraries. It examines the current iteration of this faith, in light of the emergence of library makerspaces and other collaborative creative places.

*Method.* This discourse analysis examines the library faith and library makerspace literatures, including an analysis of twenty-eight texts featuring discussion on public library makerspaces. These texts were published between 2009 and 2014.

*Analysis.* The researcher analysed the data qualitatively, to search for the foundational reasons proffered for makerspaces’ inclusion in public libraries, as well as the means and ends the library faith historically justified.

*Results.* The library faith has shifted from public aims, such as a strong democracy, to individualistic aims, such as a marketable skill set. While this individualistic faith was always visible, it is particularly so in the makerspace rhetoric, along with increasingly economic motives.

*Conclusion.* While the makerspace version of the faith often does not expand to the level of abstraction that drove earlier versions, a theoretical shift to include Illich’s concept of “convivial tools” can re-centre the library faith rhetoric in broadly applicable social goals, while retaining utility for individuals.

**Esther Ebole Isah and Katriina Byström** | Work role as enactors of workplace information practices: the diverse role of physicians in a health care team

*Introduction.* Information practices, i.e. collectively adopted information related activities such as needing, seeking, creating, sharing, valuing, and distributing information), are embedded in the ongoing work routines. In this study, we have used the cultural historical activity theory to examine information practices of physicians in patient care as our study underscores a practice-oriented approach that views information related activities as embedded the context of work.

*Method.* A qualitative interpretative approach and Engeström's activity theory were found useful as method to study the contextual elements in the information practices of physicians in patient care work activity.

*Results.* In this study, patient care is the central work activity and is seen as part of an embedded web of many systems interconnected to all the other elements in the activity system. Understanding information practices entailed analyzing these elements. It was found that social positioning influenced how information practices were enacted.

*Conclusions.* This study contributes empirically to the body of LIS research that views information practices from the holistic approach in work context. The different elements of activity theory help to portray workplace information practices from a rich and nuanced point of view, highlighting epistemological postulations that are not familiar in African developing countries.

**Sanjica Faletar Tanackovic, Koraljka Golub and Isto Huvila** | The meaning of interoperability and its implications for archival institutions: challenges and opportunities in Croatia, Finland and Sweden

This exploratory study aims to map the premises of developing interoperability of archival holdings and the understanding of how "interoperability" is understood from an operational perspective at archival institutions. A web survey comprising 35 multiple-choice and

open-ended questions focusing on current state and plans regarding online access and interoperability of the holdings and metadata of the institutions was sent out to archives in Croatia, Finland and Sweden in autumn 2015. Both quantitative and qualitative analyses were carried out on the data, which related to 45 individual archives. While the respondents are unanimous in their opinion that interoperability is important for their institutions and useful for their users, the current level of interoperability and the online access to holdings provided by the responding institutions in discrepancy with this opinion. The lack of resources and expertise could be traced back to the shortage of interest at strategic and managerial level.

**Sylwia Frankowska-Takhari, Andrew MacFarlane, Ayşe Göker and Simone Stumpf** | Selecting and tailoring of images for visual impact in online journalism

*Introduction.* Images have a strong presence in online journalism and are used to attract readers' attention to news content. Images are predominantly sourced from online collections offering access to ready imagery. Yet, the literature shows that image retrieval systems fall short of meeting users' needs. This study investigated image selection and use in online journalism, in order to propose improvements to the effectiveness of image retrieval.

*Method.* Twelve image professionals working in online journalism participated in semi-structured interviews. Eight professionals were observed while performing real illustration tasks in situ. Thematic analysis was used on data to identify common themes. Illustrations created in this study were included in the data, and a social visual semiotics approach was used for the interpretation of visual meaning.

*Results.* A trend in how images were selected and tailored for online news content emerged, and a set of recurring image features was identified in illustrations used for online news content.

*Conclusions.* The primary contribution of this study is the identification of recurring image features and linking them to visual impact. It is expected

that when applied as search functionality, these features will improve the effectiveness of retrieval of visually engaging images as required in online journalism.

**Romina Goldman, Noa Aharony and Dov Har-Even** | Internet use and e-health literacy: an Israeli perspective on vaccination

*Introduction.* Parents' hesitancy to use vaccines is becoming more prevalent in Israel. The aim of the current research is to examine whether there is a relationship between the increase in parents' level of involvement in the decision to vaccinate their children, and the increase in searching for and filtering information from online electronic sources. The current research is based on Hochbaum and Rosenstock's health belief model from 1952 (Champion and Skinner, 2008) and the Lily model, which relates to e-health literacy (Norman and Skinner, 2006).

*Method.* The research population consists of 200 parents of children born from 2000 forward. Researchers surveyed five aspects to gather data: demographic characteristics, vaccination intentions, level of online information sources use, knowledge on the subject of vaccination and perceived e-health literacy.

*Analysis:* Research hypotheses are divided into two categories: parents' conformity and refusal to vaccination. This presentation provides partial results and focuses on the first category.

*Results.* Partial results show that non-conformer parents have a greater likelihood to refuse vaccination, and that they search more in alternative sites, forums and social sites. However, no difference was found between non-conformer and conformer parents concerning perceived e-health literacy and, surprisingly, conformer parents have a greater knowledge about vaccination.

**Tim Gorichanaz** | Genre, format and medium across the information professions

*Introduction.* Convergence in the information professions has brought certain tensions to the fore. This motivates further research into key disciplinary concepts, which can be approached through the study of vocabulary.

*Method.* A survey of diverse information professionals was conducted to explore their use and understanding of "genre", "format" and "medium". Participants described multiple manifestations of textual, visual and auditory works according to these terms. Afterwards, participants gave their definitions of these terms, as well as "form" and "mode".

*Analysis.* Data was analyzed qualitatively and quantitatively to address three research questions: What do these terms mean to working information professionals? How are they used in different cases? Are these terms understood differently by different types of information professionals?

*Results.* The essential themes that characterize each term are discussed. While different professionals see different nuances in these concepts, the differences do not seem to be related to their field, supporting the notion of convergence in the information disciplines.

*Conclusion.* Tensions between research and practice are reflected in different ways of arriving at and employing definitions. This study brings to light common essences that have been obscured by these tensions, opening the door to further research that seeks to bridge research and practice.

**Brian L. Griffin** | Metatheory or methodology? Ethnography in library and information science

*Introduction.* Ethnography is popular in library and information science, though researchers seldom describe their methodology clearly. Ethnography is also described as a metatheory and a methodology.

However, ethnography is best understood as a methodology, which inherits ontological assumptions from the metatheory with which it is being used.

*Theoretical argument.* Metatheory is similar to one of Thomas Kuhn's meanings of paradigm. Paradigms share common ontological stances. Ethnography is not a metatheory but a methodology because ethnographic methods-as-tools, such as interviewing and participant observation, can be used with different paradigms.

