Emerald Insight

Journal of Documentation
Researching public libraries and the social web, 2006-2012
Hanna Carlsson

Article information:

Users who downloaded this article also downloaded:

For Authors

About Emerald www.emeraldinsight.com

Researching public libraries and the social web, 2006-2012

Hanna Carlsson

Department of Arts and Cultural Sciences, Lund University, Lund, Sweden

Abstract

Purpose – The purpose of this paper is to sketch out the general tendencies, gaps and opportunities within the body of research studying the social web as a new facet of public librarianship in order to delineate the findings so far and suggest directions for future research.

Design/methodology/approach – Literature searches were conducted through the Library, Information Science and Technology Abstract database, The ISI Web of Science database and the Directory of Open Access Journals. A selection process in two steps resulted in 44 articles that were subjected to a two-stage analysis and coding process: a coding analysis based on the stated aims or research questions of each article and analysis of the articles as clusters around a shared theme.

Findings – The articles, exhibiting a richness and diversity in research directions, are dispersed in a wide range of journals and the topics addressed cover a variety of segments within Library and Information Science. Despite this diversity, research exploring the consequences of the social web for public libraries in situ and considerations of research on the broader political economic conditions of the public library institution in late modernity is largely lacking. Furthermore, the status of librarianship and the professional expertise of librarians, in light of the social web, need to be further addressed.

Originality/value – The rising interest and investment of library professionals into the practices, principles and technologies of the social web calls for further studies into the consequences of this ongoing development for public library services. This paper gives a preliminary overview of the research done 2006-2012 and identifies gaps in the literature that may serve as a point of departure for future research.

Keywords Public libraries, Librarians, Social web, Library 2.0

Paper type Literature review

1. Introduction

In recent years the emergence of participatory media and cultures online has attracted a great deal of attention from the public library sector. Current trends in library development – combining user-driven change with social media applications such as blogs and social networking sites – have been described as an attempt to create a Library 2.0 (Casey and Savastinuk, 2007), adopting the very discourse of "Web 2.0." This new direction in librarianship has been the subject of numerous books and conferences, as well as animated discussions in the community of library and librarian blogs commonly referred to as the "biblio-blogosphere." The interest has remained constant despite a growing criticism toward Web 2.0 in libraries (Godwin, 2012) and the gradual replacement of the "2.0" epithet by other near-synonymous terms, such as "social media" or "participatory media." Although these notions might not be perfectly interchangeable, they are indicative of transitions and emerging discussions in the public library sector. For pragmatic reasons that will be further explained below, this paper uses the umbrella term social web to encompass all these related phenomena and concepts.

Concurrent with the rising interest and investment of library professionals into the practices, principles and technologies of the social web is the growing the body of academic research studying the use of social web in public libraries. Although this stream of inquiry is still in its infancy, the number of published articles on the subject has continuously increased. This accumulating body of research invites an analytical literature review in order to delineate the findings so far and suggest future directions

for research. Similar reviews have already been done on the research into the social web at other types of libraries or areas of librarianship. The work of Boxen (2008), for example, examines the professional literature on Library 2.0 implementation in academic reference departments. Aharony (2011) investigates the subject of Web 2.0 and its main applications as discussed in professional Library and Information Science (LIS) literature. This paper complements these previous works by presenting an overview of LIS academic research published between 2006 and 2012, specifically examining research by the academy on public libraries and the social web. As stated, the term social web is used in this analysis as an umbrella term to refer to many related yet diverse phenomena or concepts, with different associations and connotations. "Web 2.0" and "Library 2.0" have been alternatively treated as services, models, applications, tools and more. "Social media" and "participatory media" bring to this plurality the elusive concept of media. Recognizing that the naming of things does matter, employing the term social web is to be understood a pragmatic move to circumvent all these ambiguous distinctions in order to include into this analysis the full range of phenomena necessary to arrive at meaningful conclusions.

1.1 Aim and research questions

The aim of this analytical literature review is to sketch out the general tendencies, gaps and opportunities within the body of research studying the social web as a new facet of public librarianship. In particular, the analysis seeks to answer to the following questions:

RQ1. Which journals are used for publishing the research here analyzed? Is it possible to identify a main platform for the publication of social web research on public libraries in the period of 2006-2012?

RQ2. What themes and topics are most frequently addressed in LIS research on public libraries and the social web over the period in question?

RQ3. What are the patterns – here understood as recurring features and/or gaps – in the research?

2. Scope and procedure

The literature search was conducted through the Library, Information Science and Technology Abstracts (LISTA) full-text database, the ISI Web of Science database and the Directory of Open Access Journals (DOAJ). The general-level search included general key phrases, such as "social web," "Library 2.0," "Web 2.0" and "social media," while the intermediate-level search used specific types of applications, such as "social networking sites," "blogs," "blogging" and "micro-blogs/'micro-blogging." The narrow-level search included the names of particular sites and services, e.g. Facebook, Twitter and Myspace. These search-terms were all used in conjunction with the phrases "public libraries" or "public library" (see Appendix 1). Searches were limited to academic journals within the chosen year-of-publication time-range. This search procedure was complemented by chain searches based on the reference lists of the selected articles. By combining these two search methods – keyword searching and chaining – a substantial selection of literature was obtained for analysis.

In total, 206 journal articles were collected in the initial searches. In the first stage of selection and analysis, abstracts and other metadata of the retrieved articles were studied. At this stage, several non-research articles were discarded, such as book

reviews and editorial columns. Articles were also rejected on the basis of not fitting the scope of the study, for instance, by focussing on other types of library besides public libraries, although articles that discussed libraries in general or compared public libraries with other library types were included in the sample. Additionally, a considerable number of the articles were rejected on the basis of their authors' affiliation and title; to maintain the emphasis on academic research, a criterion for inclusion was that at least one of the authors should be a scholar affiliated with an LIS department or the like. At the end of this sorting, 44 articles (see Appendix 2) were deemed to be relevant and subsequently subjected to a two-stage analysis and coding process.

