Social Metadata for Libraries, Archives, and Museums

Part 3: Recommendations and Readings

Karen Smith-Yoshimura
OCLC Research

Rose Holley
National Library of Australia

OCLC®

Social Metadata for Libraries, Archives, and Museums. Part 3: Recommendations and Readings
Karen Smith-Yoshimura and Rose Holley, for OCLC Research

Suggested citation:
Smith-Yoshimura, Karen and Rose Holley. 2012. *Social Metadata for Libraries, Archives, and
Museums. Part 3: Recommendations and Readings*. Dublin, Ohio: OCLC Research.
http://www.oclc.org/research/publications/library/2012/2012-01.pdf.

Contents

Tables

Acknowledgements

Introduction

The cultural heritage organizations in the RLG Partnership were eager to take advantage of user contributions to enrich the descriptive metadata created by libraries, archives, and museums (LAMs)[1] and expand their reach into user communities. Enriching LAM metadata improves the quality and relevancy of users' search results and helps people to understand and to evaluate the content better. User contributions can also augment and provide additional context to LAM resources. In 2009-2010, a 21-member RLG Partner Social Metadata Working Group from five countries investigated how to take full advantage of the array of potential user contributions that would improve and deepen their sites' user experiences. The working group considered issues related to assessment, content, policies, technology, and vocabularies.

In our first report, *Social Metadata for Libraries, Archives, and Museums, Part 1: Site Reviews* (Smith-Yoshimura and Shein 2011b), we synthesized our reviews of 76 sites that support social media features and that were most relevant to libraries, archives, and museums. Our second report, *Social Metadata for Libraries, Archives, and Museums, Part 2: Survey Analysis* (Smith-Yoshimura, et al. 2011), summarized our analysis of survey responses from 42 site managers. The survey focused on the motivations for creating a site, moderation policies, staffing and site management, technologies used, and criteria for assessing success. In addition, the working group conducted interviews and did extensive reading of the professional literature, represented in the annotated "What did we read?" section of this report. From this research and our discussions, we derived the following recommendations for LAMs considering or implementing social media features to attract user-generated content.

Social media tools are needed to generate user-contributed content, which includes "social metadata"— information from users that helps people find, understand, or evaluate a site's content. Social media and social metadata overlap; you cannot have social metadata without the social media functions that create it. Your objectives will determine which of the following recommendations apply. What's needed to support a Facebook presence differs

---

[1] Some countries use the term "GLAM" for galleries, libraries, archives, and museums.

from what you'll need to integrate social metadata and other user-generated content into your own site.

We believe it is riskier to do *nothing* and become irrelevant to your user communities than to *start using* social media features. Given the wide variety of cultural heritage organizations, and the range of objectives and resources available, there is no one recommendation that would fit all types of institutions. Factors that everyone should consider:

- What are your objectives?

- Are there existing sites to which you could contribute content that would meet those objectives?

- What social media features should you add to your own site to meet these objectives?

- What metrics do you need to gather to determine whether you are meeting those objectives?

- What policies do you need to develop?

- What training is needed for your staff to use the social media features you'll be using?

- How much time and resources can you commit to this effort?

If you are adding social media features to an existing site rather than using third-party hosted sites, make sure you add them where they are useful and can help your users or community accomplish something. We are approaching the end of the "wild west" of Web 2.0 when LAMs simply experimented with new features—throwing a lot of tools and services at the virtual wall to see what might stick. Now that we have some experience and data, we are collectively making data-driven decisions about launching, expanding, or ending our social media experiments. We are learning where users can effectively contribute content that LAMs want to receive.

Social engagement has always been part of the activities of libraries, archives, and museums. Social media provides a means to expand on our usual methods of engagement with—and well beyond—our traditional core communities. As Rose Holley, manager of the National Library of Australia's Trove service, noted in her November 2009 presentation on crowdsourcing at the Pacific Rim Digital Library Alliance Annual Meeting in Auckland:

In the 'pre- digital library days' a user did not expect to go to a library and have a simple information transaction. They wanted the information but they also wanted to discuss with the librarian (or any other user) what they thought of the latest novel they had just read, the results of their research, what else they know about steam locomotives that was not in the book they just read, the error they just found in your card catalogue. On the books return desk, they tried to sneak back text books that had pencil—or worse, pen or highlighter—underlinings and annotations, without the librarian noticing. If they were noticed, they would be fined—or worse, banned from borrowing books again! They formally wrote the librarian letters of complaint or compliment about their services and the librarian replied on letter headed paper. When we first started delivering digital resources all these social interactions were taken away from users and they simply got an information transaction by downloading content. It has taken us a while to realise that users still want more than a simple information transaction and they want the same and more social interactions than they had in the 'pre-digital library' days. In our digital library world they want to: review books, share information, add value to our data by adding their own content, add comments and annotations and 'digital post its' to e-books, correct our data errors, and converse with other users. And now they are telling us they can do even more, they can organise themselves to work together to achieve big goals for libraries and make our information even more accessible, accurate and interesting. Why are we not snapping up this great offer immediately?

To move beyond the project and experimental stage, LAM staff need to know how to incorporate the user-generated content generated by social media within their daily workflows. Our recommendations for doing that follow below. We hope that our recommendations will enable cultural heritage institutions to leverage users' enthusiasm while enhancing their own resource descriptions and extending their reach to new communities.

Recommendations

1. Establish clear objectives for using social media.

There is often a tension between the organization's desire to have "one voice" in the media, with social media as an important marketing tool, and information specialists' drive to communicate—in both directions with multiple voices—in various channels. Organizations will want to distinguish between using social media to create community around the organization (the province of public relations offices) and using social media to create community around the collections. Your objectives will determine both which social media features you use and how you use them. Publicity and participation are at different ends of the spectrum. Although it is important to develop the patron base for the institution through good use of social media publicity tools, it is equally important to give those patrons a voice—and therefore a sense of ownership—in the materials and content curated by the institution.

2. Motivate your users and leverage their enthusiasm to contribute!

We encountered a number of well-designed sites with engaging topics and goals that did not have many user contributions. Include plans for how to attract and facilitate user contributions in your site design. The literature and our interviews with site managers have common themes on why people contribute to sites supporting social media features:

- They're enthusiasts, driven by a passion to share with other enthusiasts.

- They find the activity is interesting and fun.

- They feel they are contributing to a cultural heritage site is a worthy cause; they are contributing to the "greater good."

- They want to help achieve a challenging goal. Just ask for their help.

- They feel part of a community.

- They have a selfish reason that is satisfied by the site.

Rose Holley offers tips for successful crowdsourcing in the March/April 2010 issue of *D-Lib Magazine* that are applicable to attracting social metadata as well:

- Have a clear goal on your home page. If you have a temporary goal, include the start and end dates.

- Make the overall environment easy to use, intuitive, quick, and reliable.

- Make the activity easy and fun.

- Take advantage of topical events if applicable.

- Let contributors identify themselves if they want acknowledgement.

- If applicable, acknowledge high-volume contributors with ranking tables.

- Provide a communication environment to build and nurture a community.

Recruit a "community manager" to set the tone of the site and to actively encourage and support users, especially during startup.

3. Look at other sites to get ideas before starting.

Our first report provides an overview of 76 sites, with more detailed reviews of 24 of them. Use the "At a Glance: Sites that Support Social Metadata" spreadsheet (Smith-Yoshimura and Shein 2011a) to identify the type of organizations most like your own and the features and contributions their sites support that you are considering. Take advantage of the work done by others, either emulating what seems to be working well or by avoiding what doesn't work well.

4. Go ahead! Invite user contributions without worrying about spam or abuse.

Don't let the fear of inappropriate user contributions paralyze you. Social metadata site managers report that they have experienced little or no spam or abuse. Spam can be reduced by implementing a CAPTCHA before users can add content or comments. The risk of liability that could lead to legal problems such as exposure to libel suits, privacy invasion, or copyright infractions is small, but be prepared:

- Articulate why you are asking for user contributions, the type of contributions sought, and what you intend to do with the user-contributed content.

- Provide guidelines for what types of content are, and are not, considered appropriate.

- Require users to register a user name that's displayed before they can add content. Making users and their activity visible is a deterrent to bad behavior. Users also like to be recognized for their contributions.

- Include an easily-accessible link to your take-down policy on your site that warns users that any content deemed inappropriate will be removed, without notice.

- Count on your core user base or community managers to help identify spam or other problematic content.

- Monitor user contributions.

If you have multiple administrators, consider preparing an "Abuse Grid" with three columns: Inappropriate behavior; description of the inappropriate behavior; action to take (warnings, take-down, blocking user if first or second attempt, etc.) (advice taken from Johnston 2009). With these precautions in place, there will be less need for moderation. Decide how often to review contributed content and cut back later on if less is deemed sufficient.

5. Adapt existing policies or create new ones for social metadata.

In our second report analyzing the results of our social metadata survey, we included examples of policies from social metadata site managers, either those that extend existing institutional policies, new ones, or a combination, with links. When creating original policies, align them with those of your parent institution and consult your institution's legal counsel if appropriate. Examine the policies of institutions most like your own to determine what types you'll want to adapt. Common themes include:

- Acceptable community behavior and content.

- Guidelines on repurposing and modifying user content, including the right to edit or remove user content or incorporate it into one's own site.

- Protecting personal information and privacy.

- Ownership of user-contributed content.

- Wording to indemnify your institution if content is used inappropriately or conflicts with copyright.

- Willingness of institutions to take down content if the community points out that it infringes on another's copyright (for example, a user demonstrates ownership of a work previously thought to be orphaned).

Wherever possible, make your content and users' contributions available under a Creative Commons License.

6. Prepare your staff.

Identify the staff who will be engaging with the community using social media, either on your site and/or on third-party hosted sites. Explain the context for your use of social media features and how you hope to incorporate them into your services. Address any gaps in your aspirations and staff skills. Staff need to want to participate, and may be more eager to participate if they have had some training with both the tools and policies. Confident and trained staff will bring better results. Two sites the working group referred to:

- Betha Gutsche's "Competencies for Social Networking in Libraries," webjunction.org/competencies/-/articles/content/61740835, a list of skills, knowledge, and attitudes that will help library staff achieve competency in social networking.

- "The 23 Things" you can do with Web 2.0 tools. There are numerous versions of these "23 Things" that include learning about using blogs, wikis, Flickr, YouTube, Facebook or MySpace, Twitter, etc. The idea originated from Helen Blowers, Public Services Technology Director for the Public Library of Charlotte & Mecklenburg County, who developed a 23-Things list to encourage staff to experiment with and learn about the new and emerging technologies on the Internet. She compiled a list of those who are promoting "Learning 2.0" at plcmcl2-about.blogspot.com/2006/05/list-of-libraries-others-doing-learning.html. Some lists are specifically adapted for museums (23dingenvoormusea.nl/over/) and others adapted for archives (23thingsforarchivists.wordpress.com/about/). The "23 Things" is published under Creative Commons. You can do the course on your own or in small groups of colleagues, where you can share your experiences and help each other.

Establish guidelines for staff participation—whether they are interacting on a third-party hosted site such as Flickr or Facebook or your own site—regarding when it is appropriate to post as a representative of your organization, as a professional, or as an individual. There are several cultural heritage organizations that have published their policies on staff usage in Chris Boudreaux's Social Media Governance Policy Database at socialmediagovernance.com/policies.php?f=0. If you establish your own guidelines, consider sharing them with others in this database.

7. Decide on what metrics you need to measure success.

Measures are needed to justify what you're doing and the resources invested. They also are a means to demonstrate the value of the investment and to help you fine tune the site.

Creating measures for social engagement is challenging. Analytic tools are readily available to measure "quantity" (number of visitors, pages viewed, downloads, etc.) but quality is subjective. Your measures will depend on your objectives and the target audience. Most of the site managers we surveyed thought their sites were successful, even if user contributions were few. A number of sites have very broad outreach, such as those hosted by national libraries. Sites dedicated to a local community will have a smaller audience and thus fewer contributions, and may be satisfied with just a few high-quality contributions. Success can be attributed to a well-planned strategy, garnering sufficient user interest, playing well in a third-party culture, and having institutional buy-in. (See Table 1 for sample goals and metrics).

Know what it is you need to measure from the beginning of your site design, then build or acquire the tools to get the metrics that would demonstrate that it's working the way you want. Be aware that if you are building a new community, it will take time.