*Analysis.* In library and information science, each of the four main metatheories (scientific, critical, constructivism, and postmodern) is associated with different types of ethnography based on shared worldview or ontological assumptions. Ethnographic methods-as-tools can be used in different types of ethnography and are often adapted to reflect a study's ontological assumptions, as illustrated in information research examples.

*Conclusion.* Information researchers should explicitly articulate their ontological stance and theoretical paradigm and explain how their methodological choices, including the use of ethnography, are consistent with their stance and paradigm. This would help eliminate confusion about whether ethnography is a metatheory or methodology and improve the alignment of theory to method of ethnographic research.

**Jutta Haider** | Controlling the urge to search. Studying the informational texture of practices by exploring the missing element (a work-in-progress report)

This short paper examines how and in which situations people restrict themselves in order to control their online searching and how this is negotiated. It is framed in a sociomaterial perspective taking account of the entanglement of information technology with its users and the conditions of its use. The paper draws on empirical material from 10 focus groups with app. 50 participants carried out in Sweden during 2014 and 2015. It contributes to a conceptual discussion of ways in which information and information activities are integrated with social practices and of how to study the social shaping of the informational texture of

issues and practices. It further seeks to contribute to an emerging discussion of how online search is shaped through the various practices and situations scaffolding it.

**Fredrik Hanell** | Where identity meets information: teacher trainees' performance of identity positions and information activities

*Introduction.* This paper reports findings from an on-going analysis of how pre-school teacher trainees position their identities, as learners and future pre-school teachers, as information activities are performed in a Facebook Group and on a blog.

*Method.* The analysis is based on results from an ethnographic study at a pre-school teacher-training programme at a Swedish university. Participant observations and interviews were conducted from November 2013 to January 2014, among a class of 249 students who started the programme in 2011.

*Analysis.* Three types of identity positions are identified through comparative and thematic analysis of 147 Facebook conversations. Interviews with students and teachers are analysed to contextualize and validate the findings from the online interactions.

*Results.* Three identity positions are identified: discussion-oriented learner, goal-oriented learner and customer-oriented learner. The way a student commits to others, to ideas and to a career choice affects the performance of identity positions and information activities.

*Conclusion.* The findings presented in this paper begin to chart how the performance of identity positions is connected to the performance of information activities in teacher training. Results suggest that a socio-cultural understanding of identity positioning is valuable for understanding how information activities are performed.

## **Jenna Hartel** | Information behaviour, visual research, and the information horizon interview: three ways

*Introduction.* As visual research increases across information science, the first and most prevalent visual method used to study information behaviour—the information horizon interview (Sonnenwald, 1999)—warrants critical attention.

*Method.* The paper draws upon the social scientific literature about visual methods and close readings of three visual data gathering techniques native to information science.

*Analysis.* The original formulation of the information horizon interview by Sonnenwald and the subsequent, novel reinventions of the information source horizon (Savolainen, 2008) and the analytical information horizon map (Huvila, 2009) are analysed comparatively in terms of their theoretical commitments, research designs, and data gathering protocol.

*Results.* The three visual methods have significant differences. The information horizon interview is a graphical elicitation technique that generates a diagram of an information seeker's information resources within an activity space. The information source horizon is a more psychological notion that focuses on source preferences and their relevance. The analytical information horizon map is a tool for synthesizing and displaying multiple accounts of information behaviour from a collective.

*Conclusion.* Researchers of the future may recognise the unique characteristics of each technique and therefore more easily adopt the one most suited to elicit answers to their research questions.

## **Åse Hedemark and Ulrika Kjellman** | Illustrating knowledge: the Swedish school poster

*Introduction.* This poster presents a planned study on the visualized, organized and mediated knowledge in Swedish school posters.

*Material.* The empirical material consists of school posters from 1920 to 1950, what has been described as the “golden age” of school posters. To this date we do not know how extensive this material might be, and the limitation of the empirical material will therefore be decided on at a later stage.

*Method.* Visual analysis constitutes our main methodological and analytical perspective. A functional as well as a content analysis will be conducted.

*Results.* Since the poster describes work in progress we have no results. Drawing on researchers from cultural studies such as Stuart Hall the present study however rests on the assumption that school posters (or any cultural artifacts for that matter) represent and mediate certain norms and values; partly about the intended observer (most often children) and partly about visual knowledge mediation and organization. So, the posters set standard for how objects are to be seen, depicted, and understood and this activity is not without values, powers or norms.

**Åse Hedemark and Jenny Lindberg** | Stories of story-time: the discursive shaping of professional identity among Swedish children’s librarians

*Introduction.* This paper reports an empirical study on Swedish children’s librarians’ shaping of professional identity as it emerges through the study participants’ views and talk about their work with story-time activities and the required competences.

*Method.* The empirical material consists of a transcript from one focus group interview with eight children’s librarians.

*Analysis.* A discursively oriented text analysis was conducted. The transcript was initially examined regarding the explicit contents of the participants’ accounts, and then interpreted further with an analytical focus on the concepts of key narratives and professional identity.

*Results.* The analysis indicates both common and conflicting ideas concerning work methods and competencies that define and legitimize librarians’ story-time sessions. Discussing competences, the librarians’

inter-professional relations - especially to teachers - were emphasized, which is understood as an aspect of identity shaping. A key narrative unfolds, which presents the library as an enclosed, magical space.

*Conclusion.* Story-time sessions are debated objects of professional expertise. There is a lack of a professional terminology for story-time activities, which may counteract the knowledge claims of this female intensive group. The professional identity of children's librarians appears as somewhat vague and multifaceted and thus calls for further investigation.

**Syeda Hina Batool and Sheila Webber** | Conceptions of school libraries and the role of school librarians: findings from case studies of primary schools in Lahore

*Introduction.* This paper explores the conceptions of library as a place, conceived by primary school children and the role of school libraries in terms of meeting children's information needs. The article is based on a PhD study. This paper presents the selected findings related to the conceptions of libraries and the role of school libraries.

*Method.* The study used a multiple qualitative case study approach and data was primarily collected from children's focus groups, librarians' interviews, teachers' interviews, documents and observation.

*Analysis.* The present study used a combination of thematic and situational analysis approaches to analyse the data. The Nvivo 10 software was used to organize the data from coding to the final six broad themes. The themes were used in reporting results.

*Results.* It was found that primary school children conceive of the library as a place for reading, playing and a room to store books. In Pakistan, primary schools lack school libraries and offer limited services to children.

*Conclusion.* The majority of the children studying in state schools did not see libraries as physical places, they have different conceptions of the

library. School libraries are playing a limited role in developing reading habits and making children independent learners.