The first stage of analysis was aimed at answering the first research question: getting a broad picture of the research field's publication channels. This was done by surveying the journal titles, their impact factor and the number of selected articles. The second and third research questions were answered through the second stage of analysis, in which the articles were read closely on several occasions, while also taking notes and coded under different themes based on the main topics they address. The coding analysis thus reflected a synthesis of the whole corpus but was predominantly based on the stated aims or research questions of each article. This resulted in categories, which reflect the more general directions and areas within LIS research beyond social media. The first round of analysis resulted in eight themes, which after a second reading were reduced to six. Some of the articles address multiple topics and were thus assigned to several themes. In the second round of close reading, the articles were analyzed as clusters around a shared theme in order to arrive at a more holistic and detailed view of each theme. Additionally, this round of analysis identified particularly illuminating examples of each research theme.

3. Findings

3.1 A survey of the research
The results of the first stage of analysis are presented in Table I, which illustrates the distribution of articles in various journals. When applicable, the journal's impact factor is stated. However, the fact that most articles in this sample appear in journals not indexed in the ISI Web of Knowledge Journal Citation Reports complicates this stage of mapping as it prevents journal comparisons based on ISI data. Table I demonstrates an almost even distribution of the articles across a wide range of journals. This finding reveals that, instead of a core channel in LIS for publications on public library and social web research, the research is highly diffused. Hence, there is no main platform *per se*. This diffuse literature might be explained by this research area still being at an early stage and not yet mature enough to be consolidated within any particular channels. Also, as will be evident in the next section, research on public libraries and the social web is represented in many segments of the LIS research field.

3.2 Research themes
Table II presents the classification scheme and illustrates the distribution of the analyzed articles into the different themes based on the stated aims and research questions. In order to identify recurring features and gaps in this body of research, a thorough theme-based analysis of the articles was conducted. The results of this analysis are presented in Table II for each of the six identified research themes emerging from the sample.

3.2.1 Theme 1: conceptual research. The first identified theme deals with conceptual research, predominantly concerned with the multiple definitions of Library 2.0. The

Journal	Number of publications in the sample	Journal impact factor
Aslib Proceedings: New Information Perspectives	2	0.600
DESIDOC Bulletin of Information Technology	1	–
Discourse: Studies in the Cultural Politics of Education	1	–
Electronic Library	3	–
Evidence Based Library and Information Practice	1	–
Information Research	1	–
Information Technology and Libraries	2	0.528
Internet Reference Services Quarterly	1	–
Journal of Access Services	1	–
Journal of Documentation	1	1.447
Journal of Education for Library and Information Science	1	–
Journal of Librarianship & Information Science	2	–
Journal of Web Librarianship	2	–
Knowledge Organization	1	–
Library and Information Science Research	4	–
Library Hi-Tech	5	–
Library Philosophy and Practice	2	–
Library Review	1	–
Libri	2	–
Mousaion	1	–
New Library World	1	–
New Review of Information Networking	1	–
Online Information Review	1	0.991
Reference Services Review	1	–
Signum	1	–
South African Journal of Library & Information Science	1	–
SRELS Journal of Information Management	1	–
The Serials Librarian	1	–
Webology	1	–

Table I.
Number of
publications
per journal

authors commonly discuss its meaning in relation to, and in comparison with, its forerunner, Web 2.0. An attempt to define the concept Library 2.0 is found in the work of Holmberg *et al.* (2009), who observe the lack of an established understanding of the phenomenon. The authors emphasize that a more comprehensive definition is called for, as the existing definition for Library 2.0 fails to offer a complete picture of the phenomenon. Driven by the search for a unifying definition, Holmberg and colleagues' study combines previous conceptual work with empirical data on how Library 2.0 is perceived by practitioners to delineate a broad and comprehensive model of the term. Their model consists of seven building blocks: interactivity; users; participation; libraries and library services; Web and Web 2.0; social aspects; and technology and tools. Based on these seven blocks, they define Library 2.0 as "[…] a change in interaction between users and libraries in a new culture of participation catalyzed by social web technologies" (Holmberg *et al.*, 2009, p. 67).

Yet Holmberg's way of defining Library 2.0 is contradicted by a stream of research which questions the novelty of the phenomenon. Kwanya *et al.* (2009) argue that although the model represents a change, "it is largely of a nature close to the tradition and mission of libraries," and "is in fact merely a description of the latest instance of a

Theme	Examples of stated aims	Examples of stated research questions	Appendix number of articles
Conceptual research	"[…] to define both theoretically and empirically the concept of Library 2.0" (Holmberg *et al.*, 2009, p. 668) "This paper seeks to present an overview of Library 2.0" (Curran *et al.*, 2007, p. 288)	"With the emergence of Library 2.0, could Ranganathan's prophecy be coming to pass?"(Kwanya *et al.*, 2010, p. 2)	No. 6, 14, 25, 26
Institutional identity and organizational practices	"[…] to propose a new vision for public libraries in the digital age" (Chowdhury *et al.*, 2006, p. 454) "This article examines some of the effective strategies that have been adopted by libraries to deal with managing technology in a constantly changing environment" (Carpenter and Green, 2009, p. 158)	"Which kinds of social software are public libraries using? How are they using them? What are the attributes of the diffusion of social software? What impact have social software tools had?" (Rutherford, 2008a, p. 414)	No. 10, 11, 12, 16, 17, 18, 24, 27, 29, 33, 37
Professional motivations, attitudes and experiences	"[…] to investigate the views and opinions of librarians about the implementation of Web 2.0 technologies into library operations and services" (Bronstein and Aharony, 2009, p 89) "[…] to find out which applications and new communications technologies were being adopted by members of the New Zealand library and information management profession, and what factors influenced adoption, such as age, educational level, and employment status" (Chawner, 2008, p. 630)	"Does the pragmatic biblioblogger model adequately represent the motivations for authorship of professionally focused LIS blogs? Does the pragmatic biblioblogger seek to connect, comment and build community, and if so, to what extent? (Stephens, 2008, p. 313)	No. 3, 9, 13, 19, 20, 28, 31, 38, 40, 41
Knowledge management, organization and dissemination	"[…] to provide an overview of the folksonomy tagging phenomenon […]" (Noruzi, 2006, p. 199) "This paper explores how folksonomies could be used in public library catalogues […]" (Spiteri, 2006, p. 75)	"What is the content of LIS topic-oriented blogs? Do the tags and folksonomies used in these blogs form a consistent scheme? In other words, are the tags organized in a coherent, accurate way (as library catalogues are), or are they chaotic and devoid of internal logic?" (Aharony, 2009b, p. 174)	No. 4, 35, 42, 43, 44