Table 1. Sample goals and metrics

Goal	Quantitative Measure	Subjective Measure
Enthusiasts correct errors in existing metadata	Number of corrections made; number of people correcting; number of corrections adopted out of total number submitted.	Corrections validated as correct and incorporated, improving quality of the metadata.
Expose collections to wider audience	Number of items viewed; number of unique visitors; geographic distribution; number of comments; number of links coming in through other social networking sites.	Visitors are from new geographic areas, implying broader exposure. More citations in the relevant literature; increase in tweets and blogs linking to items on your site; feedback from new users.
Get missing attributions, information in existing metadata	Number of items for which missing information was supplied.	More complete metadata descriptions providing better understanding and context of the resource.
Engage existing or new communities	Number of unique visitors; geographic distribution; number of new contributions.	Does the site have broader appeal within new communities? How has "word of mouth" use expanded? Are more blogs or tweets linking to your site?

8. Consider the benefits and trade-offs in using third-party hosted social media sites.

Small organizations with limited resources can easily leverage third party-hosted sites such as Flickr, Facebook, Twitter, and blogs to both engage their communities and expose their collections and services to a greater audience (see Cyndi Shein's "Use of Third-Party Sites and Blogs by Libraries, Archives, and Museums" in Smith-Yoshimura and Shein 2011b, 37-68). Large organizations can take advantage of the increased visibility third-party sites offer even if they are hosting their own sites, as social media sites are often environments where their own user communities already interact with each other. For example, the National Library of New Zealand has just *500* images on the Flickr Commons, but in two years they received 500,000 views, averaging 1,000 views per day. This is the same number of views all *100,000* digital images on the Library's own site received. As many cultural heritage organizations are already using third-party hosted social media sites, look at how organizations similar to your own are using them to see what works and what does not.

There are benefits and trade-offs to consider when using third-party hosted social media sites. Third-party sites provide obvious value but at a cost in terms of set functionality and long-term reliability. Business models change and acquisitions, mergers, and bankruptcies occur over time. (See t~~T~~able 2 for a summary.)

Table 2. Trade-offs in using third-party hosted social media sites

Pros	Cons
• Increase visibility of your collections on sites where your communities are already active. • Aggregate your content with content of other organizations. Provides economies of scale. • Take advantage of social media features already offered. • Users are already familiar with third-party software. • Implement quickly. • Incur little to no programming or software development costs.	• Relying on a third-party for long-term access to user-generated content can be risky. • Cannot control how your resources are presented. • Host site's functionality and policies may change without notice. If you stopped using it, will you still have access to the user-contributed content? • Need to determine how to transfer user-generated content to your own institution's website or catalog. • Be careful about copyright and privacy concerns regarding the content you expose.

Since the virtual habits of individuals in your user community vary, consider employing more than one social media tool to reach your audiences. For example, if you post a new collection of digital images to Flickr, announce it through your institution's blog, Twitter, and/or Facebook accounts, providing links to the collection on Flickr. Use a URL shortening service (like bit.ly) or Google Analytics to track which announcements brought the most traffic to your social media content so that you can better target your future messages.

9. Consider using and re-contributing open-source software.

All site managers responding to our survey thought they had made the right choice in selecting open-source software and most would recommend their choices to others. Content management and social media features were the prime uses of open-source software.

Once you have built your site using open-source software, contribute your version back to the community. Do not let your own suite of customizations deter you. Even if they are not perfect for someone else, they provide a starting point for another organization with similar, if not identical, needs. As one respondent noted, "we want to share stuff it cost us a lot to do to help others who don't have such good funding/developers."

10. Conduct usability testing early and often, *before* as well as after launch.

Most sites in our survey conducted usability testing after launch. We recommend instead that you understand how your targeted audiences will be encouraged or discouraged from contributing content during your development stage. It's hard enough to motivate users to contribute, and any perceived barriers reduce the likelihood that they will. Usability testing before launch is worth the investment. Such testing need not be extensive; you can learn a lot from informally watching a few people use the site. Consider remote usability testing tools to get early feedback from your target audience rather than just "pull in people from the street." Representatives of your target audience can help you define your requirements from the very beginning as well as identify enhancements to add after launch.

11. Add new content frequently.

Adding new content frequently shows users that the site and the community are active, and helps keep the community involved. Show what content has been added and when. Support RSS feeds to let your community know what that new content is. Prefer more frequent updates over adding an impressive number of items at one time. If new content is frequently added by your community, then there will be less need for you to add new content to

demonstrate that the site is active. Attract attention by highlighting the most popular content and the most recent user-contributions or comments. Include thumbnail images with text where possible.

12. Display and index user-generated content.

We were surprised that half of the site managers who responded to our survey did not display the tags that users contributed, and more than a third did not index the content provided by their users. If you are going to support any type of social metadata—tags, comments, reviews, captions accompanying images, audio or videos—display *and* index all of it. Note that you can index user-contributed text without having to integrate it into your own content. You can provide an option to search just user-generated content, just the LAM content, or all content.

13. Consider how to integrate user-generated content back into your catalogs or descriptive metadata.

We have seen only a few examples of cultural heritage organizations incorporating user-generated content within their own descriptive metadata. A separate "layer" for user-generated content that sits on top (or alongside) of LAM content can present an integrated view even if the user contributions are kept separate from your own descriptions. The Powerhouse Museum is an example of a site that incorporates user tags into its own catalog. The Library of Congress has used the comments on its Flickr Commons photostream to augment or correct its catalog records, citing the Flickr Commons project as the source of information that was changed or added (~~Library of Congress~~Springer et al. 2008). The University of Michigan received a CLIR-sponsored, Mellon-funded "Cataloging Hidden Special Collections and Archives" grant to expose its collection of digitized Islamic manuscripts that have had only the most minimal cataloging—often just a title or first words of the manuscript and an attribution. (For more information about the project, see University of Michigan.) The digitized manuscripts with the minimal metadata are added to a CommentPress website, Islamic Manuscripts at Michigan (lib.umich.edu/islamic/), where scholars around the world can comment and discuss them. A trained cataloger reviews the comments to augment the existing metadata.

14. Consider using social networking features to build a community.

Social networking features such as seeing who else is online, contacting other users, looking at user profiles, and writing or reading recommendations from other users are not common on LAM sites. You can create user communities within Flickr or Facebook to foster connections rather than attempting to build your own within your local system infrastructure. We see user-to-user interactions derived from user-generated content as a means to strengthen a

sense of community. We infer that these features are under-utilized on sites where there are not many frequent visitors. The benefits of adopting user-interaction features depend on the objectives of your site. They could become more useful as content and usage grow.

15. Have a persistent URL for your site and items and make them visible.

Be sure that your site can always be found! Give both your site and individual items persistent URLs, and provide automatic redirects if the site moves. Users contribute content under the implicit guarantee that their content will continue to be visible to others, so plan to support that continuity. Persistent URLs for items make it easy for users to share or embed the ones that they have commented on or tweeted about. These persistent URLs represent each item's unique identifier on the Web; offer advice on how to cite objects or at least make all URLs visible. Social networks form around "social objects."

16. Have a content migration plan.

Expect that you will need to migrate both your content and user-contributed content to a new platform or content management system sometime in the future. Test that you can easily export the content you have in your system, or in a third-party hosted site. Determine how you will deal with digital items that you want to weed from your online collection but which users may have linked to, or made comments on.

17. Get your content indexed by Google.

The 2005 OCLC report to the OCLC membership, *Perceptions of Libraries and Information Resources*, compiled from 3,300 responses from information consumers in six countries, noted that 89% of college students in all regions began their search for information on a particular topic with a search engine (De Rosa 2005, 1-17). Google was the search engine most frequently used. Three-fourths of all traffic to the National Library of Australia's Trove site comes from Google. To expose both your content and user-generated content to the widest audience possible, create site maps that can be indexed by Google.

18. Respond quickly to feedback.

Open channels of communication with your users. If your site is successful in engaging your user community, you will likely also receive feedback on the site itself. Monitor that feedback and respond in a timely way to meet user expectations. If you cannot make modifications to the site soon after they are requested, you risk losing continued engagement with your community. For major changes, announce them at least six weeks in advance and offer an opt-out feature if possible.

References

De Rosa, Cathy. 2005. *Perceptions of Libraries and Information Resources: A Report to the OCLC Membership*. Dublin, Ohio: OCLC Online Computer Library Center. oclc.org/us/en/reports/pdfs/Percept_all.pdf.

Holley, Rose. 2009. "Crowdsourcing and Social Engagement: Potential, Power and Freedom for Libraries and Users." Paper presented at the Pacific Rim Digital Library Alliance Annual Meeting. Auckland, New Zealand. 18-20 November. http://www.prdla.org/2009/10/crowdsourcing-and-social-engagement.

Holley, Rose. 2010. Crowdsourcing: How and Why Should Libraries do it? *D-Lib Magazine* 16 (3/4). http://www.dlib.org/dlib/march10/holley/03holley.html.

Johnston, Courtney. 2009. "Designing and Sustaining Creative Communities – Notes from the Webstock Workshop. LibraryTechNZ (blog). 8 March (4:52 p.m.). http://librarytechnz.natlib.govt.nz/2009/03/designing-sustaining-creative.html.

~~Library of Congress, Michelle~~ Springer, Michelle, Beth Dulabahn, Phil Michel, Barbara Natanson, David W. Reser, Nicole B. Ellison, Helena Zinkham, and David Woodward. 2008. *For the Common Good: The Library of Congress Flickr Pilot Project*. Washington, D.C.: Library of Congress, Prints and Photographs Division. http://purl.access.gpo.gov/GPO/LPS108390.

Smith-Yoshimura, Karen, Carol Jean Godby, Helice Koffler, Ken Varnum and Elizabeth Yakel. 2011. *Social Metadata for Libraries, Archives and Museums. Part 2: Survey Analysis*. Dublin, Ohio: OCLC Research. http://www.oclc.org/research/publications/library/2011/2011-03.pdf.

Smith-Yoshimura, Karen and Cyndi Shein. 2011a. "At a Glance: Sites that Support Social Metadata." Data supplement to Smith-Yoshimura and Shein 2011b. Dublin, Ohio: OCLC Research. http://www.oclc.org/research/publications/library/2011/2011-02.xlsx.

———. 2011b. *Social Metadata for Libraries, Archives and Museums. Part 1: Site Reviews*. Dublin, Ohio: OCLC Research. http://www.oclc.org/research/publications/library/2011/2011-02.pdf.

University of Michigan. "Collaboration in Cataloging: Islamic Manuscripts at Michigan." http://www.lib.umich.edu/collaboration-cataloging-islamic-manuscripts-michigan.

Issues for Future Research

The RLG Partners Social Metadata Working Group started out with a list of questions we wanted to address. Despite the site reviews, surveys, literature, interviews, and discussion, there are still issues that are open for future research.

1. What has been the impact of sharing aggregated tags across institutions: consortium tags, Steve tags, edu tags, LibraryThing tags?

2. Is there other user-generated content that can be shared across sites?

3. Are there reasons for institutions to be reluctant to add user-generated content to their own content? Note: None of the institutions that contribute to the Trove (trove.nla.gov.au/) site have wanted to add the user-generated content to their own sites yet.

4. How are cultural heritage organizations integrating social metadata into formal taxonomies?

5. What sort of social metadata metrics would be useful to share?

6. What are the concerns about long-term maintenance or relevance of social metadata?

7. What are the issues around data ownership such as attribution? What are the implications of releasing metadata to external systems?

8. What are the implications for expertise if contributions are dispersed? How do we assess the credibility of the source? Do we provide some sort of ranking, and if so, how?

9. How do we gauge the authenticity of contributors and their contributions?

10. Is there a need for mapping or linking among social metadata in different languages and scripts?

What Did We Read?

Rose Holley

The Social Metadata Working Group started in January 2009 by sharing a short reading list of articles via Basecamp, a web-based project management tool. We agreed that all members of the group should share any interesting resources they found on relevant topics as our research progressed. The topics included social engagement, social media and networking, folksonomies or tagging, open data, new initiatives from organizations that involved users interacting with each other or the organization, new websites and services, and usage statistics. The bibliography is not totally focused on social metadata; we included items that inspired the group or that we felt were relevant to libraries and archives even if aimed at other markets or readers. For this reason, the abstracts summarize the relevance of the article to our social metadata research, if this is not immediately obvious.