**Eva Hourihan Jansen, Jenna Hartel, Birger Hjørland and Isto Huvila**

| Domain analysis: assumptions and new techniques for articulating domains

This panel presents methodological approaches and analytical techniques for carrying out domain analysis. The panel contributes to the ongoing debate about the substance and form of epistemic and ontological character of domain analysis, offering a disruption of the normative assumptions of domain analysis by representing the expanding spectrum of approaches with specific techniques of interdisciplinary, arts informed, ethnographic, and cultural approaches. The panel will explicate the intellectual history this approach and trace its development forward to discuss the powerful and enduring appeal of domain analysis in Library and Information Science.

**Isto Huvila, Heidi Enwald, Kristina Eriksson-Backa, Noora Hirvonen and Helena Käsäkoski**

| Taking health information behaviour into account: implications of a neglected element for successful implementation of consumer health technologies on older adults (HIBA)

Many e-health services and technologies have not been successful in bringing sustainable innovations into health care practices. E- health services and technologies often fail to acknowledge the interdependency of technology, socioeconomic environment and the entire spectrum of citizens' health information behaviour. The project Taking Health Information Behaviour into Account: Implications of a Neglected Element for Successful Implementation of Consumer Health Technologies on Older Adults (HIBA) aims at studying how citizens' health information behaviour influences the use of consumer health technologies and how these technologies can be effectively tailored to fit the everyday health information behaviours and practices of a growing ageing population suffering from a chronic condition to complement, substitute, and add personal and societal value to traditional health services. The objective is to develop comprehensible, manageable and, in particular, more

meaningful and user friendly e-health services in the future. The practical significance of the project is in that using action research approach it provides directly applicable information on user practices and the actual utility value of the studied e-health services that can be used in improving existing services and developing new ones.

## **Casper Hvenegaard Rasmussen** | The participatory public library

*Introduction.* From collection to connection has been a buzzword in the library world for more than a decade. This catchy phrase indicates that users are seen not only as borrowers, but as active participants. The aim of this paper is to investigate and analyse participatory culture in public libraries.

*Method.* The method is mainly analytical. A heuristic selection of theoretical approaches and practical examples are used to get a varied understanding of participatory culture in public libraries.

*Analysis.* The paper is divided into three parts. The first part outlines three characteristics of participatory culture in libraries. The second part discusses how libraries, users and societies can benefit from participatory culture, while the third part outlines a typology of different kinds of participation in libraries.

*Results.* There are six forms of active participation in libraries: volunteer programmes, interactive displays, workshops, co-creation, user driven innovation and book clubs.

*Conclusion.* This is a paper challenges the deeply rooted assumption that participation in libraries takes place almost exclusively within digital contexts.

**Fidelia Ibekwe-Sanjuan** | The journey of information. How students perceive information in France using the draw and write technique

*Introduction.* This study is part of an international initiative promoting an alternative arts-informed approach to studying the conceptions of information worldwide.

*Method.* Participants were masters' students in the School of Journalism and Communication at Aix-Marseille University in France. 52 drawings and their corresponding textual definitions were gathered.

*Analysis.* A thematic analysis was performed with the aim to identify major themes in the drawings and the texts, as well as the underlying theories evoked.

*Results.* The thematic analysis revealed six recurring themes that portray a journey of information, from its most basic manifestation as bits of data to its more complex and societal functions.

*Conclusions.* Although recurring themes appeared in the drawings made by the participants studying media and communication studies in France and the ones made by North American students enrolled in information studies in Canada (Hartel 2014), the differentia resided in the theories evoked in the drawings, which in turn reflected the 'intellectual homes' of the students. Our study tended to show that intellectual or academic bias outweighs cultural, linguistic or geographic ones in the students' conceptions of information. This would indicate the prevalence of the domain over linguistic or geographic factors in their conceptions of information.

**Ina-Maria Jansson** | Approach and incorporation of user-contributed metadata in participatory online image collections

Extended abstract of the authors first study, concentrating on approach and incorporation of user-contributed metadata in participatory online image collections. The user-empowerment aspect of participation is taken for the study. The aim is to investigate how Swedish cultural institutions

are coping with managing their relation towards user-contributed metadata in image archives, how online user-participation is promoted by cultural institutions and how user-contributed data is incorporated into the collections. A qualitative perspective dominates the research; interviews based on critical incident approach, close reading of policy documents and website observations are methods used. The study may deliver results on approaches of, expectations on and ways of promoting user-participation, together with findings of how user-contributed data is incorporated in institutional collections.

**Veronica Johansson and Louise Limberg** | Seeking critical literacies in information practices: reconceptualising critical literacy as situated and tool-mediated enactments of meaning

*Introduction.* This paper argues for a reconceptualisation of critical literacy into critical literacies as a merger of respective strengths in two traditions: the elaborate politicised conceptions of critical in associated literacy traditions, and the attention to situated enactments expressed in literacies approaches.

*Method.* A selective conceptual review forms basis for the reconceptualisation of critical literacies, in light of which empirical findings from a small convenience sample of information practices studies are re-interpreted.

*Analysis.* Information practices studies are re-interpreted with particular attention to two main critical literacy aspects in terms of evaluative and transformative enactments of meaning.

*Results.* The studies analysed can be seen to express a variety of critical literacy enactments, but due to their alternative framings and focus, individual studies merely comprise a limited range of possible aspects.

*Conclusion.* Focus on situated enactments of critical literacy can provide a topical addition to the analytical focus and explanatory realm of information practices studies. These studies in turn can help further explore the critical literacies concept and formulate relations between

normative definitions and local practices. This requires, however, explicit and comprehensive attention to critical literacies beyond and across sites, tools and users in partly new ways.

**Vinícius Kern and Elea Giménez-Toledo** | The editorial peer review system: towards a comprehensive description with the CESH system metamodel

*Introduction.* Peer review might mean different things, so the strong support and the severe criticism it amasses are not surprising. What is peer review? This paper's objective is to describe peer review as a system, accounting for its context and culture.

*Methods.* The approach is based on Mario Bunge's systemism, especially the composition-environment-structure-mechanism (CESM) system metamodel. Modelling sources are specialized literature and interviews with experts.

*Analysis.* The source text is marked and abstracted as peer review components, environmental items and bonds. This literature-based model tends to be incomplete. Interviews with experts provide input to fill in the gaps.

*Results.* The abstraction is synthesized in a traceable, comprehensive model of the peer review system, in textual and graphical form.

*Conclusion.* This description is input for the formulation and test of mechanisms, or explanations, of peer review functioning. It uses the systemist reduction – to the system, not to the atom as in analytical science. We try to show how this allows for explaining systemic effects, sometimes unexpected, in complex systems.

**Sara Kjellberg and Jutta Haider** | The time of data – conditions for digital knowledge production in big science

Increasingly the material research deals with is cast as data. This is an ambiguous concept, which describes the matter of research in all stages of

the research process. From having been seen as a stepping-stone on the way to producing the scientific results, increasingly data is itself positioned as the result. At the same time demands for data preservation and open data are often motivated with the hope that they will be of some use for new discoveries in the future.

