

# “Back Onto The Tracks”: Convergent Community Boundaries in LibraryThing and Goodreads

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## ABSTRACT

Despite increased study of social and sociotechnical contexts within information science, the roles played by digital libraries in supporting and facilitating existing and emergent communities is still unclear. This short paper presents select findings from content analysis of messages posted by users of the LibraryThing and Goodreads digital libraries. Analysis focused on the roles they play, as social phenomena and boundary objects, in the information behaviors and activities of users within, between, and across multiple existing and emergent communities. Analysis using a framework of Star’s boundary object theory, Strauss’s social worlds perspective, and Burnett and Jaeger’s theory of information worlds found three different types of community convergence around values, structure, and social networks. Preliminary conclusions and implications for digital library research and practice and for related social informatics research are discussed.

## Keywords

Digital libraries, social informatics, boundary objects, communities, boundaries, convergence, social worlds, information worlds.

## INTRODUCTION AND BACKGROUND

While much research in information science has focused on an information retrieval perspective (Ellis, 1992; Raber, 2003), the field has examined the social and sociotechnical contexts of information as far back as Bush’s (1945) memex; the information within a memex would be socially exchanged, constructed, and discussed by and with other scholars within and beyond an individual’s social network. A social paradigm of information science, often following a social informatics or sociotechnical approach, has since emerged (Chatman, 2000; Kling, 1999; Sawyer & Eschenfelder, 2002; Talja, Tuominen, & Savolainen, 2005).

Digital libraries are often seen as modern-day parallels of Bush’s memex. While early conceptions focused on the collection, organization, and retrieval of digital content (Borgman, 1999; Kahn & Cerf, 1988), a broader approach including digital libraries as organizations offering services within “social, behavioral and economic” contexts

(Borgman, 1999, p. 240) has since emerged. Calls to consider the social contexts of digital libraries began as early as the first academic conference on digital libraries (Ackerman, 1994) and continued through and beyond the major funding of digital library research (Gazan, 2008; Levy & Marshall, 1995; Lynch, 2005; Marchionini, Plaisant, & Komlodi, 2003; Marshall & Bly, 2004).

Many experimental and promising models, frameworks, and methods of study have contributed to knowledge of how digital libraries can support and facilitate communities and key social contexts, including Marchionini’s (1999) “sharium” model, Fox’s (1999) 5S model, wikis (Frumkin, 2005; Krowne, 2003), social annotations (Gazan, 2008; Neuhold, Niederée, & Stewart, 2003), and social constructionism (Tuominen, Talja, & Savolainen, 2003). There is still, however, continuing need for research into if and how digital libraries support and facilitate communities and social contexts. To help fulfill this need, this paper presents key findings on emergent communities within and around two social digital libraries, LibraryThing and Goodreads, drawn from content analysis of messages posted on the sites.

## FRAMEWORK

### Social Digital Libraries

Drawing from Borgman’s (1999) discussion of different conceptions of digital libraries, a *social digital library* can be defined as

- having one or more collections of digital content collected on behalf of a user community;
- offering services, relating to the content, by or through the digital library to the user community; and
- being one or more—or part of one or more—formal or informal organizations managing these content and services.

Social digital libraries exist in various contexts, many socially constructed (Tuominen & Savolainen, 1997). This definition parallels the roles of physical libraries as not just physical collections and technical services but also physical, conceptual, and contextual spaces “link[ing] people to ideas and to each other” (Pomerantz & Marchionini, 2007, p. 506).

### **Communities, Social Worlds, and Information Worlds**

While many concepts and theories of community could be applied to the “knowledge communities” (Bearman, 2007, p. 245) around digital libraries (see e.g. Ellis, Oldridge, & Vasconcelos, 2004), careful review and analysis led to adoption of the *social worlds perspective* and the *theory of information worlds* for this study. *Social worlds* (Strauss, 1978) incorporate *activities, sites, technologies*, and (in established worlds) *organizations*; *information worlds* (Burnett & Jaeger, 2008; Jaeger & Burnett, 2010) feature *social norms, social types, information behavior, information value, and boundaries*. Both theories conceive of multiple, overlapping, and intersecting worlds and communities of many sizes, shapes, and settings.