(continued)

Table II.
Identified themes

Theme	Examples of stated aims	Examples of stated research questions	Appendix number of articles
Technologies and tools	"This paper explores the use of blogs as a platform for providing reference service […]" (Pomerantz and Stutzman, 2006, p. 200) "[…] to put librarian use of instant messaging into a context of new media development" (Nielsen, 2009, p. 237)	"Do public libraries produce more or less tweets than academic libraries? Is there a linguistic difference between tweets produced by public libraries and those produced by academic libraries? Is the content of tweets produced by public libraries different from that of tweets produced by academic libraries?" (Aharony, 2010, p. 337)	No. 1, 2, 5, 7, 8, 15, 32, 34, 36, 39
Implications for digital and information literacies	"Examine the importance of raising awareness of differences between professional content and content produced by amateurs of the Web 2.0" (Koltay, 2010a, b, p. 1)	No stated research questions	No. 21, 22, 23, 30

Table II.

long-standing and time-tested institution in a democratic society" (Kwanya *et al.*, 2009, p. 74). In a later study, Kwanya *et al.* (2010) further support this argument through a comparison between the principles of Library 2.0 and Ranganathan's five laws of library science. From this analysis, they conclude that the Library 2.0-model is not a "radical departure from the principles of librarianship embodied in Ranganathan's five laws of library science" (Kwanya *et al.*, 2010, p. 14). Hence, there is a contradiction in how Library 2.0 is perceived in the research: for Holmberg and colleagues, assuming a more empirical approach, this is a novel phenomenon that requires a comprehensive definition, whereas Kwanya and colleagues, assuming a more unmitigated conceptual approach, perceive of it as a natural extension of library practices and principles.

3.2.2 Theme 2: institutional roles and missions. The second theme identified in this sample is the impact of Library 2.0 on the public library as an institution and, in particular, its mission and role in society. A central issue is the future social role and function of public libraries in light of the Library 2.0-model. Many of the authors depict contemporary public libraries as being in a state of crisis, where the library's ability to fulfill user needs is under heightened scrutiny. The articles often portray this precarious state of libraries as the result of changes in information and communication technology. For instance, Curran *et al.* (2006) express a concern that the rise of Google and Amazon might render established knowledge institutions such as libraries, slow and irrelevant and that Library 2.0 is ultimately about "survival of the library" (Curran *et al.*, 2006, p. 56). Chowdhury *et al.* (2006) describe the current situation for public libraries as a struggle "to find a new, unique and vital source of value" concluding that in this search for a new role and identity indicates how "public libraries are being attacked from all sides" (Chowdhury *et al.*, 2006, pp. 454-455). Rutherford (2008a) similarly recognizes a challenge to public libraries instigated by online information gathering tools. He contends that public libraries, under new pressure from personal ICTs, have to more clearly express the ways they can "add value to user experience" (Rutherford, 2008a, p. 411).

In the sample, Library 2.0 is repeatedly presented as a method to face the perceived challenges. Anttiroiko and Savolainen (2011) review public libraries' efforts to renew their services by using Web 2.0 technologies and conclude these tools "provide new opportunities for public libraries to improve their services and their relationships with users and stakeholders" (Anttiroiko and Savolainen, 2011, p. 97). Erich (2007) describes Library 2.0 as a model that encourages constant and purposeful change, enabling libraries to keep up with the shifting needs of their users. This is also argued by Curran *et al.* (2006), who contend that Library 2.0 services are substantively different from contemporary library services, and operate according to the expectations of today's users. Chowdhury *et al.* (2006) argues that public libraries should take on a new mission in disseminating local and community knowledge. They propose the 2.0-model, along with the use of new participatory web technologies, as the means to accomplish this mission. In the articles, the notions of novelty and change are reoccurring topics, which are closely associated with Library 2.0.

The mission of a Library 2.0 is described in different terms, albeit with common denominators. As mentioned above, Chowdhury *et al.* (2006) emphasize a new role for public libraries as platforms for distributing and storing local community knowledge through twenty-first century digital technologies. The notion of a platform is commonly used in the articles' discussions of Library 2.0, standing in contrast to the more static and less interactive role of libraries as merely providers of access to

knowledge. Words like "interactivity" and "participation" are often used in the sampled articles to describe the activities of future libraries. In this way, the 2.0-model is said to replace the traditional "top-down" services model and make better use of the knowledge of the library users (Erich, 2007). Lankes *et al.* (2007) use conversation theory to depict libraries not as institutions but as "participatory conversations." This paper is one of few classified under this theme where the authors apply a specific theoretical framework for analyzing and understanding Library 2.0. Drawing in the work of Lankes *et al.* (2007), Nguyen *et al.* (2012) argues for an understanding of contemporary libraries as participatory and suggest that more empirical research is needed on this topic.

In general, the articles touching on the theme of "institutional roles and missions" call up long-standing concerns over the roles and mission of public libraries in the information society. For these authors, Library 2.0 opens up possibilities for novelty and change after a lengthy period of panic over the "erosion" of the public library's institutional legitimacy at the hands of very ICTs that are now the library's salvation.

3.2.3 Theme 3: professional motivations, attitudes and experiences. A central theme in the articles concerned with public library professionals and Library 2.0 is the opinions, experiences and motivations of librarians to use Web 2.0 technologies. The studies show that librarians have positive attitude toward Web 2.0, trusting it to assist and empower them in fulfilling their library service missions and goals (Bronstein and Aharony, 2009; Aharony, 2009a; Rutherford, 2008b). Yet there appears to be a discrepancy between, on the one hand, the goals and desires expressed by study participants of Library 2.0 and, on the other hand, what they actually think is achievable. Many studies reveal a great deal of skepticism toward abilities of libraries and librarians, as well as their willingness to let go of their traditional role as gatekeepers (cf. Bronstein and Aharony, 2009; Rutherford, 2008b; Stephens, 2008). Some findings also suggest that most librarians can be categorized as passive, rather than active, users of the social web (Chawner, 2008), and that there are barriers preventing librarians from taking full advantage of the social web in delivering and innovating services (Hall, 2011).