This poster highlights some of the ways in which notions of data emerge in the construction of big science facilities in order to raise some issues concerning implications for how and when knowledge production is thought to occur. We studied data and their making in setting up of two large-scale research facilities in southern Sweden, ESS and MAX IV, specifically of the necessary infrastructure for dealing with research data management. The main focus is on temporal aspects of data, thus shifting the interest from the question “what are data?” to the often more productive question “when are data?”. This also works to emphasis various sociomaterial entanglements shaping research data and its meaning in different organisational contexts.

**Ulrika Kjellman** | Images as scientific documents in Swedish race biology – two practices

*Introduction.* In the early period of Swedish race biology photography was extensively used in the scientific practice. Later on photographs were discarded and other pictorial techniques were put into practice. This change in pictorial technique coincided with changes in the scientific practice of race biology.

*Method.* Comparative picture-analysis.

*Analysis.* Two pictures, exemplifying the two periods are compared. The pictures are analysed in connection to functional theories of scientific images as actors in institutional practices.

*Results.* The objective of the race biological project was to record physiognomic traits of Swedish race types, but the photographs of the early period depicts much more than that. Redundant information was used to bias data with ideological presumptions – insignificant aspects as

light, surroundings, props, clothes, were used to expose Nordic race types as superior. When race biology changed direction and denied the existences of race differences, also pictorial rhetoric and techniques were changed, and photographs were no longer asked for to depict human races.

*Conclusion.* A shift of theories and objectives in the scientific practice will also affect tools and methods. If images make a part of the scientific practice also image techniques and rhetoric will be changed.

**Terttu Kortelainen, Mari Katvala and Anni-Siiri Länsman** | Attention and altmetrics

*Introduction.* The concept of attention is applied in two altmetric studies, concerning (1) the use of social media tools on web pages of scientific journals, and indications of attention in them, and (2) attention received by radio news published on the web page of an indigenous radio station. The purpose is to reveal characteristics of web publications most clearly to attention they receive.

*Method.* Altmetric data describing attention data was compiled from the Facebook sites of scientific journals and the Facebook site of the indigenous radio station news, as well as the web site of the news. Study was both quantitative and qualitative.

*Analysis.* Attention was operationalized as comments, likes or sharing Facebook postings that were analyzed quantitatively. The contents of the postings were also analyzed by qualitative content analysis.

*Results.* Characteristics of postings most clearly related to receiving attention were relevance, community in the meaning of ownership, belonging and co-creation, and engagement in the meaning of interactivity. Convenience is also an important factor but did not produce any differences in the study material.

*Conclusion.* Altmetric data enables the study of attention and attention economy theory supports the interpretation of altmetric data.

**Deborah Lee** | Conceptions of knowledge about classification schemes: a multiplane approach

*Introduction.* As knowledge organization systems (KOSs) are an important part of knowledge organization research, gaining deeper understanding of the KOS is imperative. This paper considers one specific type of KOS, classification schemes, and asks epistemological questions about our knowledge of them.

*Method.* An original conceptual model is introduced and explained: the multiplane approach. This model is justified and enhanced using a specific aspect (faceting) of an example classification scheme (Dickinson Classification).

*Model.* The multiplane approach separates out knowledge about classification schemes into four planes: the scheme itself; authorial description and analysis; external criticism and analysis; context and author background. The model is visualised using a tetrahedron, with a different plane of knowledge at each vertex.

*Results and discussion.* Analysing Dickinson Classification demonstrates the value in isolating individual planes of knowledge and the importance of interactions between these planes. The multiplane approach unveils important new knowledge through highlighting a contrast between the faceted nature of Dickinson and the lack of faceting theory in the authorial background.

*Conclusion.* The multiplane approach provides an original way to view classification schemes, which produces new information about the scheme. This conception produces new knowledge about classification schemes, organization of domains, and knowledge organization more generally.

**Xiaofeng Li and Ross J. Todd** | “We don’t get any help, what we do is just a simple test, like trial and error”: Information practices of young people at a public library makerspace

*Introduction.* This paper aims to understand how young people engage in information practices to make sense of their experiences in an informal learning environment. The library makerspace was chosen as the operationalization of an informal learning environment, with the goal to understand its affordance and constraints.

*Method.* Informed by Dervin’s sense-making verbing approach and sociocultural approaches to learning, qualitative data were collected through field observations, an initial round of informal interviews, follow-up semi-structured interviews, and surveys with open-ended questions.

*Analysis.* Data were analysed both deductively and inductively. They were first analysed using codes based on the elements of the sense-making theory. Then the inductive constant comparison technique was employed to generate emerging sub-categories.

*Results.* Young people frequently consulted interpersonal resources and direct experience through iterative trial and error to make sense of their participation at the makerspace. The affordance and constraints that a library makerspace offered were also identified.

*Conclusion.* Information practices are essentially social, situated, and embodied, and they are an integral part of young people’s social activities. The library makerspace as an information-rich, collaborative social entity embedded in a formal institution, affords young people the ability to make, participate, collaborate, and become informed, both individually and collaboratively.

**Karolina Lindh** | Making the news – the production of press releases and publicity in practices of communicating medical research

This poster outlines a recently initiated study of how medical scientific findings make news reports. It investigates the work-practices of public

relations officers employed at medical faculties at two Swedish universities. Tying a public relations officer to a particular research group or research institution appears to have become more common. This raises questions about how come research institutions and researchers increasingly rely upon public relations officers to communicate their recent findings to media, the lay public or particular target groups and how demands for the skills of public relations officers are created in the context of research. While science journalism during the past decades has suffered increasing cuts at news editorials the number of public relations officers employed at universities and by particular research groups have increased. Demands from universities and research funders for outreach activities have made the work of public relations officers important to medical research groups' quest for making the news. The work of the public relations officer can be described as occurring at the intersection of research policy, researches work and news media. The aim of this study is to explore the practices of composing press releases in the work of public relations officers.

**Linnéa Lindsköld** | Google as a library – conceptualisation of Google search regarding the “right to be forgotten” ruling

*Introduction.* In this paper I explore how Google is constructed as a political subject within an information policy discourse. This is done by studying how the “Google as a library”-metaphor is used in texts relating to the “Right to be Forgotten” ruling by the European court of justice in May 2014.

*Methods.* Google can be understood as part of a discourse network (Kittler 1990) and a discourse analysis is used to investigate the formation of the discourse network. Analysis ten practical texts (Foucault) published in newspapers and blogs 2014-2015 have been analysed focusing on how the nodes Google and library are described, what they are defined against and presuppositions and assumptions made in the discourse.

*Results.* The analysis show that Google is likened to historical or fictional libraries, to the practice of visiting a library or searching in a catalogue and to a librarian, actively mediating knowledge.