As our research progressed, members started to e-mail each other either directly or via Basecamp links to items of interest. A high proportion of these links were to blog posts. Blog posts were very useful because they had the ability to report new items of interest in a short and timely way, informing us about new social metadata related activities as they happened. Several of the blog posts contained embedded presentation slides, videos or audios if they were referring to a conference event, news item or presentation. Also some blog posts attracted many members of the public or the profession to comment and it was interesting to read their opinions. These tended to be on more popular posts like Wikipedia or Google related items, though the ArchivesNext blog also got significant feedback on tagging and crowdsourcing from archivists. Journal articles tended to summarize research or activities that had happened at least a year previously (because of the delay in writing up findings and publishing them), and only two books were recommended for reading. Almost all of the items we looked at were freely available online.

 When the time came to write the final report and prepare the bibliography, the group felt that perhaps blog posts should not be included. However, everything we had read was

compiled into a list for review and then it became apparent that blog posts dominated and held value. We thus decided to include them in this bibliography.

The bibliography contains relevant resources published up until 1 July 2010. The working group looked at 185 items in total between January 2009 and June 2010 that held relevance for our social metadata research. For convenience, we categorized this long list by these seven topics:

- New initiatives

- Open data

- Social engagement

- Social media

- Tagging

- Training

- Usage statistics

New Initiatives

ABC (Australian Broadcasting Commission). 2010. "US Library of Congress to Archive Twitter." *ABC News Australia*. 15 April (posted 07:06:00). http://www.abc.net.au/news/stories/2010/04/15/2873163.htm.

- Web Page: The US Library of Congress says it plans to digitally archive all of the billions of messages known as "tweets" sent on Twitter since its launch four years ago.

ABC (Australian Broadcasting Commission). 2010. "Rose Holley Talks about Trove in the Australian News. April 2010." YouTube video, 2:05, from an ABC News Australia television broadcast, posted by "Grapefruit2601," 25 July 2010, http://www.youtube.com/watch?v=c5Xroj_R_60.

- TV Broadcast: Short news item on Trove from the National Library of Australia. Trove offers access to content and user engagement features.

Ashting, Jim. 2006. "International Report—Ground Surveys: Past and Present—Our Global Correspondent Reports on the Domesday Book Online and The Geograph British Isles, which will Archive Photos of Every Square Kilometer of the U.K. and Ireland." *Information Today*. 23 (9): 27.

- Journal Article: Provides information on some online information resources related to Great Britain. Domesday Online provides a unique insight into the history of England based on the "Domesday Book," where results of a national survey ordered by William the Conqueror, the first Norman king of England, were recorded. Users can search the site for people and places with English translations of the original Latin text. Geograph British Isles is an online community project which offers representative photos of the entire Great Britain and the Republic of Ireland, which the working group reviewed in its first report. The European Digital Library is an attempt to digitize the collections of Europe's National Libraries.

Australian Business Report and Times. 2010. "Trove the Literary Google Search of Australia—Search Engines." *Australian Business Times*. 30 April. http://www.australianbusinesstimes.com/australian/trove-the-literary-google-search-of-australia-search-engines/.

- Magazine Article: Trove is a new discovery experience focused on Australia and Australians. It supplements what search engines provide with reliable information from Australia's memory institutions. It is another one of the sites the working group reviewed in its first report.

Australian Government 2.0 Taskforce. 2010. "Government 2.0 Taskforce." http://gov2.net.au/.

- Web Page: The official website for the Australian Government 2.0 Taskforce, it includes a blog and the task force's final reports.

Berger, Sherri. 2010. "Creating a Web 2.0 'Event' for Online Outreach." Western Roundup: A Joint Conference of the Conference of Inter-Mountain Archivists, Northwest Archivists, Society of California Archivists, and Society of Rocky Mountain Archivists. Session 2: Web 2.0 and Archives. Seattle, Washington. 9 April. http://northwestarchivistsinc.wildapricot.org/Presentations.

- Presentation: Berger summarized her experiences in using Twitter and Facebook to promote a new collection of John Muir's papers and reach out to new audiences.

Blithe. 2009. "Newspapers in Pyjamas." *Two Tree Hill* (blog). 22 June.
http://twotreehill.blogspot.com/2009/06/newspapers-in-pyjamas.html.

- Blog Post: A user describes reading historical newspapers in bed in pajamas, much like reading today's newspaper. Refers to the Australian Historical Newspapers service, another site the working group reviewed in its first report.

Boyd, Morag. 2006. "Web 2.0 and the Opening of WorldCat.org." *TechKnow* 12 (4): 1-4.
http://www.library.kent.edu/files/TechKNOW_December_2006.pdf.

- Journal Article: Describes the web 2.0 features for users in the newly released WorldCat.org, including FRBR-like clustering, freeing of data and deep linking. This is another site the working group reviewed in its first report.

Butler, Philip, Rachel Cowgill, Celia Duffy, Richard J. Hand, and Deborah Price. 2006. "Multi-disciplinary Perspectives on the British Library's Archival Sound Recordings Project." *Performance Research*: *A Journal of the Performing Arts*. 11 (4): 117-126. doi:10.1080/13528160701363598.

- Journal Article: The authors give an overview of the Archival Sound Recordings project and reflect on ways it may inform and enhance approaches to research and teaching in the performing and visual arts; the effects of enhanced accessibility to this collection; the consequences of digital resources on education on all levels; and how to prepare future generations. This is another site the working group reviewed in its first report.

Campbell, Debbie. 2002. "Federating access to digital objects: PictureAustralia." Program: electronic library and information systems. 36 (3): 182-187. doi:10.1108/00330330210440476.

- Conference Paper: This article discusses the successful Australian service, PictureAustralia, a collaboration which utilizes the Web as a delivery mechanism for enhanced access to unique cultural materials. PictureAustralia has been a very useful platform for exploring the benefits and disadvantages of federated searching with an emphasis on interoperability and it continues to provide opportunities to explore new protocols in the future. This is another site the working group reviewed in its first report.

Carson, Lucy. 2007. "Re-Picturing Australia through the Looking Glass." *Gateways* 90(December). http://www.nla.gov.au/pub/gateways/issues/90/story05.html.

- Journal Article: Calls for the public to 'mash-up' significant public-domain images into new artworks by combining and editing the historical images from Picture Australia and incorporating their own illustrations and photographs to create innovative montages. This is to be done via Flickr with end products going back to the National Library of Australia.

Cathro, Warwick and Susan Collier. 2009. "Developing Trove: The Policy and Technical Challenges." In*: VALA2010 Conference: Proceedings*. Victoria, Australia. 10 February. http://www.vala.org.au/vala2010/papers2010/VALA2010_127_Cathro_Final.pdf.

- Conference Paper: Describes the development of "Trove" from the National Library of Australia. Trove improves the discovery experience for the Australian public and researchers by aggregating content and encouraging users to engage with the content. Another site the working group reviewed in its first report.

Coughlan, Sean. 2009. "Museum lovers' Social Networking." UK: Education in *BBC News*. Last updated 23 February. http://news.bbc.co.uk/2/hi/uk_news/education/7902323.stm.

- Web Page: A new website for British museums has been launched called the National Museums Online Learning Project. This site brings together resources from different institutions and encourages users to "scrapbook" those resources together and create virtual learning communities around them.

Gow, Virginia, Lewis Brown, Courtney Johnston, Andy Neale, Gordon Paynter, and Fiona Rigby.2009. "Making New Zealand Content Easier to Find, Share and Use." Edited by J. Trant and D. Bearman. In: *Museums and the Web 2009*: *Proceedings*. Toronto: Archives & Museum Informatics. 31 March. http://www.archimuse.com/mw2009/papers/gow/gow.html.

- Conference Paper: Describes the Digital New Zealand service including three innovative tools: Memory Maker, for making short videos using researched New Zealand material; a customizable search builder, for gathering data; and an open API for connecting DigitalNZ metadata with other data sources. This is yet another site the working group reviewed in its first report.

Guicherd, Timothée. 2010. "French library BNF signs a deal with Wikimedia Foundation." *Inside LabforCulture* (blog). LabforCulture.org. 9 April (09:56). http://www.labforculture.org/en/users/site-users/site-members/site-committors/site-moderators/site-administrators/timoth%C3%A9e-guicherd/51498/66822.

- Blog Post: The BNF has signed a deal with Wikimedia and made 1,400 books available to Wikimedia (via wikisource project) so that volunteers can correct the text. Wikisource started in 2003 with the aim to digitize books by volunteers. The BNF has digitized newspapers, but has chosen to offer books instead for OCR text correction (French texts).

Holley, Rose. 2009. "How good can it get?: Analysing and Improving OCR Accuracy in Large Scale Historic Newspaper Digitisation Programs". *D-Lib Magazine*. 15 (3/4). http://www.dlib.org/dlib/march09/holley/03holley.html.

- Journal Article: Details of the work undertaken by the National Library of Australia Newspaper Digitization Program on identifying and testing solutions to improve OCR accuracy in large scale newspaper digitization programs. In 2007 and 2008 several different solutions were identified, applied and tested on digitized material now available in the Australian Newspapers Digitization Program service http://trove.nla.gov.au/ndp/del/home. This article gives a state of the art overview of how OCR software works on newspapers, factors that affect OCR accuracy, methods of measuring accuracy, methods of improving accuracy, and testing methods and results for specific solutions that were considered viable for large scale text digitization projects. Includes the solution which was later adopted—the public correct the text.

Holley, Rose. 2010. "Trove: Innovation in Access to Information in Australia." *Ariadne* 64(July). http://www.ariadne.ac.uk/issue64/holley/.

- Journal Article: In late 2009 the National Library of Australia released version 1 of Trove http://trove.nla.gov.au to the public. Trove is a free search engine. It searches across a large aggregation of Australian content. The treasure is over 90 million items from over 1,000 libraries, museums, archives and other organizations which can be found at the click of a button. Finding information just got easier for many Australians. Exploring a wealth of resources and digital content like never before, including full-text books, journals and newspaper articles, images, music, sound, video, maps, Web sites, diaries, letters, archives, people and organizations has been an exciting adventure for users and the service has been heavily used. Finding and retrieving instantly information in context; interacting with content and social engagement are

core features of the service. This article describes Trove features, usage, content building, and its applications for contributors and users in the national context.

Hooton, Fiona. 2006. "PictureAustralia and the Flickr Effect." *Gateways* 80(April). http://www.nla.gov.au/pub/gateways/issues/80/story01.html.

- Magazine Article: Describes the launch of Click and Flick, an initiative that enables individuals to contribute their images to PictureAustralia (www.pictureaustralia.org) through Yahoo!'s Flickr, an online image repository where over two million users store and share their photos and interact with others (www.flickr.com). Up until now, PictureAustralia provided access only to images from collecting institutions such as libraries, galleries archives and museums. Now anyone can add their photos to two groups within Flickr—PictureAustralia: Australia Day and PictureAustralia: People, Places, and Events. Click and Flick has provided the National Library with the means to increase the number of contemporary images in PictureAustralia and to engage with new audiences. Australians have quickly caught on to the concept and have already loaded more than 2000 images. Feedback from Flickr members is full of congratulations for the Library taking this world first initiative.

Ilieva, Polina E. 2010. "Architube: Using YouTube to Showcase and Promote Your Audiovisual Collections." Western Roundup: A Joint Conference of the Conference of Inter-Mountain Archivists, Northwest Archivists, Society of California Archivists, and Society of Rocky Mountain Archivists. Session 2: Web 2.0 and Archives. Seattle, Washington. 9 April. http://northwestarchivistsinc.wildapricot.org/Presentations.

- Presentation: Ilieva summarizes her experiences with using YouTube to publicize the collections of the Legacy Tobacco Documents Library, reach new audiences, and crowdsource metadata.

Kansa, Eric. 2006. Storing and Sharing Central Asian GIS: The Alexandria Archive. *The SilkRoad Foundation Newsletter* 2(3). http://www.silkroadfoundation.org/newsletter/vol2num2/Storing.html.

- Magazine Article: While GIS and related technologies are revolutionizing archaeology and related disciplines, they present their own challenges. Vast amounts of data are generated in digitizing regional data-sets, and in contemporary techniques of data collection in "digital" archaeology. Projects that use GIS are a case in point. A single archaeological excavation or survey can produce literally thousands of digital photos, maps, plans, drawings, analyses, databases and reports. Archaeologists produce all this information because such detailed recording and observation is fundamental to

understanding the past. Excavation is also an inherently destructive enterprise. In some ways, to dig a site is to destroy it. Therefore it is absolutely vital that archaeologists record, preserve, and share the results of their work. This has traditionally been done by e-mail, but there must now be better methods such as the AnthroCommons.