Demographic and psychological variables behind the adoption of Web 2.0 technologies, such as age, educational level and employment status (Chawner, 2008), or personality characteristics and computer expertise (Aharony, 2009a), are also explored in the research. The findings suggest that age and the level of resistance-to-change stand out as the most influential factors affecting adoption. Chawner (2008) found that most respondents actively using the social web were between 31 and 45 years old. Aharony (2009a), meanwhile, found that librarians who are extrovert and seek-out challenges a more inclined to use these tools than those who are highly resistant to change.

Many of the articles examine librarians' motivations to blog, as well as charting the so-called "biblio-blogosphere." Chawner (2008) found that blogs were the most popular Web. 2.0 applications used by librarians in New Zealand. In the American context, Mon and Randeree's (2009) results from a study of 242 American public libraries show similar results. Yet in a study of the Irish biblio-blogosphere, Lee and Bates (2007) found only a small number of blogs by libraries, librarians and librarian associations. Despite this finding, the authors claim an emerging biblio-blogosphere was discernable at the time of their study, suggesting that a comparable development to New Zealand and the USA might be expected in Ireland.

The articles on librarians and blogging identify some interesting connections between the practice and the professional and personal development of librarians. A phenomenological study by Stephens (2008) found that the blog functions as a personal knowledge archive, as well as a tool for connecting to news, technologies and discussions. In many cases, the blogger librarian becomes a person of importance at his or her workplace by virtue of being well informed about current technologies. The blogging practices might also extend the blogger's personal network, making him or her more visible beyond their workplace. Hence, blogging strengthens the biblio-blogger's sense of professional development and empowerment (Stephens, 2008). Lee and Bates (2007) also found blogging connected to librarians' personal development. The participants in their study described blogging as a creative practice and associated it with feelings of satisfaction and autonomy.

One conclusion, which may be drawn from the findings presented in this theme, is that most librarians enthusiastically welcome these tools. However, institutional barriers, as well as a failure and fear of recognizing the validity of non-institutional expertise might counter the enthusiastic uptake of social web technologies, which is the subject of the next theme.

3.2.4 Theme 4: social bookmarking and folksonomies. The articles coded under this theme are broadly concerned with the tagging and social bookmarking phenomenon (e.g. applications like Furl, Pinboard and Delicious), leading to the emergence of "folksonomies," and the implications of these developments for public libraries. A significant part of the research compares folksonomies to expert generated taxonomies built with controlled vocabularies, evaluating the comparative applicability and quality of these two approaches to knowledge organization (cf. Noruzi, 2006; Spiteri, 2006, 2007; Aharony, 2009b). In many studies, researchers express reservations regarding the more unstructured production of folksonomies. Aharony (2009b) analyzed the use of tags in the "biblio-blogosphere" in order to understand the tagging patterns of librarians and information scientists. She found that librarians tend to use specific tags without external checks or controls, which produced an extensive yet imprecise and inconsistent folksonomy. Furthermore, the use of random tags, "which have no real meaning" added to an "air of unreliability" of the folksonomy (Aharony, 2009b, p. 178).

Spiteri (2006, 2007) expresses similar concerns about the quality of folksonomies as applied to online public library catalogues. She suggests that a combination of folksonomies and controlled vocabularies should be used as to provide "client-based customizable features" (Spiteri, 2006, p. 85) in public library catalogues. Still, she advises libraries that decide to implement social bookmarking features in their catalogues to formulate "clearly written recommendations for the choice and form of tags" to attenuate the unreliability of pure folksonomies (Spiteri, 2007, p. 23). Weaver (2007) makes a somewhat different connection between public libraries and folksonomies. In a study on the potential of user-generated metadata for public libraries, he found that the public library user community produced an assemblage of tags that offered a richer description of a chosen book than did the social web site library thing. Based on this finding, he suggests that the non-commercial nature of public libraries gives them a unique position to build consistent, long-term online communities. However, this requires that the library's traditional services change in ways to promote the connection of library collections with user groups. Hence, Weaver has more confidence in the usefulness of folksonomies, and conceives of the public

library setting as particularly beneficial for the production of user-generated metadata. His work thus stands apart from a strong tendency in the sample to argue for the advantages of expert generated metadata.

3.2.5 Theme 5: technologies and tools. The articles coded under this theme are foremost concerned with understanding the particular characteristics and applications of the technologies and tools associated with Library 2.0, such as blogs, instant messaging, micro-blogs (e.g. Twitter) and social networking sites (e.g. Facebook). Surveys of the prevalence and evaluations of the benefits of these tools in public libraries are also common, with findings suggesting that Web 2.0 applications affect the overall quality of the library web site, and in particular the quality of online services (Chua and Goh, 2010).

Research on blogs is highly represented in this theme (Pomerantz and Stutzman, 2006; Natarajan, 2007; Bar-Ilan, 2007; Aharony, 2009c). Such articles discuss the history and significance of blogs in the library sector (Natarajan, 2007), arguing for their use in specific activities such as collaborative reference work (Pomerantz and Stutzman, 2006) or as information channels for the LIS community as well as the general public (Bar-Ilan, 2007). Aharony (2009c) examines the personal motivations of blogging librarians and the strong individualized character of blogs, observing that the energy and enthusiasm for blogging seems to decrease as the technology loses its air of novelty.

Despite their popularity, other tools such as micro-blogs, instant messaging and social networking sites are rarely discussed in the sample. One exception is Aharony (2010), who conducted a comparative study of Twitter use in public and academic libraries. She found that both types of libraries use Twitter as a tool for broadcasting and sharing information about events, attitudes and professional interests. Nielsen (2009) evaluates the use of instant messaging as tool in public libraries and finds that the service cannot be characterized as an instance of participatory culture as there is no opportunity for knowledge sharing between users. Social networking sites are the subject of Scale's (2008) study, which evaluates Facebook's capacity to act as a social search engine. He finds that Facebook is inadequate for the task, concluding that this approach to information retrieval is amateurish and that the expertise of librarians in information search and retrieval is still needed. Public and academic library Facebook use is also the topic investigated by Aharony (2012), who concludes that market events, activities and services are the most common activities that Facebook enable.

3.2.6 Theme 6: implications for digital and information literacies. In the sample, only a very small number of articles address literacy issues. These articles offer critical perspectives on the Web 2.0 rhetoric celebrating amateurism (Koltay, 2010a, b, 2011) and the assumptions made of digital literacy and participatory culture (MacShane, 2011). The authors call for more nuanced approaches to the role of public libraries in the age of social web technologies and participatory cultures. Koltay argues for new approaches to the concept of literacy that more clearly acknowledge both the opportunities and problems as library users' as library users move from being strictly content consumers to also taking on the role of content producers. MacShane (2011), by contrast, argues for a less dramatic take on the future role of public libraries in literacy training, recognizing "the distinctive role and potentials of libraries in this area" (MacShane, 2011, p. 393).