*Conclusions.* Through the metaphor Google is put forward as a neutral institution, silencing the company's ideological ideals and values. The library is used to legitimise Google and the RTBF ruling makes the already existing biases of Google more visible, thus delegitimising the company.

**Brendan Luyt** | Learning from history: old encyclopaedic forms and Wikipedia

With the emergence of Wikipedia, the staid world of encyclopaedia writing was stood on its head. Its success shook the world of the traditional encyclopaedia to the core. But at the same time as Wikipedia points towards a different future for the encyclopaedic genre there are signs that the hold of the past continues to haunt attempts to create new forms of encyclopaedias. While many criticisms of Wikipedia do have merit there is a danger of allowing them to halt the experiment in developing new forms of encyclopaedia which is what Wikipedia represents at its best. This would be a tragic failure of potential.

The aim of this paper then is to open up to scrutiny the idea of what an encyclopaedia should look like or what it should contain by bringing to attention examples of earlier encyclopaedic forms. By so doing I hope to help develop a broader conception of encyclopaedias that may in turn help spark ideas about the future of online encyclopaedias more generally.

**Tanja Merčun and Maja Žumer** | Exploring the influences on pragmatic and hedonic aspects of user experience

*Introduction.* Over the last years we have seen a growing interest in understanding user experience. There are, however, many factors that shape the user experience and studies are only starting to discover the interrelationships between different dimensions and factors. This paper aims to add to this body of knowledge by examining influences on pragmatic and hedonic aspect of user experience.

*Method.* The paper builds on the data collected in a user study of five bibliographic information systems that applied performance as well as user experience measures.

*Analysis.* The analysis focuses on the results collected using the reaction cards method. The cards are grouped by pragmatic/hedonic and positive/negative aspects and the results of individual category analysed in the context of other study variables.

*Results.* The results show that participants selected more cards representing pragmatic than hedonic aspect. Time-on-task and perceived task difficulty represented the strongest factors that influenced on the choice, while the influence of task success and exposure was smaller. The changes in success or perceived difficulty had more effect on the pragmatic than hedonic attributes.

*Conclusion.* Despite some limitations, the study presents a starting point for analysis of user experience through reaction cards and points to future research questions.

**John Mowbray, Hazel Hall, Robert Raeside and Peter Robertson** | The role of networking and social media tools during job search: an information behaviour perspective

*Introduction.* The paper presents a critical analysis of the extant literature pertaining to the networking behaviours of young jobseekers, in both offline and online environments. A framework derived from information behaviour theory is proposed as a basis for conducting further research in this area.

*Method.* Relevant material for the review was sourced from key research domains, such as library and information science, job search research, and organisational research.

*Analysis.* Three key research themes emerged from the analysis: (1) social networks, and the use of informal channels of information during job search, (2) the role of networking behaviours in job search, and (3) the

adoption of social media tools. Wilson's general model of information behaviour was also identified as a suitable framework to conduct further research.

*Results.* Social networks have a crucial informational utility during the job search process. However, the processes whereby young jobseekers engage in networking behaviours, both offline and online, remain largely unexplored.

*Conclusion.* Identification and analysis of the key research themes reveal opportunities to acquire further knowledge regarding the networking behaviours of young jobseekers. Wilson's model can be used as a framework to provide a holistic understanding of the networking process, from an information behaviour perspective

**Jeppe Nicolaisen** | The problem of probability: an examination and refutation of Hjørland's relevance equation

*Introduction.* The paper presents a critical examination of Professor Birger Hjørland's relevance equation: Something (A) is relevant to a task (T) if it increases the likelihood of accomplishing the goal (G), which is implied by T.

*Method.* Two theories of probability logic (the logical theory and the intersubjective theory) are briefly reviewed and then applied to Hjørland's equation.

*Analysis.* Focusing on how these theories warrant the probability assumption makes it possible to detect deficiencies in Hjørland's equation, based as it is on probability logic.

*Results.* Regardless of the kind of logic applied to warrant the probability assumption of Hjørland's equation, the outcome of using it to determine the relevance of any A to any T is found to have quite bizarre consequences: Either nothing is relevant or everything is relevant.

*Conclusion.* Contrary to Hjørland's claim that his relevance equation applies to anything (including documents, ideas, meanings, texts, theories, and things), it is found at best to have very limited generalizability.

**Anita Nordsteien** | Handling inconsistencies between information modalities - workplace learning of newly qualified nurses

*Introduction.* Information-related activities of nurses touch on questions of life and death, this makes their work life challenging, particularly when dealing with inconsistencies between different information sources. This paper provides some insight into how, when and why newly qualified nurses respond to these information inconsistencies.

*Methods.* A longitudinal ethnographically inspired study was conducted on a nurse training programme in a hospital in Norway. Focus groups and interviews were used to collect data from 25 newly qualified nurses.

*Analysis.* Thematic analysis was carried out with NVivo10, and three themes were identified: reliance on information, challenging practice and complying with practice.

*Results.* Participation in a training programme appears to affect how newly qualified nurses handle information inconsistencies. Training-nurses seem to rely on theoretical information, and use this to substantiate and challenge existing practices. The new nurses adapt to the routines on their wards, but have a strong impetus to improve practice promoting their prior knowledge, motivation and values.

*Conclusion.* Theoretical information plays a major role in new nurses' learning processes; they seem to transfer knowledge from their former practices, and use it to challenge social information sources. The findings indicate that new nurses have the capacity to substantiate and change established practices.

**Gillian Oliver** | The records perspective: a neglected aspect of information literacy

*Introduction.* The power of records and recordkeeping is a perspective that is largely missing from information literacy research and practice. As records are influential at all levels of human existence, the consequences of not addressing this perspective, particularly for the least empowered individuals in society (such as refugees), can be profound. The two purposes of this paper are to raise awareness of records and recordkeeping in the information literacy community, and to explore why this situation has come about.

*Findings.* Although archival or primary source literacy has been considered by the archival community (largely in terms of user education) literacy from the point of view of interacting with everyday records and records systems has not. Issues of professional identity and culture are likely to have influenced the lack of awareness of the need for records literacy in everyday life, in particular the division of responsibilities for recordkeeping to records managers and archivists.

*Conclusion.* There is a need for a research and practice agenda to introduce and embed awareness of records and recordkeeping in information literacy.

**Michael Olsson and Annemaree Lloyd** | Being in place: embodied information practices

*Introduction.* The concept of embodied information practices and the implications for research and professional practice are examined drawing from the authors' empirical studies of people engaged in professional and everyday practices. The authors suggest that information behaviour research's focus on individual cognition has led our field to overlook the important role that embodied practices play in individual and collective sense-making

*Method.* Conceptual paper that draws from a number of qualitatively framed research projects, which explore the role of information practices in knowledge construction.