### **Social Digital Libraries as Boundary Objects**

This study incorporates *boundary object theory*, detailed in Star and Griesemer (1989) and Star (1989). Social digital libraries, conceived as boundary objects, are used by and cross the boundaries of multiple communities. As socially constructed boundary objects (Van House, 2003), they should adapt to the “local needs” (Star, 1989, p. 46) of as many of these communities as possible. Serving as an interface and translation device between social and information worlds, they should reconcile and cohere the “meanings” and understandings across these worlds to allow users to “work together,” collaborate, and interact (Star & Griesemer, 1989, pp. 388–389). They should also

- support the emergence of localized and common social norms, social types, information values, and information behaviors shared—to varying and overlapping extents—by the different information worlds using them (Burnett & Jaeger, 2008; Jaeger & Burnett, 2010);
- act as common sites and technologies for users to engage in information-based activities (Strauss, 1978); and
- support the possible convergence and emergence of broader communities around their use.

This framework provides an appropriate, well-grounded, and flexible approach for study of the social contexts of digital libraries.

### **METHOD**

This study uses a case study approach (Yin, 2003) to examine LibraryThing (librarything.com) and Goodreads (goodreads.com), large-scale, public, multi-faceted social digital libraries and Web sites for lovers of books and related media. The research questions focus on the roles LibraryThing and Goodreads play, as boundary objects, in (a) translation and coherence between existing social and information worlds, and (b) coherence and convergence of new worlds around their use.

This paper focuses on the second question of convergence, reporting key findings from content analysis of messages posted across nine groups, five from LibraryThing and four

from Goodreads.<sup>1</sup> Groups were selected at random from the most active and popular groups from each digital library.<sup>2</sup> Fifty to sixty individual messages were collected per group, with at least three threads sampled per group to increase representativeness.

An interpretive and qualitative approach focusing on the latent content (Ahuvia, 2001; Krippendorff, 2004) was used to analyze each message using NVivo qualitative data analysis software. Codes were assigned for concepts from boundary object theory, the social worlds perspective, and the theory of information worlds; open, emergent codes not predefined were assigned if necessary during the coding process, as recommended by Ahuvia (2001) and Charmaz (2006).

### **RESULTS**

Five phenomena played important roles in the processes of convergence of communities within and around the groups and the two digital libraries: emergent information value, sites, technologies, social types, and social norms.<sup>3</sup>

#### **Information Value**

Information value played a key role in convergence around and within two groups. In one, members spent much time establishing common values of which audiobook narrators were best and of the qualities they valued in narrators. In another group, the welfare of a member’s cat became a common value for building community, with other users expressing shared concern in a friendly and often humorous way (e.g. “keep my paws crossed”) over time. This second group built common values around the thread topics they wanted to see established; when two new topical threads were suggested, many users chimed in to express their approval and agreement. Other groups also expressed common information values, but at a lower rate; values played a lesser role in convergence in such groups.

#### **Sites and Technologies**

The Goodreads groups were more apt to use the digital library as an emergent site for information behavior and activities. Group moderators would set up threads and folders (grouped collections of threads) as sites for structured, purposeful discussion and behavior:

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<sup>1</sup> Five Goodreads groups were initially selected, but one of these had to be dropped from the research after initial data collection.

<sup>2</sup> Groups were selected at random from lists of the 91 most active LibraryThing groups and the 93 most recently active Goodreads groups, retrieved from <http://www.librarything.com/groups/active> and <http://www.goodreads.com/group/active>, respectively, on April 30, 2013.

<sup>3</sup> Names and other information that could identify participants were changed to protect group members’ confidentiality.

*"I've set this thread up for people to post their progress reports and score updates, ask questions and just generally chat as we go."*

*"This folder is where we will post threads for the chosen group read."*

LibraryThing users established common sites within groups, but did so less often than Goodreads users, with one exception: a group formally connected to a book publisher featured many emergent sites for discussion of the publisher's books and book series.