4. Discussion
The analysis of research on public libraries and the social web, published between 2006 and 2012, reveals six major recurring themes: conceptual research; institutional identity

and organizational practices; professional roles and experiences; knowledge management, organization and dissemination; technologies and tools; and implications for information and digital literacy. These themes cover a considerable segment of the broader field of LIS research and a wide range of topics, underlining the diversity of the analyzed research. However, although these themes differ with regards to the overarching questions they address, the sample reveals consistent tendencies running throughout all the themes, if not through all the articles. I will now turn to discussing these tendencies, in both in what is present and absent throughout the research, toward answering my final research question. I will then turn to the question of journals acting as common venues for this type of research in LIS.

4.1 Struggles over impact and meaning

In the rich and multifaceted body of research analyzed, one pervasive tendency is the struggle over the impact and meaning of the phenomena and concepts collectively referred to here as the social web. On the one hand, there is a stream of research that perceives the social web as something radically new, fundamentally departing from previous public library practices. Embedded in this notion of novelty is a positive attitude to change, as equated with progress. The social web is thereby understood as an instigator of change, and is therefore portrayed as an inherent good for public library practice and librarianship. This positive rhetoric is colored by certain preconceptions of technology and its role in society and social practices. The social web is hence characterized as having certain powers or causing certain effects, which suggests a strain of technological determinism. Technological determinism, in its disregard of the complex and inextricable interplay between technology and society, ultimately infers public libraries as merely passive receptors instead of active agents in technological development. This view of technology as an inherent driver of positive change also suggests a tendency toward technological utopianism. Leckie and Buschman (2009) present the epitome of such utopianism in the work of Segal (1995), whose "uncritical faith in technology's ability to solve all problems" implies that technological progress "will make [us] healthier, happier, more efficient, more productive, and more democratic than ever before." Hence, "comparisons with all prior technological revolutions can therefore be ignored, so profoundly different will the future be from the past" (Segal, 1995, cited in Leckie and Buschman, 2009, p. 11).

In contrast to this "brave new world" rhetoric, there is also a stream of research that questions both the novelty of the social web and its inherent positive effects for public library practice, a critique that has also been issued by Godwin (2012). Here, the suggested potentials of the social web are constantly compared to the traditional expertise of librarians and found wanting in some respect. Often the comparison is made in relation to core professional competences of librarians, such as knowledge organization and the promotion of literacy. But although this stream of research offers a more critical (if not conservative) perspective, it is still not clear on what theoretical premises this critique is based. Theoretical discussions of the authors' views on technology in society and practice are continuously lacking, which is the case for the sample as a whole.

4.2 The state of the public library institution

Another tendency throughout the research is the depiction of the public library institution as in a state of crisis, followed by calls for change and adjustment to contemporary user needs. This is most clearly expressed in the first three themes but is

also manifested in the other three, in particular when notions of novelty and change are discussed. With a few exceptions (cf. Chowdhury *et al.*, 2006), this crisis is explained as being caused by changes in ICTs, where, among other things, the social web has altered the way users engage with information. The inability of public libraries to adapt to new user expectations threatens to render libraries obsolete, hence their current state of crisis. By depicting technological development as driving force of change echoes the previous discussion on the tendency in this sample of research to offer explanations veering into technological determinism. It also disregards previous research offering other models of explanation for the challenges facing the public library institution in late modernity, such as the dismantling of the public sphere (Buschman, 2003) and the pervading importance of new public management policy (Kann-Christensen and Andersen, 2009).

4.3 Librarianship and professional expertise
A final pervasive tendency is the focus on the status of librarianship and the professional expertise of librarians in face of the shadow of Library 2.0. A recurring question – particularly evident in evident in themes three (professional motivations) and four (knowledge) – asks how ready librarians are to respond to the emergence and importance of user-generated content in their areas of traditional expertise, such as knowledge management. Questions that seem to concern the authors are whether established mandates of librarians relating to information access will be replaced with new forms of engagement and knowledge production; whether librarians will adjust to such transformations and give up their traditional roles as gatekeepers; and what challenges can be identified that limit the extent to which librarians are able to fully accept and take advantage of the social web. From the results discussed in this paper, despite the richness and diversity of this body of research, it is clear that further research is needed in order to address these questions thoroughly and critically.

4.4 Channels for publication
The plurality of research directions is further illustrated by the dispersion of the analyzed articles across a considerable number of journals, of which only a few are indexed in ISI Web of Science (see Table I). From this listing of journals it is not possible to identify any core channel within LIS for the publication of public library and social web research. Although *Library Hi Tech* and *Library and Information Science Research* appear to be the most common sources in this research, they are hardly dominating the field. Hence, the communication of findings is not concentrated to a top list of high-impact journals, which might be explained by the immaturity of the field as well as the heterogeneity of the LIS field in general.

5. Conclusions
The relatively small sample of research on public libraries and the social web analyzed in this paper exhibits a richness and diversity in research directions that hardly corresponds to its limited size. The topics addressed cover a variety of segments within the LIS field – a variety that is further illustrated by the dispersion of articles in a wide range of journals. Despite this diversity, some central tendencies can be identified with regards to the implicit assumptions about the social web and the state of the public library institution. In general, theoretical discussions on the authors' understanding of technology and its role in society and practice are lacking, as well as empirical work

that explores the consequences of social web for public libraries in situ. Also absent (with a few exceptions) are considerations of outside research on the broader political economic conditions of the public library institution in late modernity. Furthermore, the status of librarianship and the professional expertise of librarians, in light of Library 2.0, need to be further addressed.