*Conclusions.* Empirical studies which focus on non-linguistic and embodied practices may appear removed from the Library and Information Science agenda, however these should become increasingly routine, because they provide the research field with a source of information about how people engage with the non-normative aspects of everyday life and learn from others to inform their practices.

**Francisco Paletta and Luis Milanesi** | Current findings from research on professional librarian skills development and needs in Brazil

*Introduction.* Presents reflections on the outcome of a research project conducted at the School of Communications and Arts of the University of São Paulo, regarding librarian training, their field of expertise and the need for continued education.

*Methodology.* The methodological design compiled in the research project involved planning-presenting the project, and developing the questionnaire for data collection. The electronic form was applied to an intentionally random, stratified sample of 18,374 active librarians throughout Brazil, totalling 3,320 responses that were statistically treated and compiled.

*Analysis.* Once the data was collected using the electronic forms, we analysed the collected information and the literature, cleansed the information and standardized the bibliographic records and statistical processing of data that formed the results presented in this research project.

*Results.* As the world gets more sophisticated and diversified, the competence required of the professional librarian, which in a first stage is highly technical – remembering that it is impossible to dispose of or move forward without it being well established – grows and includes other important responsibilities in the new organizational environment. We

must work towards a holistic qualification, valuing management, methodological, cultural, multidisciplinary and systemic skills – all highlighted in the economy of knowledge.

**Ola Pilerot, Björn Hammarfelt and Camilla Moring** | The many faces of practice theory in LIS

*Introduction.* This paper presents an exploration of how the notion of “practice” is theorized and applied in library and information studies (LIS).

*Method.* To highlight how “practice” is conceptualized and to discern what methodological approaches are taken, a qualitative analysis was conducted of a selection of practice-oriented contributions to the LIS literature. A bibliometric study of publications relating to “practice theory” provided a complementary quantitative overview of the influence of “the practice turn” in LIS.

*Analysis.* Through reading a number of introductions to practice theories, a selection of prominent characteristics were identified. These characteristics provided guidance for the close-reading of the sample of practice-oriented LIS literature. As well as indicating direction for the qualitative analysis, the outcomes of the bibliometric study were recontextualized by the qualitative study.

*Results.* The practice-oriented LIS literature can be divided into four different areas based on disciplinary influences. Authors are highlighting different key tenets when adhering to practice theory. It is possible to identify at least four different methodological approaches to empirical studies in the discipline.

*Conclusions.* There is not one “practice-based approach” in LIS, but rather a multifaceted strand, which exhibits many different characteristics.

**Johanna Rivano Eckerdal and Charlotte Hagström** | Qualitative questionnaires as a method for information studies research

*Introduction.* We present qualitative questionnaires, originally an ethnological method for documenting and collecting material about everyday life, as a fruitful method for information studies.

*Method.* Since the early 20th century qualitative questionnaires, on various themes, have been sent out to informants. The answers to a qualitative questionnaire consist of memories, opinions and experiences. Most archives working with questionnaires have regular informants who have enrolled because they are interested in sharing their knowledge of and views on everyday life. The paper starts with a brief presentation of the origin of the method followed by a discussion of how answers to qualitative questionnaires may be analysed to benefit the most from the specifics of this tool. Examples from two studies based on material from the Mass Observation Archive, University of Sussex, and the Folklife Archives, Lund University, are introduced. The examples are chosen to illustrate two possible ways to adopt this method: to re-use an existing questionnaire and to create a new one.

*Conclusion.* Qualitative questionnaires generate a rich material, useful for researchers from many disciplines. The material provided by the respondents is highly informative of various aspects of everyday life, past and present, and merits more attention from scholars.

**Kerstin Rydbeck** | Participants and information practices in contemporary Swedish reading communities

*Introduction.* This paper discusses results from an on-going research project, studying contemporary Swedish reading communities – i.e. local groups of readers that meet to discuss literature and reading experiences.

*Methods.* The paper presents results from the first, quantitative part of the project, based on data from a survey carried out in 2013–14 with 231 local reading communities in the county of Uppsala.

*Analysis.* The aim of this survey was to get an idea of the number of active groups, to get to know more about their participants, and to understand how the groups worked. This analysis focuses on the participants, and the way the groups were organized. Finally some patterns are presented regarding the groups strategies in getting information about what literature to read, and how to get access to it.

*Results and conclusions.* Freestanding groups are the by far largest category and there is a strong dominance of women. Many groups have been working for very long; consequently the average age of the participants is quite high. New groups do not seem to attract many young people. Personal networks and literature reviews in daily papers are the most common ways to get information about literature.

### **Nora Schmidt** | How international is academic knowledge production?

In Information Studies, research on the production of academic knowledge accounting for Postcolonial Theory is rare. Researchers from the Global South can be found stating that funding policies are degrading the diversity of academic knowledge. However, their work is rarely referred to by scholars from the Global North. Whatever may be individual reasons for this, in fact, it is very hard to retrieve, e. g., Africa-published literature in the Global North.

These are only some of the reasons why the congruence of semantics of international academia and the social structure that it supposedly describes will be questioned throughout this PhD project. The research questions of the four individual papers of the project will be outlined in the poster. They can be understood as operationalisation of the title-giving overarching question.

The thesis' coverage is limited to Social Sciences and Humanities (SSH) in Eastern Africa. It makes use of bibliometric methods (paper 1 and 2) on the one hand, and Action Research (3 and 4) on the other. Postcolonial Theory and Social Systems Theory will be coupled to serve as analytical tool.

**Trine Schreiber** | E-learning objects and actor-networks as configuring information literacy teaching

*Introduction.* With actor-network theory (ANT) as the theoretical lens the aim of the paper is to examine attempts to build network for shaping information literacy teaching.

*Method.* The paper is based on a study of a project in 2014-2016 where information professionals representing ten educational libraries produced and implemented e-learning objects in information literacy teaching. The material was collected through interviews, observations, documents and feedback sessions.

*Analysis.* Latour's concept of translation and Callon's four translation moments are used to analyze the network building during the time of the project. The analysis followed the network building and retraced different knowledge claims which were put into play by the actors.

*Results.* The study reveals that the e-learning objects produced during the time got an important role in a network building. Further, it also shows that a network configuring information literacy teaching based on new interactive roles has not been stabilized.

*Conclusion.* The paper concludes that the strength of ANT is first of all the mediation of an overview of different kinds of actors involved in network building. Further, the paper proposes to combine findings of earlier research on conditions of information literacy teaching with studies based on ANT.

**Nicole Shelawala, Ayse Goker and Andrew Macfarlane** | Categorising rich-text image search requests from creative professionals

*Introduction.* We report an investigation into image search tasks represented by the domain of advertising to assess how the features and aspects of the image requests can be categorised.

*Method.* 85 briefs, posted online by image professionals, requesting images for use in advertisements and related media, were collected and the text separated into individual phrases for analysis.