Many users of LibraryThing and Goodreads were frequent users of technology to link within to pages for books, authors, and series. They linked beyond the group and used the technology provided to support the creation and continuation of sites for common information behavior:

*"Have you found the ... German Literature group ([link]), yet? ... Also there is a 'Books set in Germany' thread in this group, under [folder name], as well as many other interesting threads."*

Larger Goodreads groups featured more technology use, while technology use in LibraryThing was diffuse across the five groups. The two groups with the least use focused on a specific author and book series known well to members of each group.

### **Social Types**

Users of three LibraryThing groups were much more prone to share social typing of members of the group, book authors, book characters, or other individuals known to the group. Short names and initials were often used:

*"Mel (melanie123) is AJ's daughter. She's in college now and not around as much."*

Sometimes typing referred to members of the group as a whole or to roles:

*"It's not as if we're a select and elevated small group of connoisseur literati anyway."*

*"...does anyone have the power to clean up old threads...?"*

### **Social Norms**

While members and visitors to both sites tended to invoke shared social norms in discussions, common norms were more frequent in Goodreads groups and played a larger role in the communities that emerged. Moderators often set and enforced norms when starting threads as sites for specific activities:

*"Rules for Nominating: ONE nomination per member. There is no need to second or third a nomination. Do not nominate books the group already has read. LINK the title and book you are nominating. If you can not link please include the title and author in your nomination. If there is no author included in your nomination I will not accept it."*

Most messages posted in a thread would follow the norms set out in the first few messages. Group-wide norms were also referenced:

*"Please take time to read the group rules on posting (especially authors)!"*

In other cases, new topics emerged within threads and became normative within the existing thread or through the starting of a new thread, as in this exchange:

Bob: *"...I think it would be awesome to have a 'Best books you've read this year' thread around new year :-)"*

[Other members, including Carla and Marie, express agreement with Bob's suggestion.]

Carla: *"...Oh hell, I'll go ahead [and] start a Best/Worst of 2012 thread! I think we've derailed this a bit... Update: Here it is, guys [link]."*

Marie: *"...And the derailing is the best part of these threads, eventually they will wander back onto the tracks."*

Bob: *"Cool! Cheers Carla :D Looking forward to everyone's chat! :-)"*

### **DISCUSSION AND CONCLUSIONS**

While new communities converged around and within most of the groups studied, the nature of the communities and how they converged was quite different. Three convergent community boundaries emerge from the analysis:

- *Values:* Value-bounded communities form as members establish common information values and concerns around objects of interest and what they want to see in discussions. LibraryThing and Goodreads show moderate structure as boundary objects in such communities, allowing for convergence around common interests and values without enforcing it; occasional divergences are tolerated.
- *Structure:* Structure-bounded communities form as key members—often group moderators—establish common sites for information behavior and activities, with explicit social norms governing their use and purpose. Structural boundaries are more common in Goodreads, which encourages greater use of its own structural features. The digital library has strong structure across the community, with convergence emphasized through the guidance of dedicated, structure-creating members. These communities tend to be larger and are often sub-divided.
- *Social network:* Social network-bounded communities form as members establish common ties between and a social network of connections among themselves. Social typing of other members, authors, and outsiders becomes common, and off-topic discussions are more frequent. Seen more in LibraryThing, such communities are less tied to it as their venue for information behavior and

activities. LibraryThing plays the roles of allowing community members to connect and of serving as a weakly-structured (but still key) boundary object.

Based on these preliminary findings, to better support their social contexts digital libraries like LibraryThing and Goodreads should consider the convergence process and the types of boundaries that help form the resulting communities, incorporating design features that support sharing common values, establishing structure, and forming social ties and connections. Further research on social digital libraries should look at these features in communities and their interrelations with information behavior and activities. To help confirm these preliminary conclusions and implications, this study will continue with a survey of users from the nine groups and follow-up interviews with a selection of users, to further explore and describe the roles LibraryThing and Goodreads play in coherence, translation, and convergence.

At a higher level, social informatics-based studies of a broad range of sociotechnical systems can use the framework incorporated here to examine the coherence, convergence, and translation processes and the boundaries around user communities. In this way, we will learn more about how users find their way—as Marie put it—“back onto the tracks,” be they the pre-existing tracks of established communities or the emergent tracks of a new community.