These findings should of course be discussed in relation to the limitations of this study. As noted, the sample analyzed is retrieved from LISTA, ISI and DOAJ, and thus limited to the content of those databases. This implies, among other things, that research published in monographs is excluded from the analysis. Here, I would especially like to point to the works of Huvila (2012), Godwin (2012), Dyer-Witheford (2009) and Crawford (2011) as examples of interesting and relevant research not included in the corpus analyzed. Bearing these limitations in mind, I suggest that future directions in research on public libraries and the social web should relate to other public library research, in particular the extensive work done on the state of the public library institution in contemporary society (cf. Buschman, 2003; Kann-Christensen and Andersen, 2009; Audunson, 2005). Preferably, authors would also articulate their understandings of technology and its role in society more clearly as to initiate a more thorough and theoretically grounded discussion on the interplay between technological development and the public library, thereby neither overstating the determining force of the technology nor the institution.

References

Aharony, N. (2009a), "Web 2.0 use by librarians", *Library and Information Science Research*, Vol. 31 No. 1, pp. 29-37.

Aharony, N. (2009b), "Librarians and information scientists in the blogosphere: an exploratory analysis", *Library and Information Science Research*, Vol. 31 No. 1, pp. 29-37.

Aharony, N. (2009c), "An exploratory analysis of librarians' blogs: their development, nature and changes", *Aslib Proceedings*, Vol. 61 No. 6, pp. 587-604.

Aharony, N. (2010), "Twitter use in libraries: an exploratory analysis", *Journal of Web Librarianship*, Vol. 4 No. 4, pp. 333-350.

Aharony, N. (2011), "Web 2.0 in the professional LIS literature: an exploratory analysis", *Journal of Librarianship and Information Science*, Vol. 43 No. 1, pp. 3-13.

Aharony, N. (2012), "Facebook use in libraries: an exploratory analysis", *Aslib Proceedings*, Vol. 64 No. 4, pp. 358-372.

Anttiroiko, A. and Savolainen, R. (2011), "Towards library 2.0: the adoption of web 2.0 technologies in public libraries", *Libri: International Journal of Libraries and Information Services*, Vol. 61 No. 2, pp. 87-99.

Audunson, R. (2005), "The public library as a meeting-place in a multicultural and digital context: the necessity of low-intensive meeting-places", *Journal of Documentation*, Vol. 61 No. 3, pp. 429-441.

Bar-Ilan, J. (2007), "The use of weblogs (blogs) by librarians and libraries to disseminate information", *Information Research*, Vol. 12 No. 4, p. 323, available at: http://InformationR.net/ir/12-4/paper323.html (accessed March 27, 2012).

Boxen, J.L. (2008), "Library 2.0: a review of the literature", *Reference Librarian*, Vol. 49 No. 1, pp. 21-34.

Bronstein, J. and Aharony, N. (2009), "Views and dreams: a delphi investigation into library 2.0 applications", *Journal of Web Librarianship*, Vol. 3 No. 2, pp. 89-109.

Buschman, J. (2003), *Dismantling the Public Sphere: Situating and Sustaining Librarianship in the Age of the New Public Philosophy*, Libraries Unlimited, Westport, CT.

Carpenter, M. and Green, R.A. (2009), "Managing library 2.0", *Journal of Access Services*, Vol. 6 Nos 1/2, pp. 158-162.

Casey, M.E. and Savastinuk, L.C. (2007), *Library 2.0: A Guide to Participatory Library Service*, Information Today, Medford, NJ.

Chawner, B. (2008), "Spectators, not players: information managers' use of web 2.0 in New Zealand", *Electronic Library*, Vol. 26 No. 5, pp. 630-649.

Chowdhury, G., Poulter, A. and McMenemy, D. (2006), "Public library 2.0: towards a new mission for public libraries as a network of community knowledge", *Online Information Review*, Vol. 30 No. 4, pp. 454-460.

Chua, A.K. and Goh, D. (2010), "A study of web 2.0 applications in library websites", *Library and Information Science Research*, Vol. 32 No. 3, pp. 203-211.

Crawford, W. (2011), *Library 2.0: A Cites and Insights Reader*, Cites and Insights Books, Mountain View, CA.

Curran, K., Murray, M. and Christian, M. (2007), "Taking information to the public through library 2.0", *Library Hi Tech*, Vol. 25 No. 2, pp. 288-297.

Curran, K., Murray, M., Christian, M. and Norrby, S.N. (2006), "Involving the user through library 2.0", *New Review of Information Networking*, Vol. 12 Nos 1/2, pp. 47-59.

Dyer-Witheford, N. (2009), "Cycles of net struggle, lines of net flight", in Leckie, G.J. and Buschman, J. (Eds), *Information Technology in Librarianship: New Critical Approaches*, Libraries Unlimited, Westport, CT, pp. 61-82.

Erich, A. (2007), "Library 2.0. A new service model for libraries", *Studii de Biblioteconomie şi Ştiinţa Informării*, Vol. 11, pp. 124-128.

Godwin, P. (2012), "Library 2.0: a retrospective", in Godwin, P. and Parker, J. (Eds), *Information Literacy Beyond Library 2.0*, Facet, London, pp. 3-18.

Hall, H. (2011), "Relationship and role transformations in social media environments", *Electronic Library*, Vol. 29 No. 4, pp. 421-428.

Holmberg, K., Huvila, I., Kronqvist-Berg, M. and Widén-Wulff, G. (2009), "What is library 2.0?", *Journal of Documentation*, Vol. 65 No. 4, pp. 668-681.

Huvila, I. (2012), *Information Services and Digital Literacy: In Search of the Boundaries of Knowing*, Chandos, Oxford.

Kann-Christensen, N. and Andersen, J. (2009), "Developing the library. Between efficiency, accountability and forms of recognition", *Journal of Documentation*, Vol. 65 No. 2, pp. 208-222.

Koltay, T. (2010a), "The web 2.0 contradiction: commercial and library use", *Library Philosophy and Practice*, Vol. 12 No. 2, pp. 1-5.

Koltay, T. (2010b), "Library 2.0, information and digital literacies in the light of the contradictory nature of web 2.0", *Webology*, Vol. 7 No. 2, available at: www.webology.org/2010/v7n2/a78.html (accessed March 27, 2012).

Koltay, T. (2011), "Information literacy for amateurs and professionals. The potential of academic, special and public libraries", *Library Review*, Vol. 60 No. 3, pp. 246-257.

Kwanya, T., Stilwell, C. and Underwood, P.G. (2009), "Library 2.0: revolution or evolution?", *South African Journal of Library and Information Science*, Vol. 75 No. 1, pp. 70-75.