Kansa, Eric.C. 2007a. Open data on the World Wide Web: Opencontext.org and Data Integration as a Community Process. In: *Proceedings of the 28th Annual International Association of Technical University Libraries (IATUL) Conference*, Stockholm, Sweden, 11-14 June. http://www.lib.kth.se/iatul2007/assets/files/fulltext/Kansa_E_full.pdf.

- Conference Paper: Open Context enables open public access to primary field data, notes, and media (images, maps, drawings, videos) on the web. It provides an easy to use, yet powerful, online database for exploring, searching, and analyzing multiple excavation results, survey datasets, and museum collections. Although initially intended to meet data dissemination needs of archaeology, Open Context is now being used for other disciplines. It was presented at the 2007 International Association of Technological University Libraries (IATUL) Conference held in Stockholm, Sweden.

———. 2007b. "Publishing Primary Data on the World Wide Web: Opencontext.Org and an Open Future for the Past." *Society for Historical Archaeology* 2(1). http://www.sha.org/publications/technical_briefs/volume02/article_01.pdf.

- Journal Article: Discusses how 'Open Context' works as an open access system for publishing primary archaeological data and museum collections. This was one of the sites the working group reviewed in its first report.

Kansa, Sarah Whitcher and Eric.C. Kansa. 2007. "Open Content in Open Context." Article produced in support of The Alexandria Institute Open Context Project. *Educational Technology* 47 (6). http://web.archive.org/web/20100917052643/http://alexandriaarchive.org/publications/KansaEdTecArticle.pdf.

- Journal Article: Discusses the challenges and rewards of sharing research content through a discussion of Open Context, a new open access data publication system for field sciences and museum collections. Open Context is the first data repository of its kind, allowing self-publication of research data, community commentary through tagging, and clear citation and stable hyperlinks, and Creative Commons licenses that make reusing content legal and easy.

Kansa, Sarah Whitcher and Eric.C. Kansa. 2009a. "Open context: Developing common solutions for data sharing." *CSA Newsletter* 21 (3). http://csanet.org/newsletter/winter09/nlw0902.html.

- Journal Article: Many collections created in ongoing archaeological surveys or excavations are managed by small research teams or small institutions with little capacity to develop their own web-accessible database solutions or other public access to the data files created by the project. Without greater access and dissemination, many of these collections remain obscure, ignored, and under-used. Thus, there is a significant need to find ways to facilitate sharing such research content. Fortunately, the declining costs of Web-related technologies, especially the growing power and maturity of open-source code libraries, are starting to make it more feasible for even small and under-funded institutions and individual projects to publish their collections online. Omeka (www.omeka.org), an open source collections dissemination project, is seeing widespread use to help small museums establish a Web presence and share their collections.

———. 2009b. "Yes, it is all about you: User Needs, Archaeology and Digital Data." *CSA Newsletter* 22 (1). http://csanet.org/newsletter/spring09/nls0902.html.

- Journal Article: The Alexandria Archive Institute and the School of Information at UC Berkeley recently launched a study exploring how open technologies can best meet the needs of the diverse communities of scholars working with cultural-heritage content. This 2-year endeavor is funded by a grant from the National Endowment for the Humanities (NEH) and the Institute of Museum and Library Services (IMLS), as part of their Advancing Knowledge: The IMLS/NEH Digital Partnership grant program. This paper presents some of the initial findings of user experience in archaeology. Many systems for sharing archaeological content have come on line in recent years. These systems have made tremendous strides in developing ways to share content that would otherwise be difficult to access or use. However, most are tailored to meet specific needs on a project-specific level. This is true for most archaeological project that share data—in general, they tend to be custom-built systems that require specific knowledge of the project to explore in any depth. On the other end of the spectrum are popular, but not archaeology-specific systems such as Flickr, the popular photo sharing site, which are sufficiently generalized to meet most needs, but on a very superficial level.

Kansa, Sarah Whitcher, Eric C. Kansa and Jason M. Schultz. 2007. "An Open Context for Near Eastern Archaeology." *Near Eastern Archaeology* 70 (4): 188-194. http://www.jstor.org/stable/20361331.

- Journal Article: Discusses electronic publication of field research data with Open Context, including responses to issues around copyright and professional incentives. The common use by archaeologists of ubiquitous technologies such as computers and digital cameras means that archaeological research projects now produce huge amounts of diverse, digital documentation. However, while the technology is available to collect this documentation, we still largely lack community-accepted dissemination channels appropriate for such torrents of data. Open Context aims to help fill this gap by providing open access data publication services for archaeology. Open Context has a flexible and generalized technical architecture that can accommodate most archaeological datasets, despite the lack of common recording systems or other documentation standards. It includes a variety of tools to make data dissemination easier and more worthwhile. Authorship is clearly identified through citation tools, including web-based publication systems that enable individuals to upload their own data for review, and collaboration is facilitated through easy download and "tagging" features. Near Eastern archaeologists will benefit from Open Context's flexibility to share a variety of content from diverse projects, no matter how large or small.

Keim, Brandon. 2010. "Pharma Watchdog Needs Your Help with Incriminating Documents." *Wired Science* (blog). *Wired*. 4 March (12:54 pm). http://www.wired.com/wiredscience/2010/03/crowdsourcing-dida/.

- Blog Post: Overwhelmed by thousands of documents describing the inner workings of pharmaceutical companies, the Drug Industry Document Archive wants to enlist the help of crowds. DIDA is an offshoot of the University of California, San Francisco's Legacy Tobacco Documents Archive, which was born from the 1998 legal settlement between tobacco companies and 46 states that sued them. As a condition of the settlement, all industry documents uncovered during the trial had to be made readily available to the public. It now contains 11 million documents numbering some 60 million pages. Documents uncovered during lawsuits against drug companies could be made searchable to the public, just like documents from tobacco company lawsuits. The problem is that there are more files than DIDA's own workers can handle. Until they're processed, they can't be properly searched. Crowdsourcing the project could speed the database's growth. "In the long run, it's not feasible to get grants to add the documents, and we want to do it sooner rather than later," said Kim Klausner, the Archive's manager.

Kiss, Jemima. 2009. "Cornell Team Maps Out 35m Flickr Photos." *PDA: The Digital Content Blog*. *The Guardian*. 27 April (10:54 EDT). http://www.guardian.co.uk/media/pda/2009/apr/27/photography-digital-media.

- Blog Post: The post summarizes a web visualization study by Cornell University. They achieved a visualization of where the most photographs are taken in the world and of which things. Top city—New York, top building—Eifel Tower. There is a link to an article on the full project which investigates how to organize a large collection of geotagged photos, working with a dataset of about 35 million images collected from Flickr. The approach combines content analysis based on text tags and image data with structural analysis based on geospatial data. The spatial distribution of where people take photos is used to define a relational structure between the photos that are taken at popular places. There is interplay between this structure and the content, using classification methods for predicting such locations from visual, textual and temporal features of the photos. Visual and temporal features improve the ability to estimate the location of a photo, compared to using just textual features. These techniques illustrate how to organize a large photo collection, while also revealing various interesting properties about popular cities and landmarks at a global scale.

Lally, Ann M. and Carolyn E. Dunford. 2007. "Using Wikipedia to Extend Digital Collections." *D-Lib Magazine* 13(5/6). http://www.dlib.org/dlib/may07/lally/05lally.html.

- Journal Article: University of Washington Libraries began populating Wikipedia articles with links to their Digital Collections in 2007. This was in response to the OCLC report which showed that most searchers started in Google or Wikipedia rather than the library catalogue. The process and outcomes are described.

Lopipardo, Jeanne and Eric Kansa. 2006. *Evaluating Anthrocommons and Looking to the Future of Digital Open Access Systems for Professional Conferences*. San Francisco, California: The Alexandria Archive Institute. http://alexandriaarchive.org/wp-content/uploads/2008/anthrocommons_eval.pdf.

- Report: Gives background, evaluation and future directions for the AnthroCommons an online forum that enables discussion and exchange of conference presentations.

Mattison, David. 2009. "United States National Archives goes Web 2.0 Bigtime." Ten Thousand Year Blog (August 02010-). 17 August. http://tenthousandyearblog.blogspot.com/2009/08/united-states-national-archives-goes.html.

- Blog Post: The United States National Archives and Records Administration (NARA), has gone Web 2.0 bigtime: a new blog, NARAtions was launched in August 2009 and they are also accessible through YouTube, Flickr and Facebook, the last with two facets:

events and news, and research and genealogy. You'll find more details about their Web 2.0 and social media outreach work at http://www.archives.gov/social-media/.

Ontario Ministry of Government Services. 2010. "Archives of Ontario." *You Tube*. Last modified 5 October. http://www.youtube.com/ArchivesOfOntario.

- Web Page: The Archives of Ontario posts an entertaining assortment of treasures from its Sound and Moving Image collection.

Oomen, Johan, Harry Verwayen, Nikki Timmermans, and Leike Heijmans. 2009. "Images for the Future: Unlocking the Value of Audiovisual Heritage." Edited by J. Trant and D. Bearman. In: *Museums on the Web 2009: Proceedings*. Toronto: Archives & Museum Informatics.31 March. http://www.archimuse.com/mw2009/papers/oomen/oomen.html.

- Conference Paper: Images for the Future is the largest digitization effort in Europe to date. A consortium of six partners (Dutch Film Museum, Institute for Sound and Vision, Centrale Discotheek Rotterdam, National Archives, Association of Public Libraries and Knowledgeland) are migrating a substantial part of the Dutch audiovisual heritage to a digital environment. The project has three objectives: safeguarding heritage for future generations, creating social- economical value, and supporting innovation in cultural infrastructure. Much is to be expected from recent developments in computer science, especially in the areas of data-mining, information retrieval, and user-audience participation capabilities. To achieve these objectives, the cultural heritage sector is challenged to re-evaluate its business models. This article presents the theoretical framework in which Images for the Future is operating, and substantiates this framework with concrete examples of results. The user engagement activities and opening the data for sharing are of particular interest.

Rollitt, Karen. 2009. "DigitalNZ ā-tihi o Aotearoa: Connecting the Digital Content of New Zealand: Advice, Open Standards and Interoperability." In: *Proceedings of the International Conference on Dublin Core and Metadata Applications 2009*, Seoul, Korea, 12-16 October. http://dcpapers.dublincore.org/ojs/pubs/article/view/982/965.

- Conference Paper: DigitalNZ ā-tihi o Aotearoa aims to connect New Zealand's digital content from collections of significance and find ways for New Zealanders to engage in, use and reuse the digital content. DigitalNZ advises digital content providers to use open standards and to do this developed a standards based advice framework containing seven primary functions for the selection, creation, description, management, discovery, use and reuse, and preservation of digital content. The use of Dublin Core metadata can be incorporated into most functions of the standards advice framework. DigitalNZ is one of the sites reviewed by the Social Metadata Working Group in its first report.

Schaffner, Jennifer. 2010. "Commit to Transparency: Blog Your Thefts." *Archival Outlook* (March/April):6. http://www2.archivists.org/sites/all/files/AO-MarApr2010.pdf.

- Journal Article: Describes how institutions can publicize their missing items by using the list feature of WorldCat.org that feeds into the MissingMaterials.org site, also available as a free subscription.

Siegel, Gail. 2009. "Knowledge Exchange: Plateau Tribes to Curate WSU Digital Collection." *WSU News*. 13 March.
http://wsutoday.wsu.edu/pages/Publications.asp?Action=Detail&PublicationID=14066&PageID=21.

- News Article: Kimberly Christen is developing the Plateau Peoples' Web Portal to provide access to cultural materials from Columbia Plateau tribes held in Washington State University's collections, including WSU Libraries' Manuscripts, Archives and Special Collections unit (MASC) and the Museum of Anthropology. They are being catalogued online for portal use. Members of the Yakama, Umatilla and Coeur d'Alene nations will have the ability to add to and comment on the records, curating the portal archive through an interactive process. This is one of the sites the Social Metadata Working Group reviewed in its first report.

"Special Collections and University Archives: What is in UMarmot?" 2010. *UMarmot (Special Collections and University Archives)* (blog).Accessed 11 September. University of Massachusetts Amherst Libraries.
http://www.library.umass.edu/spcoll/umarmot/?page_id=561.

- Blog Post: UMarmot originated early in 2007 as an experiment responding to two perceived needs: first, to find a low cost means of maximizing the public availability of the archives; and second, to find a solution that could be shared with colleagues in less technologically-intensive institutions. After completing a comprehensive survey of our holdings and generating standards-compliant, minimal descriptions of each collection, we recognized that the indexing capacity, web-readiness, and familiarity of blogging software made it a good fit for an online catalog — hence "catablog." After surveying our options, we selected WordPress blogging software for its superior combination of power, ease of development and maintenance, and flexibility in design. Each bibliographic entry is essentially, a blog posting with a link to the finding aid.