*Analysis.* Briefs' text was analysed according to a classification framework evolved from various studies of image attributes and image queries by Enser et al., Jørgensen, Shatford, Jaimes and Chang, and others.

*Results.* It proved possible to map search requests onto existing frameworks for image categorisation. Results are discussed in relation to other image query studies in various domains, including history, journalism and the web.

*Conclusions.* In comparison with image query studies, this study showed the emergence of domain-specific business and contextual facets, related to the image's intended use, purpose and target market, as well as copyright information. A higher proportion of requests referred to abstract concepts than did similar studies of general web image requests.

**Kjell Ivar Skjerdingsstad** | The anatomy of excitement – teenagers' conceptualizations of literary quality

*Introduction.* This paper suggests a theoretical model for understanding the core criterion of teenagers' conceptualizations (i.e. verbalizations) of literary quality, namely spenning/excitement.

*Method and analysis.* The core criterion was identified through quantitative analysis of online reviews written by students in secondary school on teen fiction books. In dialogue with a pragmatic and phenomenological framework the complexity of excitement were discovered through close readings.

*Results.* The different understandings of excitement pinned down is joined together in a two dimensional model. Firstly, the temporal dimension of the text's plot dynamics is complementary to the readers' need for relevance. Secondly, the relational dimension, in accordance with Georges Poulet, takes two directions, one leading from text to reader (impartation

and voyeurism), one from reader to text (identification and sense of place). Both of them concern persona and setting respectively.

*Conclusion.* The study displays the complexity of reading experiences labelled exciting in a theoretical model of its anatomy. The theoretical framework should be useful for practical as well as further theoretical work on the promotion of literature (litteraturformidling/Litteraturvermittlung) in libraries, schools etc. Key-words. Teen fiction. Reading experience. Promotion of literature. Youth literature.

## **Jela Steinerová** | Mapping theoretical constructs and ecological paradigm of information science

*Introduction.* The conceptual paper analyses theoretical constructs in information science embedded in social science theories. The purpose is to map theories, develop frameworks and propose an integrative paradigm.

*Methodology.* Literature-based conceptual analysis was applied to identify theoretical constructs in information science. Traditional/objectivist and alternative/interpretive approaches are compared. Methods of conceptual mapping and modelling were applied.

*Analysis.* A conceptual map of theoretical paradigms was developed (e.g. object, system, user, context, social). Two analytical frameworks are presented with the use of social and philosophical theories applied to information retrieval and human information behaviour.

*Findings.* Two frameworks for typology of theoretical constructs are presented. The paper contributes to developing models mapping the domain and the dominant paradigms. An integrative ecological paradigm is proposed based on analysis of different concepts. Main categories of the ecological paradigm are determined. Conceptual and methodological implications of the ecological paradigm contribute to holistic understanding of information interactions, adaptations and prevention from information pathologies.

*Conclusion.* The proposed models help navigate among different theoretical perspectives in information science and develop its categorization. The ecological paradigm of information science contributes to new insights into theoretical understanding of the information process and digital information environment.

**Pär Sundling** | Library and information science according to the citing pattern of students: a bibliometric study

*Introduction.* Many bibliometric studies of library and information science has been performed over the years, almost without exception based on research articles from Web of Science. The purpose of this paper is, using bibliometric techniques, to conceptualize library and information science according to the information use of students, instead of the information use of researchers.

*Method.* A citation index was constructed, containing reference data from 210 master theses, allowing for in-depth bibliometric analysis. Analysis: Various basic bibliometric indicators were calculated in Excel and SPSS, while bibliographic coupling and cluster analysis was applied using R.

*Results.* The price index for the total population of documents indicates that library and information science should be considered a soft science. On the whole the result of the bibliographic coupling, revealing 32 clusters of which a large majority contained practice-focused theses using different qualitative methods as the main mode of research technique, supports this.

*Conclusion.* Using master theses as a data source to conceptualize library and information science bibliometrically, produces significantly different results than when traditional data sources is used. Earlier bibliometric studies has tended to downplay the amount of practice-oriented research, and thus also to underestimate the impact of researchers involved with such questions.

**Kim Tallerås and Nils Pharo** | Mediation machines: how principles from traditional knowledge organization have evolved into digital mediation systems

*Introduction.* We compare mediation activities taking place in digital services like Google with those developed for mediating culture heritage in libraries, archives and museums, or so-called LAM-institutions

*Method.* Digital mediation systems are examined in light of theories and techniques from knowledge organization, exemplified with implementations of such theories and techniques in public libraries.

*Analysis.* Our analysis sheds light on similarities between the digital mediation in recommendation systems and libraries' mediation of culture, but also reveals some important differences.

*Results.* We find that the digital mediation systems follow many principles and techniques of traditional knowledge organization such as those related to classification and metadata. Further they mimic the librarian who knows her users, knowledge organization systems and collection. An important challenge is the mechanical rationality embedded in the computation of recommendations, which may limit the exposure of material of interest to the user that the system finds irrelevant.

*Conclusion.* Digital mediation systems have implemented traditional theories and techniques of knowledge organization, and they can be interpreted as "mediators" in a LAM context. However, their mechanical approach to information behaviour risk to be inconsistently adaptive to users emotional needs and to not facilitate serendipitous discoveries very well.

**Eamon Tewell** | Resistant spectatorship and critical Information literacy: strategies for oppositional readings

*Introduction.* This paper considers how the theory of resistant spectatorship, developed in the field of media studies, can allow librarians and researchers to better understand or encourage individuals' opposition

to commoditised information environments. Resistant spectatorship theorises that instead of passive acceptance, individuals have the ability to reinterpret, substitute, or entirely reject the message of the information they encounter according to their lived experiences.

*Method.* Resistant spectatorship is applied to the setting of academic libraries, sites subject to increasing corporatisation but still aligned with ideals of access and intellectual freedom, and thus with the potential to encourage resistant readings of dominant information structures such as commercial search engines and global publishers. Critical information literacy is proposed as a practice aligned with resistant spectatorship that holds possibility for librarians and students to recognise and act upon oppressive information in their own contexts.

*Conclusion.* The practice of critical information literacy, a pedagogical approach relating to the ideas of resistant spectatorship, is a promising mode for encouraging students of higher education to become resistant readers of information in its increasingly corporate-mediated forms.

**Ciaran Trace** | Phenomenology, experience, and the essence of documents as objects

*Introduction.* The descriptive phenomenology of Edmund Husserl studies the structure of consciousness, experience, and meaning. This paper looks at how the phenomenological approach can be put to use by information science researchers interested in the study of documents and document work. In particular, the paper explores how phenomenology can expand both our understanding of the document as object and the document as experienced.

*Analysis.* Phenomenology provides us with an ontology of real and ideal objects in which we can situate our understanding of the document as an object in the world to which our consciousness is attuned. This includes understanding the document as a real object situated in time and space, understanding the essence that is born by that document (that which makes it an instance of a particular object type), and understanding the

document as it is experienced in consciousness (how we are conscious of documents as they are brought before our minds).