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#### REFERENCES

Ackerman, M. S. (1994). Providing social interaction in the digital library. In J. L. Shnase, J. L. Leggett, R. K. Furuta, & T. Metcalfe (Eds.), *Digital Libraries '94: Proceedings of the first annual conference on the theory and practice of digital libraries* (pp. 198–200). College Station, TX: Texas A&M University. Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.48.2437&rep=rep1&type=pdf>

Ahuvia, A. (2001). Traditional, interpretive, and reception based content analyses: Improving the ability of content analysis to address issues of pragmatic and theoretical concern. *Social Indicators Research*, 54, 139–172. doi:10.1023/A:1011087813505

Bearman, D. A. (2007). Digital libraries. *Annual Review of Information Science and Technology*, 41, 223–272. doi:10.1002/aris.2007.1440410112

Borgman, C. L. (1999). What are digital libraries? Competing visions. *Information Processing and*

*Management*, 35, 227–243. doi:10.1016/S0306-4573(98)00059-4

Burnett, G., & Jaeger, P. T. (2008). Small worlds, lifeworlds, and information: The ramifications of the information behaviour of social groups in public policy and the public sphere. *Information Research*, 13(2). Retrieved from <http://informationr.net/ir/13-2/paper346.html>

Bush, V. (1945). As we may think. *The Atlantic Monthly*, 176, 101–108.

Charmaz, K. (2006). Coding in grounded theory practice. In *Constructing grounded theory: A practical guide through qualitative analysis* (pp. 42–71). Thousand Oaks, CA: Sage.

Chatman, E. A. (2000). Framing social life in theory and research. *The New Review of Information Behavior Research*, 1(1), 3–17.

Ellis, D. (1992). The physical and cognitive paradigms in information retrieval research. *Journal of Documentation*, 48, 45–64. doi:10.1108/eb026889

Ellis, D., Oldridge, R., & Vasconcelos, A. (2004). Community and virtual community. *Annual Review of Information Science and Technology*, 38, 145–186. doi:10.1002/aris.1440380104

Fox, E. A. (1999). The 5S framework for digital libraries and two case studies: NDLTD and CSTC. In C. Chen (Ed.), *Information technology and global library development: Proceedings of NIT '99*. West Newton, MA: Microuse Information. Retrieved from <http://web.archive.org/web/20061026125725/http://www.ndltd.org/pubs/nit99fox.doc>

Frumkin, J. (2005). The Wiki and the digital library. *OCLC Systems & Services*, 21, 18–22. doi:10.1108/10650750510578109

Gazan, R. (2008). Social annotations in digital library collections. *D-Lib Magazine*, 14(11/12). doi:10.1045/november2008-gazan

Jaeger, P. T., & Burnett, G. (2010). *Information worlds: Behavior, technology, and social context in the age of the Internet*. New York, NY: Routledge.

Kahn, R. E., & Cerf, V. G. (1988). *The Digital Library Project: Volume 1: The world of knowbots*. Reston, VA: Corporation for National Research Initiatives. doi:4263537/2091

Kling, R. (1999). What is social informatics and why does it matter? *D-Lib Magazine*, 5(1). doi:10.1045/january99-kling

Krippendorff, K. (2004). Conceptual foundation. In *Content analysis: An introduction to its methodology* (2nd ed., pp. 18–43). Thousand Oaks, CA: Sage.

Krowne, A. (2003). Building a digital library the commons-based peer production way. *D-Lib Magazine*, 9(10). doi:10.1045/october2003-krowne