Springer, Michelle, Beth Dulabahn, Phil Michel, Barbara Natanson, David W. Reser, David Woodward and Helena Zinkham. 2008. *For the Common Good: The Library Of Congress Flickr Pilot Project*. Washington, D.C.: Library of Congress, Prints and Photographs Division.
http://purl.access.gpo.gov/GPO/LPS108390.

- Report: Describes the pilot project started by Library of Congress with Flickr in 2007 which became the Flickr Commons. Reaching out to unknown as well as known audiences can attract more people to comment, share, and interact with libraries. Taking collections to where people are already engaged in community conversations might also encourage visits to a library's web site where the full wealth of resources are available. One solution worth exploring is to participate directly in existing Web 2.0 communities that offer social networking functionality.

Theimer, Kate. 2009. "News: Wikipedia Policy Change Means Archives Can Post Links in Articles! Go Crazy, Archivists!" *ArchivesNext* (blog). 17 September.
http://www.archivesnext.com/?p=402.

- Blog Post: Up until now Wikipedia usually disallows people who are being paid to do so from making edits to Wikipedia. That has been applied to employees or interns at archives and libraries. But these are the only people with the information. In the interest of putting such useful material in Wikipedia, there is now an exception and the editorial policy has been modified. Even though library employees may have a conflict of interest, adding such material is now allowed as "non-controversial" edits.

Theimer, Kate. 2010. "Winners: Best use of Crowdsourcing for Description." *ArchivesNext* (blog). 6 August. http://www.archivesnext.com/?p=1557.

- Blog Post: The Best Archives on the Web awards in the category "Best Use of Crowdsourcing for Description" was won by Waisda? from Nederlands Instituut voor Beeld en Geluid (Netherlands Institute for Sound and Vision). An overview of Waisda? (also included in the Social Metadata Working Group's first report): "To explore the impact and success criteria of social tagging in the audiovisual heritage domain, a large-scale video labeling pilot, Waisda?, was launched in March 2009. The goal of Waisda? (which translates to "What's That?") is to collect user tags that can help bridge the semantic gap, to collect time-related metadata, and to offer people a new way of interacting with television programs, thus creating a connection with the television archive. Waisda? is the world's first operational video labeling game in the cultural heritage field." Second prize went to PhotosNormandie on Flickr, which incidentally is not run by an archive and which the archive community found rather threatening.

University of Michigan Library. 2010. "Collaboration in Cataloging: Islamic Manuscripts at Michigan." http://www.lib.umich.edu/collaboration-cataloging-islamic-manuscripts-michigan.

- Web Page: Describes the project where scholar experts from around the world can work together to amplify, clarify, and correct the metadata associated with digitized pages of Islamic manuscripts.

The U.S. National Archives and Records Administration. 2010. "Implications of Recent Web Technologies for NARA Web Guidance." *Records Managers* in National Archives. Accessed 11 September. http://www.archives.gov/records-mgmt/initiatives/web-tech.html.

- Web Page: NARA Issues Guidance for Web 2:0 activities (long anticipated). The guidance addresses web portals, RSS, blogs, and wikis. Disappointingly the guidelines are very generic and don't offer much concrete advice for archivists and certainly no suggested policies on moderation, authenticity verification, policing, or procedures. The guidelines ask the question: How does an agency ensure the trustworthiness of information maintained in these applications? Content derived from external sources may lack sufficient information to establish the integrity, authenticity, reliability and usability of the information maintained in these applications. The managing entity of each application, in conjunction with advice from records management staff, need to develop procedures to ensure the application is configured to capture such information. These include specification of appropriate metadata. However the procedure to do this is not covered.

The U.S. National Archives and Records Administration. 2010. "National Archives Office of the Inspector General Launches Facebook Page." *Press/Journalists* in National Archives. Press Release 20 May. http://archives.gov/press/press-releases/2010/nr10-97.html.

- Web Page: The National Archives Office of the Inspector General (OIG) has launched an Archival Recovery Team Facebook page http://www.facebook.com/archivalrecoveryteam. Through this new social media outreach, the OIG expands its effort to identify and recover alienated Federal holdings that belong in the collection of the National Archives. This Facebook page urges the public to assist the OIG's Archival Recovery Team in identifying and recovering missing Federal records. The Facebook page features a number of missing items that are of significance Each month the Archival Recovery Team Facebook page will feature an item (or related group of items) that is missing from the collection of the National Archives. The May "Missing Item-of-the-Month" is the collection of 35 documents from the Wright Brothers Flying Machine patent file, last seen at the National Archives in 1979.

Voss, Jacob. 2005. Metadata with Personendaten and Beyond. In: *Proceedings of Wikimania 2005 - The First International Wikimedia Conference*, Frankfurt, Germany, 4-8 August. http://meta.wikimedia.org/wiki/Transwiki:Wikimania05/Paper-JV2.

- Conference Paper: German Wikipedia people records are enriched with data fields that contain name, date, place of birth and other metadata. This data comes from a relationship with the Deutsche Bibliothek Personendaten (PND) files. The PND number is entered into the article and links to the OPAC of the DB. There is another paper written which explains more fully how wikipedians matched the PND to the Wikipedia person file.

Waibel, Günter. 2009. "UK National Museums Get Creative." *Hanging Together* (blog). 4 March. http://hangingtogether.org/?p=636.

- Blog Post: Creative spaces, a UK project formerly known as the National Museums Online Learning Project, just launched as a Beta. It aggregates museum content and offers social engagement features and is proving to be controversial.

"Wikipedia: GLAM/SI." 2010. *Wikipedia*. Accessed 11 September. http://en.wikipedia.org/wiki/Wikipedia:GLAM/SI).

- Web Page: A section of Wikipedia set up for a group dedicated to improving Wikipedia's coverage of topics related to the Smithsonian Institution. On 26 June 2010,

as part of the 10th DC meetup, Wikimedia DC met with representatives of the National Museum of the American Indian and the Smithsonian Institution, who were overwhelmingly receptive. This project exists to organize collaboration with the Smithsonian, paving the way for future Wiki-Academies, meet-ups and general cooperation between the Smithsonian and the Wikimedia community. The page outlines some Smithsonian article statistics.

Wyatt, Liam. 2003. "The British Museum and Me." *Witty's Blog*. March 2003. http://www.wittylama.com/2010/03/the-british-museum-and-me/. (This blog is no longer available.).

- Blog Post: Liam Wyatt (VP Wikimedia Australia) is to be the first 'wikipedian in resident' at a cultural institution. He will build a relationship between the British Museum and the Wikipedian community through a range of activities both internally and public-facing. These will include: creating or expanding existing articles about notable items or subjects of specific relevance to the collection and the Museum's expertise; supporting Wikipedians already editing articles related to the British Museum both locally and internationally; and working with Museum staff to explain Wikipedia's practices and how they might be able to contribute directly. Note: This blog is no longer available.

Wyatt, Liam. 2010. "End of my Residency." *Witty's Blog*. July 2010. http://www.wittylama.com/2010/07/end-of-my-residency/. (This blog is no longer available.)

- Blog Post: Liam summarizes the end of his six week Wikipedian in residence stint at the British Museum. It had many positive outcomes however he warns anyone else of thinking of doing it to be very clear about the objectives beforehand and says "Be prepared for hostility. From both directions. There are some (though not many) in the museum sector who believe that working with Wikipedia or free-culture community will undermine the role of the professional cultural institution. Equally, there are some in the Wikipedia community who believe that working with museums will undermine the encyclopedia's independence. I've heard the phrase "but we must preserve the integrity of our collection" used in reference to museums arguing for control but equally I have heard the same phrase used by Wikipedians arguing why they should not interact with outside organizations. I've also been accused of having a conflict of interest, of being a paid-editor". Note: This blog is no longer available.

Open Data

Cellan-Jones, Rory. 2010. "Tim Berners-Lee Unveils Government Data Project." Technology in *BBC News*. Last updated 21 January 2010 (01:24 GMT). http://news.bbc.co.uk/2/hi/technology/8470797.stm.

- News Article: Web founder Sir Tim Berners-Lee unveils his latest venture for the UK government, which offers the public better access to official data. A new website, data.gov.uk, will offer reams of public sector data, ranging from traffic statistics to crime figures, for private or commercial use. They want to make data open and kick start a new wave of services that find novel ways to make use of the information. Sir Tim was hired by Prime Minister Gordon Brown in June 2009 to oversee the project. There is also a video clip embedded on the news site with Tim Berners Lee and Nigel Shadbolt discussing what open data means.

Gruen, Nicholas. 2010. "An Open Book for Economic Reform.*" Sydney Morning Herald*. 4 March. http://www.smh.com.au/business/an-open-book-for-economic-reform-20100303-pj71.html.

- Newspaper Article: Suggests that Australian Government information should be "Open," and this is not just doing the right thing but is a matter of economic reform. Uses the example of FixMyStreet. Gruen is a leading economist and was the lead on the Australian Government's 2.0 Taskforce.

Kansa, Eric C., Jason Schultz, and Ahrash N. Bissell. 2005. "Protecting Traditional Knowledge and Expanding Access to Scientific Data: Juxtaposing Intellectual Property Agendas via a 'Some Rights Reserved' Model." *International Journal of Cultural Property*. 12 (3):285-314.

- Journal Article: Discusses 'open knowledge' vs. 'traditional knowledge' in scientific data and how this may fit with creative commons licensing.

Kaufman,Peter. 2010. "Open Video Coming to Wikipedia." *Open Culture* (blog). 20 March. http://www.openculture.com/2010/03/open_video_coming_to_wikipedia.html.

- Blog Post: Wikipedia is now opening the online encyclopedia to video, giving contributors a new way to convey information in a richer way. And they're making a point of using video in an open format (Ogg Theora). The day is fast coming where video will be as easy for users to write, edit, annotate, and remix as text is today.

Rosenberg, Jonathan. 2009. "The Meaning of Open." *Google Public Policy Blog*. 21 December (4:57 PM ET). http://googlepublicpolicy.blogspot.com/2009/12/meaning-of-open.html.

- Blog Post: An employee of Google describes what they think "open" means. There are two components to the definition of open: open technology and open information. Open technology includes open source, meaning Google release and actively support code that helps grow the Internet, and open standards, meaning Google adhere to accepted standards and, if none exist, work to create standards that improve the entire Internet (and not just to benefit Google). Open information means that when Google has information about users it uses it to provide something that is valuable to users. Google are transparent about what information they have about users, and give users ultimate control over their information. These are the things Google should be doing. However the writer acknowledges in many cases they aren't, but he hopes that with this post they can start working to close the gap between reality and aspiration. "If we can embody a consistent commitment to open—which I believe we can—then we have a big opportunity to lead by example and encourage other companies and industries to adopt the same commitment. If they do, the world will be a better place." There were a lot of comments in response to this post—many cynical.

Social Engagement

Anderson, Michael. 2007. "Four Crowdsourcing Lessons from the Guardian's (Spectacular) Expenses-Scandal Experiment." *Nieman Journalism Lab*. 23 June (7 A.M.). http://www.niemanlab.org/2009/06/four-crowdsourcing-lessons-from-the-guardians-spectacular-expenses-scandal-experiment/.

- Journal Article: Describes how The Guardian utilized crowdsourcing on thousands of handwritten documents (MP's expenses). Outlines the lessons learnt in interface design and usability to encourage crowdsourcing.

BBC. 2009. "WW2 People's War: An Archive of World War Two Memories—Written by the Public, Gathered by the BBC." About This Site: Project History. Accessed 11 September. http://www.bbc.co.uk/ww2peopleswar/about/project_07.shtml#personalpages.

- Web Page: Shows how a user would have interacted with the site and project after registering when the project was live. Screenshots show the creation, contribution and social engagement process.

Ball, Jill. 2009. "The 99+ Genealogy Things Meme." *Geniaus* (blog). 5 January. http://geniaus.blogspot.com/2009/01/99-genealogy-things-meme.html.

- Blog Post: There is a list circulating around genealogical blogs of 100 things a genealogist has to do. The list is here and is interesting because it shows firstly how motivated these people are to help each other and share information, and secondly how they are increasingly doing this through sites with social engagement features. These people are driven to use the latest web 2.0 technologies because they are so useful to them, even though a large proportion of these people are older and until they took up genealogy were perhaps largely unfamiliar with the web or web 2.0. They are mostly trying to find resources in archives, which mostly don't have social engagement features so therefore they utilize other spaces like Facebook and rootsweb forum. Australian genealogists added to this list another task, "correct some articles and names in Australian Newspapers."