Kwanya, T., Stilwell, C. and Underwood, P.G. (2010), "Library 2.0 principles and Ranganathan's fifth law", *Mousaion*, Vol. 28 No. 2, pp. 1-16.

Lankes, R., Silverstein, J. and Nicholson, S. (2007), "Participatory networks: the library as conversation", *Information Technology and Libraries*, Vol. 26 No. 4, pp. 17-33.

Leckie, G.J. and Buschman, J. (Eds) (2009), *Information Technology in Librarianship: New Critical Approaches*, Libraries Unlimited, Westport, CT.

Lee, C.M. and Bates, J.A. (2007), "Mapping the Irish biblioblogosphere: use and perceptions of library weblogs by Irish librarians", *Electronic Library*, Vol. 25 No. 6, pp. 648-663.

MacShane, I. (2011), "Public libraries, digital literacy and participatory culture", *Discourse: Studies in the Cultural Politics of Education*, Vol. 32 No. 3, pp. 383-397.

Mon, L. and Randeree, E. (2009), "On the boundaries of reference services: questioning and library 2.0", *Journal of Education for Library and Information Science*, Vol. 50 No. 3, pp. 164-175.

Natarajan, M.M. (2007), "Blogs: a powerful tool for accessing information", *DESIDOC Bulletin of Information Technology*, Vol. 27 No. 3, pp. 13-20.

Nguyen, L.C., Partridge, H.L. and Edwards, S.L. (2012), "Towards an understanding of the participatory library", *Library Hi-Tech*, Vol. 30 No. 2, pp. 335-346.

Nielsen, H. (2009), "Library communication outside a library context: instant messaging as library service", *New Library World*, Vol. 110 Nos 5/6, pp. 237-248.

Noruzi, A. (2006), "Folksonomies: (un)controlled vocabulary?", *Knowledge Organization*, Vol. 33 No. 4, pp. 199-203.

Pomerantz, J. and Stutzman, F. (2006), "Collaborative reference work in the blogosphere", *Reference Services Review*, Vol. 34 No. 2, pp. 200-212.

Rutherford, L.L. (2008a), "Building participative library services: the impact of social software use in public libraries", *Library Hi Tech*, Vol. 26 No. 3, pp. 411-423.

Rutherford, L.L. (2008b), "Implementing social software in public libraries: an exploration of the issues confronting public library adopters of social software", *Library Hi Tech*, Vol. 26 No. 2, pp. 184-200.

Scale, M. (2008), "Facebook as a social search engine and the implications for libraries in the twenty-first century", *Library Hi Tech*, Vol. 26 No. 4, pp. 540-556.

Segal, H.P. (1995), "The cultural contradictions of high tech: or the many ironies of contemporary technological utopianism", in Ezhrahi, Y., Mendelsohn, E. and Segal, H. (Eds), *Technology, Pessimism, and Postmodernism*, University of Massachusetts Press, Amherst, MA, pp. 175-216.

Stephens, M. (2008), "The pragmatic biblioblogger: examining the motivations and observations of early adopter librarian bloggers", *Internet Reference Services Quarterly*, Vol. 13 No. 4, pp. 311-345.

Spiteri, L.F. (2006), "The use of folksonomies in public library catalogues", *The Serials Librarian*, Vol. 51 No. 2, pp. 75-89.

Spiteri, L.F. (2007), "The structure and form of folksonomy tags: the road to the public library catalog", *Information Technology and Libraries*, Vol. 26 No. 3, pp. 13-25.

Weaver, M. (2007), "Contextual metadata: faceted schemas in virtual library communities", *Library Hi Tech*, Vol. 25 No. 4, pp. 579-594.

Further reading

Anderson, C. (2007), *Long Tail*, Bonnier Fakta, Stockholm.

Appendix 1. Key phrase searches

Search 1:
("social web" OR "library 2.0" OR "web 2.0" OR "social media") AND "public librar*"

Search 2:
("social networking sites" OR blog* OR micro-blog*) AND "public librar*"

Search 3:
(Facebook OR Twitter OR Myspace OR Delicious) AND "public librar*"

Appendix 2. List of included articles

(1) Aharony, N. (2012), "Facebook use in libraries: an exploratory analysis", *Aslib Proceedings*, Vol. 64 No. 4, pp. 358-372.

(2) Aharony, N. (2010), "Twitter use in libraries: an exploratory analysis", *Journal of Web Librarianship*, Vol. 4 No. 4, pp. 333-350.

(3) Aharony, N. (2009), "Web 2.0 use by librarians", *Library and Information Science Research*, Vol. 31 No. 1, pp. 29-37.

(4) Aharony, N. (2009), "Librarians and information scientists in the blogosphere: an exploratory analysis", *Library and Information Science Research*, Vol. 31 No. 1, pp. 29-37.

(5) Aharony, N. (2009), "An exploratory analysis of librarians' blogs: their development, nature and changes", *Aslib Proceedings*, Vol. 61 No. 6, pp. 587-604.

(6) Anttiroiko, A. and Savolainen, R. (2011), "Towards library 2.0: the adoption of web 2.0 technologies in public libraries", *Libri: International Journal of Libraries and Information Services*, Vol. 61 No. 2, pp. 87-99.

(7) Bansode, S., Dahibhate, N.B. and Ingale, K. (2009), "RSS applications in libraries and information centres", *Library Philosophy and Practice*, Vol. 11 No. 1, pp. 1-4.

(8) Bar-Ilan, J. (2007), "The use of weblogs (blogs) by librarians and libraries to disseminate information", *Information Research*, Vol. 12 No. 4, p. 323, available at: http://InformationR.net/ir/12-4/paper323.html

(9) Bronstein, J. and Aharony, N. (2009), "Views and dreams: a delphi investigation into library 2.0 applications", *Journal of Web Librarianship*, Vol. 3 No. 2, pp. 89-109.

(10) Calvert, P.J. (2012), "Facebook and the diffusion of innovation in New Zealand public libraries", *Journal of Librarianship and Information Science*, Vol. 44 No. 4, pp. 227-237.

(11) Carlsson, H. (2012), "Working with Facebook in public libraries. A backstage glimpse into library 2.0 rhetoric", *Libri: International Journal of Libraries and Information Services*, Vol. 62 No. 3, pp. 199-210.

(12) Carpenter, M. and Green, R.A. (2009), "Managing library 2.0", *Journal of Access Services*, Vol. 6 Nos 1/2, pp. 158-162.