- Levy, D. M., & Marshall, C. C. (1995). Going digital: A look at assumptions underlying digital libraries. *Communications of the ACM*, 38(4), 77–84. doi:10.1145/205323.205346
- Lynch, C. (2005). Where do we go from here? The next decade for digital libraries. *D-Lib Magazine*, 11(7/8). doi:10.1045/july2005-lynch
- Marchionini, G. (1999). Augmenting library services: Towards the sharium. In K. Tabata & S. Sugimoto (Eds.), *Proceedings of International Symposium on Digital Libraries 1999* (pp. 40–47). Tuskuba, Japan: University of Library and Information Science. Retrieved from <http://ils.unc.edu/~march/sharium/ISDL.pdf>
- Marchionini, G., Plaisant, C., & Komlodi, A. (2003). The people in digital libraries: Multifaceted approaches to assessing needs and impact. In A. P. Bishop, N. A. Van House, & B. P. Buttenfield (Eds.), *Digital library use: Social practice in design and evaluation* (pp. 119–160). Cambridge, MA: MIT Press.
- Marshall, C. C., & Bly, S. (2004). Sharing encountered information: Digital libraries get a social life. In H. Chen, H. D. Wactlar, C. Chen, E.-P. Lim, & M. G. Christel (Eds.), *Proceedings of the 4th ACM/IEEE Joint Conference on Digital Libraries* (pp. 218–227). New York, NY: ACM. doi:10.1145/996350.996401
- Neuhold, E., Niederée, C., & Stewart, A. (2003). Personalization in digital libraries: An extended view. In T. M. T. Sembok, H. B. Zaman, H. Chen, S. R. Urs, & S. H. Myaeng (Eds.), *Lecture Notes on Computer Science: Vol. 2911. Digital Libraries: Technology and Management of Indigenous Knowledge for Global Access* (pp. 1–16). Berlin, Germany: Springer-Verlag. doi:10.1007/b94517
- Pomerantz, J., & Marchionini, G. (2007). The digital library as place. *Journal of Documentation*, 63, 505–533. doi:10.1108/00220410710758995
- Raber, D. (2003). *The problem of information: An introduction to information science*. Lanham, MD: Scarecrow Press.
- Sawyer, S., & Eschenfelder, K. R. (2002). Social informatics: Perspectives, examples, and trends. *Annual Review of Information Science and Technology*, 36, 427–465. doi:10.1002/aris.1440360111
- Star, S. L. (1989). The structure of ill-structured solutions: Boundary objects and heterogeneous distributed problem solving. In L. Gasser & M. N. Huhns (Eds.), *Distributed artificial intelligence* (Vol. 2, pp. 37–54). San Mateo, CA: Morgan Kaufmann.
- Star, S. L., & Griesemer, J. R. (1989). Institutional ecology, ‘translations’ and boundary objects: Amateurs and professionals in Berkeley’s Museum of Vertebrate Zoology, 1907–39. *Social Studies of Science*, 19, 387–420. doi:10.1177/030631289019003001
- Strauss, A. (1978). A social world perspective. In N. K. Denzin (Ed.), *Studies in symbolic interaction: An annual compilation of research* (Vol. 1, pp. 119–128). Greenwich, CT: JAI Press.
- Talja, S., Tuominen, K., & Savolainen, R. (2005). “Isms” in information science: Constructivism, collectivism and constructionism. *Journal of Documentation*, 61, 79–101. doi:10.1108/00220410510578023
- Tuominen, K., & Savolainen, R. (1997). A social constructionist approach to the study of information use as discursive action. In P. Vakkari, R. Savolainen, & B. Dervin (Eds.), *Information seeking in context: Proceedings of an international conference on research in information needs, seeking and use in different contexts* (pp. 81–96). Los Angeles, CA: Taylor Graham. Retrieved from [http://informationr.net/isic/ISIC1996/96\\_Tuominen.pdf](http://informationr.net/isic/ISIC1996/96_Tuominen.pdf)
- Tuominen, K., Talja, S., & Savolainen, R. (2003). Multiperspective digital libraries: The implications of constructionism for the development of digital libraries. *Journal of the American Society for Information Science and Technology*, 54, 561–569. doi:10.1002/asi.10243
- Van House, N. A. (2003). Digital libraries and collaborative knowledge construction. In A. P. Bishop, N. A. Van House, & B. P. Buttenfield (Eds.), *Digital library use: Social practice in design and evaluation* (pp. 271–295). Cambridge, MA: MIT Press.
- Yin, R. K. (2003). Designing case studies. In *Case study research: Design and methods* (3rd ed., pp. 19–56). Thousand Oaks, CA: Sage.