Bernstein, Shelley. 2010. "Collection Online: Opening the Floodgates." *Brooklyn Museum. Community: bloggers@brooklynmuseum*. 11 March. http://www.brooklynmuseum.org/community/blogosphere/bloggers/2010/03/11/collection-online-opening-the-floodgates/.

- Blog Post: Describes how the Brooklyn Museum decided to release 'incomplete' records to the public and give them the chance to add information.

"Crowdsourcing." 2012. In: *Wikipedia, The Free Encyclopedia*. Last modified 28 February. http://en.wikipedia.org/wiki/Crowdsourcing.

- Encyclopedia Article: Gives a definition and background to the term 'crowdsourcing' (a new term in our vocabulary). There is a link to a page which lists significant crowdsourcing projects.

Cebula, Larry. 2009. "Lick This: LOC, Flickr, and the Limits of Crowd Sourcing." *NorthWest History* (blog). 25 June. http://northwesthistory.blogspot.com/2009/06/lick-this-loc-flickr-and-limits-of.html.

- Blog Post: Discusses the new Library of Congress and Flickr partnership whereby 3,000 photos were uploaded into Flickr and posits that all the comments added to photos by users are not at all useful. Crowdsourced 'noise' e.g.' lick this' overwhelms useful historical information? This post started a big discussion on the Flickr board.

Cellan-Jones, Rory. 2009. "Wikipedia on the Wane?" *dot.life: A blog about technology from BBC News*. 25 November (14:11 UK time). http://www.bbc.co.uk/blogs/technology/2009/11/wikipedia_on_the_wane.html.

- Blog Post: Wikipedia had a "net loss" of 49,000 editors in the first three months of 2009. Why was this when up until now numbers were growing? What factors have de-motivated editors? Editors who gave up provide interesting comments. Despite this, use of Wikipedia continues to rise.

Cook, Scott. 2008. "The Contribution Revolution: Letting Volunteers Build Your Business." *Harvard Business Review* 86 (10): 60-69.

- Journal Article: Looks at how commercial companies have actively created user contribution systems and examines their methods for aggregating and leveraging people's contributions or behaviors in ways that are useful to other people. Why do contributors contribute? Most contribution systems offer no financial compensation to contributors. In fact, payment can destroy participation by undermining a sense of collaboration and trust. Rather, they rely on motivations intrinsic to humanity – or involve contributions that require no motivation at all, because the user contributes without realizing it. I'm contributing? Some systems collect participants' resources or data as a by-product of things people are doing for other purposes. As shoppers buy from Amazon, they automatically contribute to its recommendation engine, which suggests products based on the ratings and purchase decisions of other customers. Practical solutions: In some systems, participants contribute in order to get reasonably immediate rewards. For example, the site Del.icio.us enables users to organize their bookmarks of websites. A byproduct of this activity is that, when aggregated, the bookmarks produce an index to the web that is valuable to others. Social reward: Many systems provide the benefits of interaction with others: being part of a community with a common interest, generating business prospects, getting a date – the drivers behind social networks like Facebook and LinkedIn. Reputation: Contribution can be sparked by a desire for public recognition, like Amazon's badge for a "top 1,000

reviewer," or for the admiration of peers: Wikipedia articles carry no authorship credit, yet authors earn the respect of other contributors. Self-expression: Many user contribution systems thrive on individuals' desire to air their thoughts, opinions, or creative expression, with the possibility of real-time feedback from users – witness the six million videos on YouTube. Altruism: Why would a person write a glowing online review of a restaurant – when it may become harder to get a table if others act on the opinion? Some people want to help local diners or reward superb restaurant owners. Others simply want the truth to be heard."

Danowski, Patrick. 2007. "Library 2.0 and User Generated Content: What Can the Users Do For Us?" In: *Proceedings of World Library And Information Congress: 73rd IFLA General Conference and Council*, Durban, South Aftrica, 19-23 August. http://ifla.queenslibrary.org/IV/ifla73/papers/113-Danowski-en.pdf.

- Conference Paper: Describes a project between Wikipedia and the Personennamendatei, the German cooperative name authority file, and Wikisource where users provide transcribed source material. Looks at how volunteers can significantly help to improve data and resources and how libraries can provide a platform for this.

Davis, Richard. 2010. "Transcribing Bentham." *ulcc da blog*. University of London Computer Centre Digital Archives. http://dablog.ulcc.ac.uk/2010/03/01/transcribing-bentham/.

- Blog Post: Describes a new project by the University College London where the public can help to transcribe the archives of Jeremy Bentham, an 18th century philosopher. The post refers to the Australian Newspapers service as its inspiration and to the Bird Phenology transcription project for training volunteers with screencasts.

De Rosa, Cathy, Brad Gauder, Rick Limes, and Diane Cellentani. 2007. *Sharing, privacy and trust in our networked world: a report to the OCLC membership*. Dublin, Ohio, USA: OCLC. http://www.oclc.org/reports/sharing/.

- Report: This OCLC report explores social participation and cooperation on the Internet and how it may impact the library's role, including the use of social networking, social media, commercial and library services on the Web; how and what users and librarians share on the Web and their attitudes toward related privacy issues; opinions on privacy online; and Libraries' current and future roles in social networking.

Dunedin Public Libraries. 2010. "DPL Heritage Collection Projects' Photostream." Flickr. Accessed 11 September. http://www.flickr.com/photos/37244113@N08/sets/.

- Web Page: Images of fragments of early printed books are posted, and a message to the EXLIBRIS discussion list asked for help with identification. Initially, once items were identified, the images were taken down, but this drew immediate complaints, on the grounds that other institutions and researchers aside from the original poster might find the information useful.

Dunn, Elizabeth. 2009. "Highly Passionate Hobbyists." *North Carolina Digital Collections Collaboratory* (blog). 4 June. http://digital.lib.ecu.edu/collaboratory/?p=207.

- Blog Post: The archivist says in 2010 "While many in the profession are understandably skeptical [about the use of volunteers and crowdsourcing], there's no doubt that hobbyists are increasingly doing really important work in making archival resources more available. I can speak from my experience with the Hugh Morton collection and blog that there is valuable knowledge out there to be tapped, and that it doesn't always take a 'crowd' to make a significant contribution (take, for example, our prolific blog commenter who was successfully converted into an official volunteer, and who now not only comments on posts but also writes them). We also had a fun in-person crowdsourcing event that resulted in oodles of usable identifications". This post received a lot of comments from archivists.

Fast Company. 1998. "The Fast Pack." *Fast Company Magazine*. 31 January. http://www.fastcompany.com/magazine/13/fastpack.html?page=0%2C4.

- Web Page: Innovative thinkers were gathered together and asked four key questions: How to Succeed at Success, Is Faster Better, Fear or Trust, What Works at Work? Harriet Rubin makes the statement: 'Freedom is actually a bigger game than power. Power is about what you can control. Freedom is about what you can unleash.' This was widely used by Rose Holley from 2008 onwards to refer to change of thinking required by libraries to crowdsource and to release data fully and openly to the public.

"Galaxy Zoo." 2009. In *Wikipedia, The Free Encyclopedia*. Accessed 11 September. http://en.wikipedia.org/wiki/Galaxy_Zoo.

- Encyclopedia Article: Gives information on Galaxy Zoo – a citizen science initiative. Galaxy Zoo is an online astronomy project which invites members of the public to assist in classifying over sixty million galaxies by looking at photographs. Chris Lintott, a member of the Galaxy Zoo team, said, "One advantage is that you get to see parts of space that have never been seen before. These images were taken by a robotic telescope and processed automatically, so the odds are that when you log on, that first galaxy you see will be one that no human has seen before." Galaxy Zoo is a collaboration between researchers at many institutions, including Oxford University, Portsmouth University, Nottingham University, Johns Hopkins University, Yale University, University of California, Berkeley and Fingerprint Digital Media, Belfast. On 2 August 2007, Galaxy Zoo issued its first newsletter which explained that 80,000 volunteers had already classified more than 10 million images of galaxies, meeting the goals for the first phase of the project. There is also an active forum (www.galaxyzooforum.org) attached to Galaxy Zoo, where volunteers post the more striking images and discuss what they are. There are already some interesting albeit unofficial results. This is of relevance for getting the public to describe photographs on a mass scale, and for learning how to make the process incredibly simple and addictive, while encouraging user engagement via the forum.

Greene, Mary. 2010. "100 Years, 11 Dresses: The V&A's Database of Wedding Fashion." *Mail Online*. Last updated 12 June (8:00 PM). http://www.dailymail.co.uk/home/you/article-1285624/The-V-A-launched-database-wedding-fashion.html.

- Newspaper Article: In advance of a forthcoming exhibition of wedding dresses in 2013, the Victoria and Albert Museum is appealing to the public to contribute their family photos and descriptions of wedding dresses to the Wedding Fashion website. They are appealing for photos of clothes for weddings and civil partnerships from all cultures from 1840 to the present day at www.vam.ac.uk/page/w/weddings/. The result is a history of fashion and a glimpse into the couples lives. This is one of the sites the working group reviewed in its first report.

Gruen, Nicholas. 2009. "Recognising the Volunteers: Jhempenstall is my Hero—Who is Yours?" *government 2.0 taskforce* (blog). 29 September. http://gov2.net.au/blog/2009/09/29/recognising-the-volunteers-jhempenstall-is-my-hero-who-is-yours/index.html

- Blog Post: Article talks about the amazing achievements of volunteers correcting text on the Australian Newspapers site, suggesting there should be other initiatives like this across the Australian Government sector.

Guevin, Jennifer. 2009. "Wikipedia Considers Limiting User Edits." *Cnet News*. 24 January (11:10 AM PST). http://news.cnet.com/8301-1023_3-10149648-93.html.

- News Article: Wikipedia is considering instituting a new editorial process that would put better safeguards in place and require all updates to be approved by a "reliable" user. The so-called Flagged Revisions process would allow registered, trusted editors to publish changes to the site immediately. This would enable breaking news stories to be covered more quickly. All other edits would be sent to a queue and would not be published until they get approved by one of Wikipedia's trusted team of editors. The idea is out to poll with Wikipedians.

Holley, Rose. 2008. "Australian Newspapers Beta Service Wows Users." *Gateways* 96(December). http://www.nla.gov.au/pub/gateways/issues/96/story01.html.

- Magazine Article: Describes user interactions in the Australian Newspapers service six months after release. The public like the idea of improving text and adding tags and are taking it up, even though this is an unfamiliar concept and no other newspaper service in the world currently offers this functionality. Over 700,000 lines of text correction have been made by more than 1,500 users. Correcting the electronically translated text improves the service for everyone as it enables more accurate search results.

Holley, Rose. 2009a. *Text Correction in Australian Newspapers Beta: Questions*. Canberra, Australia:National Library of Australia, Australian Newspapers Digitisation Program. http://www.nla.gov.au/ndp/project_details/documents/ANDP_Questionsfortextcorrectorsv2.pdf.

- Report: Questionnaire sent to the top 20 text correctors of the Australian Newspapers service in January 2009.

———. 2009b. A Success Story—Australian Newspapers Digitisation Program. *Online Currents*. 23(December). http://www.nla.gov.au/ndp/news_and_events/documents/ANDPSuccessstory_OnlineCurrents Dec2009.pdf.

- Journal Article: Gives an overview of the Australian Newspapers Digitisation Program http://www.nla.gov.au/ndp and the resulting free online public service – Australian Newspapers http://ndpbeta.nla.gov.au/ndp/del/home. The service was released to users by the National Library of Australia in August 2008 and has now been in operation for over a year. As at the end of October 2009, the Program has achieved free online public access to over 720,000 newspaper pages containing over 6.8 million articles. The public have helped to enhance the data by correcting over 6 million lines of text and adding 166,000 tags and 4,200 comments. The Program is collaborative with every State and Territory Library in Australia being involved. The service supports the key objectives of the Australian Newspaper Plan http://www.nla.gov.au/anplan to enable communities to explore their rich newspaper heritage. By mid 2011 the Program will have digitised and made available 4 million Australian newspaper pages dating from 1803-1954.

———. 2009c. "Crowdsourcing and Social Engagement: Potential, Power and Freedom for Libraries and Users." Paper presented at the Pacific Rim Digital Library Alliance Annual Meeting, Auckland, New Zealand, 18-20 November 2009. http://www.prdla.org/2009/10/crowdsourcing-and-social-engagement.