(13) Chawner, B. (2008), "Spectators, not players: information managers' use of web 2.0 in New Zealand", *Electronic Library*, Vol. 26 No. 5, pp. 630-649.

(14) Chowdhury, G., Poulter, A. and McMenemy, D. (2006), "Public library 2.0: towards a new mission for public libraries as a network of community knowledge", *Online Information Review*, Vol. 30 No. 4, pp. 454-460.

(15) Chua, A.K. and Goh, D. (2010), "A study of web 2.0 applications in library websites", *Library and Information Science Research*, Vol. 32 No. 3, pp. 203-211.

(16) Curran, K., Murray, M. and Christian, M. (2007), "Taking information to the public through library 2.0", *Library Hi Tech*, Vol. 25 No. 2, pp. 288-297.

(17) Curran, K., Murray, M., Christian, M., and Norrby, S.N. (2006), "Involving the user through library 2.0", *New Review of Information Networking*, Vol. 12 Nos 1/2, pp. 47-59.

(18) Erich, A. (2007), "Library 2.0 a new service model for libraries", *Studii de Biblioteconomie şi Ştiinţa Informării*, Vol. 11, pp. 124-128.

(19) Holmberg, K., Huvila, I., Kronqvist-Berg, M. and Widén-Wulff, G. (2009), "What is library 2.0?", *Journal of Documentation*, Vol. 65 No. 4, pp. 668-681.

(20) Hall, H. (2011), "Relationship and role transformations in social media environments", *Electronic Library*, Vol. 29 No. 4, pp. 421-428.

(21) Koltay, T. (2010), "The web 2.0 contradiction: commercial and library use", *Library Philosophy and Practice*, Vol. 12 No. 2, pp. 1-5.

(22) Koltay, T. (2010), "Library 2.0, information and digital literacies in the light of the contradictory nature of web 2.0", *Webology*, Vol. 7 No. 2, Article 78, available at: www.webology.org/2010/v7n2/a78.html

(23) Koltay, T. (2011), "Information literacy for amateurs and professionals. The potential of academic, special and public libraries, *Library Review*, Vol. 60 No. 3, pp. 246-257.

(24) Krishnamurthy, M. and Ashwath, L. (2010), "Social network technology and its implications for libraries: transforming the library services through the web", *SRELS Journal of Information Management*, Vol. 47 No. 3, pp. 283-288.

(25) Kwanya, T., Stilwell, C. and Underwood, P.G. (2009), "Library 2.0: revolution or evolution?", *South African Journal of Library and Information Science*, Vol. 75 No. 1, pp. 70-75.

(26) Kwanya, T., Stilwell, C. and Underwood, P.G. (2010), "Library 2.0 principles and Ranganathan's fifth law", *Mousaion*, Vol. 28 No. 2, pp. 1-16.

(27) Lankes, R., Silverstein, J. and Nicholson, S. (2007), "Participatory networks: the library as conversation", *Information Technology and Libraries*, Vol. 26 No. 4, pp. 17-33.

(28) Lee, C.M. and Bates, J.A. (2007), "Mapping the Irish biblioblogosphere: use and perceptions of library weblogs by Irish librarians", *Electronic Library*, Vol. 25 No. 6, pp. 648-663.

(29) Lepik, A. (2007), "Relationship marketing 2.0. Successful prospective partnership?", *Signum*, Vol. 5, pp. 13-16.

(30) MacShane, I. (2011), "Public libraries, digital literacy and participatory culture", *Discourse: Studies in the Cultural Politics of Education*, Vol. 32 No. 3, pp. 383-397.

(31) Mon, L. and Randeree, E. (2009), "On the boundaries of reference services: questioning and library 2.0", *Journal of Education for Library and Information Science*, Vol. 50 No. 3, pp. 164-175.

(32) Natarajan, M.M. (2007), "Blogs: a powerful tool for accessing information", *DESIDOC Bulletin of Information Technology*, Vol. 27 No. 3, pp. 13-20.

(33) Neo, E. and Calvert, P. (2012), "Facebook and the diffusion of innovation in New Zealand public libraries", *Journal of Librarianship and Information Science*, Vol. 44 No. 2, pp. 227-237.

(34) Nielsen, H. (2009), "Library communication outside a library context: instant messaging as library service", *New Library World*, Vol. 110 Nos 5/6, pp. 237-248.

(35) Noruzi, A. (2006), "Folksonomies: (Un) controlled vocabulary?", *Knowledge Organization*, Vol. 33 No. 4, pp. 199-203.

(36) Pomerantz, J. and Stutzman, F. (2006), "Collaborative reference work in the blogosphere", *Reference Services Review*, Vol. 34 No. 2, pp. 200-212.

(37) Rutherford, L.L. (2008a), "Building participative library services: the impact of social software use in public libraries", *Library Hi Tech*, Vol. 26 No. 3, pp. 411-423.

(38) Rutherford, L.L. (2008b), "Implementing social software in public libraries: an exploration of the issues confronting public library adopters of social software", *Library Hi Tech*, Vol. 26 No. 2, pp. 184-200.

(39) Scale, M. (2008), "Facebook as a social search engine and the implications for libraries in the twenty-first century", *Library Hi Tech*, Vol. 26 No. 4, pp. 540-556.

(40) Stephens, M. (2008), "The pragmatic biblio-blogger: examining the motivations and observations of early adopter librarian bloggers", *Internet Reference Services Quarterly*, Vol. 13 No. 4, pp. 311-345.

(41) Stephens, M. and Cheetham, W. (2012), "The impact and effect of learning 2.0 programs in Australian public libraries", *Evidence Based Library and Information Practice*, Vol. 7 No. 1, pp. 53-64.

(42) Spiteri, L.F. (2006), "The use of folksonomies in public library catalogues", *The Serials Librarian*, Vol. 51 No. 2, pp. 75-89.

(43) Spiteri, L.F. (2007), "The structure and form of folksonomy tags: the road to the public library catalog", *Information Technology and Libraries*, Vol. 26 No. 3, pp. 13-25.

(44) Weaver, M. (2007), "Contextual metadata: faceted schemas in virtual library communities", *Library Hi Tech*, Vol. 25 No. 4, pp. 579-594.

Corresponding author
Dr Hanna Carlsson can be contacted at: hanna.carlsson@kultur.lu.se