*Conclusion.* Taking a phenomenological perspective, this paper moves the discussion in document studies from one focused on how people are affected by objects in the world to one that explores how people have a sense of such objects in the world.

## **Deborah Turner** | Approaching diversity methodologically

*Introduction.* U.S. news media increasingly presents incidents involving college campus climates, entertainment industry actions and law enforcement-resident relations that lead to questions regarding diversity within institutions. While diversity is not a new topic, issues presented for public discussion suggest that ongoing effort to sustain diversity continues to achieve limited results. This study explains why the library science discipline can contribute resolutions for problems related to diversity at institution levels and explores how.

*Method.* To initiate a dialog needed to identify strategies for introducing sustainable change with regard to diversity, this study surveys three approaches for impacting the institutional level of society. This exploration includes an examination of the theoretical frameworks from which each approach emerges and related research methodologies that can be applied.

*Results.* Subsequent discussion leads to a recommendation regarding which research design identified will most likely lead to insight needed to resolve problems related to a lack of institutional diversity.

*Conclusion.* Recommendations for future research regarding library science and diversity are provided.

**Iulian Vamanu, Tim Gorichanaz, Kiersten F. Latham and Anna Suorsa**

| Phenomenology in library and information science: studying information experiences

In this panel, we propose to engage the audience in a panel discussion around the current state of phenomenology in Library and Information Science and its other possible areas of application. We will be raising such questions as: What is the place of the concepts of information and knowledge in phenomenological research? When emphasizing the meaning of experiences and being, how can one avoid the common misunderstanding that phenomenology describes something utterly subjective and idiosyncratic? Does phenomenology have a critical component? Is it compatible with change in societies? How can one grasp and teach the phenomenological approach? What are the specific methodological approaches to doing phenomenological work in LIS? Which methodological approaches are best-suited to which types of research questions?

**Michael Widdersheim** | Late, lost, or renewed? A search for the public sphere in public libraries

*Introduction.* This theoretical and historical paper problematizes applications of the public sphere concept to the study of public libraries. By working through identified problems, this study sharpens the theoretical ideas of public library research, reveals new research directions, and speculates on how public library research could contribute to a new conception of the public sphere.

*Methods.* This paper uses conceptual analysis to test the applicability of the public sphere concept to the study of modern public libraries.

*Analysis.* This study compares and contrasts the meanings of the public sphere concept with empirical realities of public libraries.

*Results.* The liberal public sphere differs from the empirical realities of public libraries in terms of temporal and categorical locations. A considerable body of research related to public libraries that has accrued

over several decades must therefore confront allegations of anachronism and anachronism.

*Conclusion.* Objections of anachronism and anachronism can be countered by either acknowledging multiple public sphere paradigms or by revising the substantive models of the public sphere. These strategies raise new research questions and suggest that further study of public libraries could contribute to a fuller understanding of the public sphere concept.

**Michael Widdersheim and Masanori Koizumi** | Methodological frameworks for developing a model of the public sphere in public libraries

*Introduction.* This short paper identifies research gaps in the literature related to the public sphere and public libraries. The paper then proposes methodological frameworks and data collection techniques to extend research in this area.

*Method.* A review of the literature related to the public sphere and public libraries is conducted to identify research gaps and develop promising research approaches.

*Analysis.* Previous literature is analyzed according to epistemological and ontological approaches.

*Results.* Existing literature related to the public sphere and public libraries exhibits epistemological and ontological shortcomings. Empirical studies are lacking, and studies remain tied to a limited public sphere concept.

*Conclusion.* Two new methodological frameworks are proposed to guide future work in this area. One framework is the circulation of power model; the other framework is a custom-built model with multiple axes and dimensions.

**Andreas Vårheim** | Public libraries, community resilience, and social capital

*Introduction.* The role of public libraries in contributing to the resilience of their local communities is an underdeveloped area of research. This paper introduces, explores and develops the concept of community resilience in a public library setting.

*Analysis.* The paper opens the broader literature on community resilience and analyses the specific theme of public libraries and community resilience, focusing on examining social capital as an adaptive mechanism for community resilience and the role of public libraries in generating social capital.

*Results.* The contribution of public libraries to specified community resilience and adaptive capacities in disaster recovery is documented in a small body of research. Social capital is an adaptive capacity that is applicable for engaging with endogenous disruptive events or exogenous shocks and are as such a general resilience adaptive capacity while also important for specified resilience adaptations pertaining to predictable disruptions.

*Conclusion.* Public libraries are community institutions contributing to community resilience. There is a lack of empirical research on the wide range of adaptive processes by which public libraries potentially contribute to general resilience and to specified resilience. Especially the concepts of general resilience and information resilience seem promising in relation to the community role of public libraries.

**Hilary Yerbury and Ahmed Shahid** | Social media activism in Maldives; information practices and civil society

*Introduction.* The study was designed to explore the information practices of a group of human rights activists in a campaign seeking to pressure the police service and government into investigating the disappearance of a journalist in the context of transnational advocacy networking.

*Method.* The social media associated with a campaign in Maldives, Find Moyameehaa, were the basis for the case study. Tweets and Facebook posts and comments from the first 100 days of the campaign and from the 500th day were downloaded; the website was analysed.

*Analysis.* Content analysis of tweets, posts and comments was carried out using a priori coding.

*Results.* The tactics of transnational advocacy networking proposed by Keck and Sikkink were apparent in the campaign, however the everyday focus of the posts showed this to be a campaign of local concern. A second potential purpose for the campaign emerged, the modelling of civil engagement in a fledgling democracy.

*Conclusions.* The information practices approach, emphasising continuity and habitualisation following Savolainen, brings additional perspectives to understanding social media activism, showing how it can represent the behaviours of civil society and create an archive of a campaign and emphasising the importance of social and cultural factors.

**Fredrik Åström, Björn Hammarfelt and Joacim Hansson** | Scientific publications as boundary objects: theorizing the intersection of classification and research evaluation

*Introduction.* When using bibliometrics for research evaluation, the classification of research fields is an issue of great importance. The purpose of this paper is to outline a brief theoretical framework for analysing the role of classification in research evaluation practices.

*Theory.* Taking departure in the concept of 'boundary objects' we develop a theoretical framework aimed at analysing how scientific publications negotiate between different social worlds. Moreover, by adding the perspective of large evaluative infrastructures our study seeks to highlight tensions between local practice, and global standards.

*Empirical example.* One scientific article is analysed in terms of the different ways it can be classified on author and affiliation levels, on a documental level and on a bureaucratic level.

*Discussion.* Publications are boundary objects residing between social worlds: the context of communication and the context of evaluation. Tensions between social worlds become apparent in infrastructures, which aims to serve the demands both of communication and of evaluation.