- Presentation: The definition and purpose of crowdsourcing and social engagement with users is discussed with particular reference to the Australian Newspapers service http://newspapers.nla.gov.au, FamilySearch http://familysearchindexing.org, Wikipedia http://wikipedia.org, the Distributed Proofreaders http://www.pgdp.net, Galaxy Zoo http://www.galaxyzoo.org and The Guardian MP's Expenses Scandal http://mps-expenses.guardian.co.uk. These services have harnessed thousands of digital volunteers who transcribe, create, enhance and correct text, images and archives. The successful strategies which motivated users to help, engage, and develop the outcomes are discussed and the question of how the lessons learnt can be applied more broadly across the library and archive sector is addressed. Top tips and strategies for libraries beginning to crowdsource are given.

———. 2009d. *Crowdsourcing and Social Engagement: Potential, Power and Freedom for Libraries and Users.* The International Open Archive for LIS, E-Prints in Library and Information Science. http://eprints.rclis.org/17410/.

- Report: The definition and purpose of crowdsourcing and social engagement with users is discussed with particular reference to the Australian Newspapers service http://newspapers.nla.gov.au, FamilySearch http://familysearchindexing.org, Wikipedia http://wikipedia.org, the Distributed Proofreaders http://www.pgdp.net, Galaxy Zoo http://www.galaxyzoo.org and The Guardian MP's Expenses Scandal http://mps-expenses.guardian.co.uk. These services have harnessed thousands of digital volunteers who transcribe, create, enhance and correct text, images and archives. The successful strategies which motivated users to help, engage, and develop the outcomes are discussed and the question of how the lessons learnt can be applied more broadly across the library and archive sector is addressed. Top tips for crowdsourcing are given. This is the full report. There is also a presentation and an article on the same topic.

———. 2009e. "Crowdsourcing Improves Historical Newspapers." *Gateways* 102(December). http://www.nla.gov.au/pub/gateways/issues/102/story06.html.

- Magazine Article: The Australian Newspapers service is truly innovative in the way it delivers digitized newspaper content and engages with the online user community. It has embraced web 2.0 technology to provide a cutting-edge service that allows users to interact, contribute and add value to the newspaper content. Appealing to the public to help correct and improve the data by crowdsourcing is a relatively new idea and has achieved amazing results. There is no other equivalent newspaper service in the world that allows users to tag, add comments and correct the electronically translated text. The goal that has been given to the public is to improve and correct all of the poor-quality text of Australian historical newspapers, thereby improving the searching and retrieval of articles for everyone. The public has embraced the call and has made a real difference towards realizing what once seemed to the Library to be a huge and insurmountable task. By October 2009, one year after release, over 6,000 members of the public had already enhanced the data significantly by correcting over 7 million lines of text in 320,000 articles, and adding 200,000 tags and 4,600 comments to articles.

———. 2009f. "Field Day with Australian Historic Newspapers." *Gateways* 101(October). . http://www.nla.gov.au/pub/gateways/issues/101/story03.html.

- Magazine Article: A short article with user quotes about the historic research being undertaken in Australian Newspapers a year after release.

———. 2009g. *Many Hands Make Light Work: Public Collaborative OCR Text Correction in Australian Historic Newspapers*. Canberra: National Library of Australia. http://www.nla.gov.au/ndp/project_details/documents/ANDP_ManyHands.pdf.

- Report: An overview of public collaborative OCR text correction in the 'Australian Newspapers' service after the first six months of operation. The service is innovative in enabling the public to enhance and improve the raw OCR text of newspapers. The National Library of Australia is the first library in the world to have considered this as a viable idea and implemented it. A risk analysis of public correction is given, more information about the correctors and their motivations, and the issues and results surrounding the correction are discussed. It seems to be highly successful and popular.

Holley Rose. 2010a. "Crowdsourcing: How and Why Should Libraries do it?" *D-Lib Magazine*. 16 (3/4). http://www.dlib.org/dlib/march10/holley/03holley.html.

- Journal Article: The definition and purpose of crowdsourcing and social engagement with users is discussed with particular reference to the Australian Newspapers service http://newspapers.nla.gov.au, FamilySearch http://familysearchindexing.org, Wikipedia http://wikipedia.org, the Distributed Proofreaders http://www.pgdp.net, Galaxy Zoo http://www.galaxyzoo.org and The Guardian MP's Expenses Scandal http://mps-expenses.guardian.co.uk. These services have harnessed thousands of digital volunteers who transcribe, create, enhance and correct text, images and archives. The successful strategies which motivated users to help, engage, and develop the outcomes are discussed and the question of how the lessons learnt can be applied more broadly across the library and archive sector is addressed. Top tips and strategies for libraries beginning to crowdsource are given.

———. 2010b. "Stories to Tell: The Making of our Digital Nation." Presented at The 2010 National Trust Heritage Festival, Mosman Public Library, 22. April. http://eprints.rclis.org/18353/.

- Presentation: A new type of volunteer is quietly adding to the sum of knowledge of our history and heritage on the web. Ordinary Australians have helped correct millions of lines of text in the National Library of Australia's Newspapers Digitisation Program. They have contributed thousands of photographs to our national digital picture collection and helped museums like the Powerhouse identify and locate the subjects of their historical images. They have transcribed birth, death and marriage records so that they are searchable on sites like the Ryerson Index and Family Search Index. They have made thousands of out of copyright books electronically available. They have told their own stories through local websites like Mosman Memories of your street. The PowerPoint presentation covers all these activities and more.

Holley, Rose, and Kent Fitch. 2009. "Perspectives on National Library of Australia Developments: How well do Services Meet the Needs of Wikimedians?" In: GLAM-Wiki (Galleries, Libraries, Archives, Museums and Wikimedia) Event: Finding the Common Ground, Canberra, Australia, 6-7 August. http://eprints.rclis.org/17415/.

- Presentation: Services from the National Library of Australia including the Australian Newspapers service and the new single business service (Trove) are analysed to see how far they meet the needs of Wikimedians. Presentation given at the GLAM-Wiki event in Australia. Power and control of information creation, description and discovery are discussed with particular reference to the fact that public users as well as libraries now have the ability to become content creators. Also the concept that libraries and content need to be discoverable from user spaces like Google and Wikipedia rather than expecting users to come direct to them. Wikimedians have a desire to be able to re-purpose and persistently identify resources, so how can we enable this?

Huvila, Isto. 2010. "Where Does the Information Come From? Information Source Use Patterns in Wikipedia." *Information Research* 15(3) September. http://informationr.net/ir/15-3/paper433.html.

- Journal Article: Little is known about Wikipedia contributors' information behavior and from where and how the information in the encyclopedia originated. Even though a large number of Wikipedia texts cite external sources complying with the verifiability policy, many articles lack references and in many others the references have been added afterwards. This article reports the results of a Web survey of information

source use patterns, answered by 108 Wikipedia contributors in spring 2008. The results indicate a preference for sources available online, but a significant proportion of information is based on printed literature, personal expertise and other non-digital sources of information. Understanding the information source use of contributors helps us to understand how new Wikipedia articles emerge, how edits are motivated, where the information actually comes from and more generally, what kind of information may be expected to be found in Wikipedia.

Jorgensen, John. 2007. "21 Proven Motivation Tactics." *Pick the Brain* (blog). 23 August. http://www.pickthebrain.com/blog/21-proven-motivation-tactics/.

- Blog Post: If you want to make things happen the ability to motivate yourself and others is a crucial skill. At work, home, and everywhere in between, people use motivation to get results. Motivation requires a delicate balance of communication, structure, and incentives. These 21 tactics will help you maximize motivation in yourself and others. The Social Metadata Working Group considered this useful to help understand why people were motivated to do crowdsourcing and what would increase or decrease their motivation.

Leadbeater, Charles. 2009a. "The Art of With." An original essay for Cornerhouse, Manchester. March.
http://www.charlesleadbeater.net/cms/xstandard/The%20Art%20of%20With%20PDF.pdf.

- Essay: Leadbeater, a leading innovationist, aims this essay at cultural heritage institutions and broadcasters (particularly the British Library and the BBC). He says we need to learn "The Art of With" i.e., how to do things with people, not for people or to people. He outlines his concept of 'boulders' and 'pebbles' on a beach which refers to large content creators and organizers and the public as small content creators and organizers, who together create large bodies of content. He outlines how the web has changed things. There is a whole wiki dedicated to discussing "The Art of With".

———. 2009b. "The Internet and Society in the 21st Century." Presented at the British Library Strategy Seminar, York, UK. http://www.charlesleadbeater.net/cms/xstandard/The%20Internet%20and%20Society%20in%20the%2021st%20Century.pdf.

- Presentation: Leadbeater, a leading innovationist, gave a powerful presentation at the British Library Strategy Seminar. It is best to read his essay "The Art of With" before you read these notes. He outlines three main things. First, people want meaningful opportunities to participate and contribute, or at least to be offered the option to do so, more of the time. Second, they want to find economically viable ways to share, easily. Think and work laterally. Third, they want organizationally viable ways to collaborate, not abstract but ways to get things done – share videos, play games, create software, campaign, find friends. When these three come together we create new ways to organize ourselves—more open, collaborative, less top down—which present a challenge to established institutions. It is really significant to create new and more public, open ways to share and develop knowledge. If libraries really want to lead this debate they need their own sophisticated view Think pebbles not boulders (referring to Art of With). We are all becoming librarians, creating, storing, retrieving, recommending material. It is a society of mass librarianship. Libraries have to think they're leading a mass movement, not just serving a clientele.

Lih, Andrew. 2009. *The Wikipedia Revolution: How a Bunch of Nobodies Created the World's Greatest Encyclopedia.* New York: Hyperion.

- Book: Describes the creation and development of Wikipedia from 2001 to 2009 from an insider's viewpoint. There were several crises in the process which are not widely known about such as finance, server capacity, the "fork", and editorial policy—all of which caused a significant decrease in volunteers. The last chapter describes the possible future of Wikipedia now that it is "almost complete" and contains 3 million articles.

Lyons, Margaret. 2009. "New York Public Library's Flickr stream." Film. *Time Out New York*. 5 January. http://newyork.timeout.com/articles/tv/70271/new-york-public-librarys-flickr-stream.

- News Commentary: An article on libraries going into Flickr Commons, noting the New York Public Library. The writer thinks it is good. This item interested the Social Metadata Working Group, but it only had one comment back which was from Josh Greenberg (NYPL's Director of Digital Strategy and Scholarship), which

showed a lack of user interest (or readership of this article?). Note: This article no longer displays comments.

Maxwell, John. 2010. "Momentum Breakers vs. Momentum Makers." *Leadership Wired*. Accessed 11 September. http://www.2020canada.ca/cms/document/Momentum.pdf.

- Journal Article: It is never the size of your problem that is the problem. It's a lack of momentum. Without momentum, even a tiny obstacle can prevent you from moving forward. With momentum, you'll navigate through problems and barely even notice them. As a leader, your responsibility is to understand momentum, to get it moving for your organization, and to sustain it over time. The goal of the article is to give you handles so that you can better recognize how to generate momentum in your workplace. Although not aimed at librarians this article was considered relevant to help librarians and archivists generate momentum for crowdsourcing or employing social engagement features into their institutions when there may be resistance against it, or the idea seems so big and impossible.

Michalko, Jim. 2009. "Things That Happen Elsewhere - User Studies Say." *Hanging Together* (blog). 5 June. http://hangingtogether.org/?p=702.

- Blog Post: An overview of a recent symposium, 'Hearing Voices'. A very interesting post on the relevance and repetition of user studies and the role of social and collaborative tools in the library environment.

Mosman Library. 2010. "Digital Volunteers do Amazing Things." *Mosman Library blog*. 27 April. http://refdesk.mosmanlibraryblogs.com/article/126/digital-volunteers-do-amazing-things.

- Blog Post: A posting about Rose Holley's recent presentation at Mosman Library (with embedded video of the presentation and list of sites that need your help). A new type of volunteer is quietly adding to the sum of knowledge of our history and heritage on the web. Ordinary Australians have helped correct millions of lines of text in the National Library of Australia's Newspapers Digitization Program. They have contributed thousands of photographs to our national digital picture collection and helped museums like the Powerhouse identify and locate the subjects of their historical images. They have transcribed birth, death and marriage records so that they are searchable on sites like the Ryerson Index and Family Search Index. They have made thousands of out of copyright books electronically available. They have told their own stories through local websites like "Mosman Memories of Your Street."

———. 2010a. "Find and Get with Trove." *Mosman Library blog*. 7 May.
http://refdesk.mosmanlibraryblogs.com/article/128/find-and-get-with-trove.

- Blog Post: Summarizes a talk Rose Holley gave to reference librarians called 'collecting, sharing and improving data: changing roles for librarians and users'. Sums up changes in the last 20 years, talks about the National Library's change in strategic direction and gives examples of changing roles using the Trove service. This has many social engagement features and has been developed closely with users who can also upload their content. The presentation slides are embedded in the blog.

Mosman Council. 2010. "Stories to Tell: The Making of Our Digital Nation: Rose Holley at Mosman Library." YouTube video, 1:18:00, from a presentation at The 2010 National Trust Heritage Festival at Mosman Library 22 April 2010, uploaded by "mosmancouncil," 24 April.
http://www.youtube.com/watch?v=a19icvJO_HE.

- Video Recording: A new type of volunteer is quietly adding to the sum of knowledge of our history and heritage on the web. Ordinary Australians have helped correct millions of lines of text in the National Library of Australia's Newspapers Digitization Program. They have contributed thousands of photographs to our national digital picture collection and helped museums like the Powerhouse identify and locate the subjects of their historical images. They have transcribed birth, death and marriage records so that they are searchable on sites like the Ryerson Index and Family Search Index. They have made thousands of out of copyright books electronically available. They have told their own stories through local websites like "Mosman Memories of Your Street." This is a video of the presentation which covers all these activities and more.

National Library of Australia. 2010. "Online Text Correctors to be Honoured." Posted 27 January. http://www.nla.gov.au/media-releases/online-text-correctors-to-be-honoured.

- Web Page: A media release announcing that volunteer text correctors working on the Australian Newspapers service would be honored on Australia Day at the National Library of Australia.

Ong, David. 2010. "Library Celebrates Quiet Achievers." *Gateways* 103 (March).
http://www.nla.gov.au/pub/gateways/issues/103/story03.html.

- Magazine Article: Describes the rewards given to the volunteer top text correctors in the Australian Newspapers service by the National Library of Australia. They were given Australia Day Achievement Awards at a Ceremony at the National Library of Australia on 28 January 2010, a singing performance by library staff, a

gold medallion, and a behind the scenes tour of rare items. The six volunteers were recognized for their help in correcting over 1.7 million lines of online newspaper text over the past year.

Palmer, Joy. 2009. "Archives 2.0: If We Build It, Will They Come?" *Ariadne* 60(July). http://www.ariadne.ac.uk/issue60/palmer.

- Journal Article: Discusses some of the opportunities and tensions emerging around the idea of engaging users, opening data and crowdsourcing for archives (Archives 2.0). The title suggests building systems and features without knowing if users want them or will use them. The author does not promote developing the services "with" users. It is interesting to compare this article with the Leadbeater article on the "Art of With" that has a very different attitude.

Proctor, Nancy. 2010. "Digital: Museum as Platform, Curator as Champion in the Age of Social Media." *Curator: The Museum Journal* 53(1): 35-43. doi: 10.1111/j.2151-6952.2009.00006.x.

- Journal Article: Gives examples of successful engagement between users and curators (with users taking on curatorial role by providing their expert knowledge). Suggest museums need to move with the times and seriously consider social engagement.

Proctor, Nancy. 2009. "Museum as Platform; Curator as Champion: Learning to Sing in the Age of Social Media." Presented at Event Culture: The Museum and *Its* Staging of Contemporary Art International Conference, Copenhagen, Denmark. 7 November. http://www.slideshare.net/nancyproctor/museum-as-platform-curator-as-champion.

- Presentation: Gives examples of successful engagement between users and curators (with users taking on curatorial role by providing their expert knowledge). Suggest museums need to move with the times and seriously consider social engagement.

Rossmeier, Vincent. 2009. "Are We Dangerously Dependent on Wikipedia?" Author Interviews. *Salon.* 23 March (3:30 am PST). http://www.salon.com/2009/03/24/wikipedia/.

- Author Interview: An interview with Andrew Lih, author of "The Wikipedia Revolution" and a former Wikipedia editor. A few choice quotations:" That notion that anyone can edit it doesn't mean that anyone does." "These two forces, the inclusionists and the exclusionists or deletionists, wage a perennial battle on Wikipedia." "The type of conversations you have on Wikipedia are the kinds you'd see in newspaper newsrooms or at an academic faculty meeting. What are the criteria for making sure something is verifiable? What are the policies we should implement to include a lot of people but also ensure quality? There is thoughtful deliberation behind the management of

millions of articles. This is not a top-down model but a very Quaker-esque consensus model." The post received a lot of comments.

Rundblad, Kevin. 2009. "Metadata in a Crowd: Shared Knowledge Production." Presented at the Society of California Archivists Conference, Riverside, California. 9 May. http://www.slideshare.net/rundblad/metadata-in-a-crowd-shared-knowledge-production.

- Presentation. Asks how to engage the crowd to give metadata. People are motivated by problem solving tasks or gaming methods, or can be unwittingly giving information e.g. via Captcha. This is an amusing presentation on the possibilities of web 2.0 and harnessing the crowd.

Sharky, Clay. 2009. *Here Comes Everybody: How Change Happens When People Come Together*. London: Penguin Books.

- Book: Shirky describes changes in society due to the web. Now it is easy for people to come together to achieve significant, important or massive tasks or goals that could not be done easily before, but can now in the online world. This collaboration is by e-mailing, texting, blogging, wiki's, and websites with web 2.0 features. He describes positive collaborative action that has occurred, with lots of examples throughout the book.

Smith-Yoshimura, Karen. 2009. "Leveraging Social Metadata." Presented at the *OCLC Digital Forum West 2009: Convergence: Where Metadata and Access Meet for Digital Discovery and Delivery*, Los Angeles, California, 16-17 September. http://www.oclc.org/us/en/multimedia/2009/files/smith-yoshimura.pdf.

- Presentation: Outlines what social metadata means and the research the Social Metadata Working Group is conducting on how libraries, archives, and museums can leverage social metadata to enrich existing descriptive metadata. Gives examples of web sites already reviewed and some preliminary results.

Theimer, Kate. 2009. "Future of Archives? 'Passionate Amateurs' Doing 'Detailed Curating'?" Archives Next. 23 January. http://www.archivesnext.com/?p=228.

- Blog Post: In January 2009 an archivist is sceptical that passionate amateurs can help crowdsource or add value to archives. This is an interesting post because it drew a lot of equally sceptical and negative thoughts from archivists. There are a few positive comments and a fair amount of examples of archive initiatives to illustrate the comments. The Social Metadata Working Group decided not to post any supporting responses because we were interested to get the real feel of the archive crowd and see how the conversation went.

Theimer, Kate. 2009. "Harnessing Crowdsourcing for Archives, or Two Examples of 'Passionate Amateurs'." *Archives Next*. 7 April. http://www.archivesnext.com/?p=267.

- Blog Post: In April 2009 the previous skeptical blog post on passionate amateurs was followed up with a positive post using the North American Bird Phenology Program (transcribing 6 million observation migration note cards) as a good example. Interestingly the post did not receive a single comment.

Thomsen, Elizabeth. 2009. "Commenting the Commons." *Pursuits :Elizabeth Thomsen* (blog). http://www.ethomsen.com/?s=Commenting+the+commons.

- Blog Post: Elizabeth Thomsen writes about why she comments on photos in the Flickr Commons, what motivates her and how she feels about it. "It's satisfying to add that first comment to a photograph, providing basic information. It's like being a kid at school raising your hand to answer a question: 'I know! I know!' It feels good to be helpful, and to be part of a project. There's often some back-and-forth discussion among the people leaving comments, as we do our detective work to identify some of these pictures…. But my main interest is adding comments that provide more information about the person or event shown in the picture." Elizabeth also happens to be a librarian.

United States Geological Survey (USGS). 2010. Instructional screencast, 15:03, for transcribing bird migration cards located on the North American Bird Phonology Program Website of the Patuxent Wildlife Research Center. Accessed 11 September. http://www.pwrc.usgs.gov/bpp/training/Phenology_controller.swf.

- Screencast: This rather long and detailed 15 minute screencast gives online volunteers instructions for how to transcribe bird migration records as part of the Bird Phenology Program. 6 million cards need to be transcribed. It is interesting because other

transcription projects have not yet created screencasts, although this is a good method of instruction.

Wesch, Michael. 2007. "The Machine Is Us/ing Us (Final Version)." YouTube video, 4:34, uploaded 8 March. http://www.youtube.com/watch?v=NLlGopyXT_g.

- Video Recording: Michael Wesch, Assistant Professor of Cultural Anthropology at Kansas State University, created this classic and popular four-minute video which has been viewed over 11 million times. It is a statement about web 2.0, changing society, and our creation and use of content. Very clever.

Wikipedia. 2012. "Wikipedia: Biographies of Living Persons." Last updated 23 January. http://en.wikipedia.org/wiki/Wikipedia:Biographies_of_living_persons.

- Web Page: Outlines the policy and rules for Wikipedia editors who are writing articles about living persons. Primary rules are that the article should have a neutral point of view and all information should be verifiable as well as outlining the difference between an encyclopedia article and a media article. The policy is strictly enforced. It is often referred to when people claim that anyone can write anything they like on Wikipedia, since the opposite is true. It holds relevance for libraries that enable commenting on items in their catalogs.

Wyatt, Liam. 2011. "GLAM Wiki: Wikimedia Australia." Wikimedia Foundation. Modified 27 March. http://wikimedia.org.au/wiki/GLAM-WIKI.

- Web Page: Contains information on the GLAM-Wiki event held in Australia in August 2009. For the first time Wikimedians and representatives from the Australasian cultural sector came together for a two-way dialogue to determine how to use the two communities' strengths to a mutual advantage. Why and how cultural institutions could work with Wikimedia projects; and what Wikimedia needs to do to make collaboration easier and more effective. The page contains the media release, the presentations, an overview, blog posts about the event, and most importantly a link to the GLAM-Wiki Recommendations that came out of this day. Cultural Heritage Institutions were asked to respond to the recommendations if they were able which were arranged in 4 sections: Law, Technology, Education, and Business.

Wyatt, Liam. 2011. "Wikipedia: GLAM/BM." *Wikipedia*. Last modified 13 June. http://en.wikipedia.org/wiki/Wikipedia:GLAM/BM.

- Web Page: Gives the outcomes from the British Museum's pilot "Wikipedian-in-residence" program in June 2010. Witty lama (Liam Wyatt) was the inaugural

resident for six weeks. It includes links to blog postings about the program, and shows what was done.

Wyatt, Liam 2010. "[[edit]] this GLAM." Presentation at the National Library of Australia, Canberra, 9 April. http://www.slideshare.net/wittylama/edit-this-glam.

- Presentation: Liam Wyatt, VP of Wikipedia Australia, gave an overview of the GLAM-Wiki recommendations to National Library of Australia staff in April 2010 (after receiving no written response from this organization to the recommendations). Liam also demonstrates the TreeView statistics which enable cultural heritage institutions to get statistics on their Wikipedia collection pages (if they have them).

Social Media

Anthony, Joanne. 2008. "Web 2.0 and Archives: Something like a Phenomenon?" *ulcc da blog*. 20 August (11:20 pm). http://dablog.ulcc.ac.uk/2008/08/20/web-20-and-archives-something-like-a-phenomenon/.

- Blog Post: Discussion on Web 2.0 impacts on the international archives sector. What are people doing, why and what have they learnt?

ArchiveBlogs. 2010."About." http://archivesblogs.com/about.

- Web Page: ArchivesBlogs syndicates content from weblogs about archives and archival issues and then makes the content available in a central location in a variety of formats. It is useful for monitoring discussions on social metadata and web 2.0.

Boudreaux, Chris. 2010. "Policy Database." Social Media Governance. http://socialmediagovernance.com/policies.php?f=0.

- Web Page: Provides access to more than 100 social media policies and guidelines from a range of organizations.

Bruns, Axel. 2009. "Social Media 'State of the Art' Report Released." *Snurblog*. 19 July (14:21). http://snurb.info/socialmedia-Vol1.

- Blog Post: Gives an executive summary of the Social Media State of the Art report recently released by Smart Services CRC (Australia). It focuses on the dynamics of user community participation in social media sites.

Cohen, Noam. 2009. "Wikipedia: Exploring Fact City." *Week in Review*. *The New York Times*. 28 March.
http://www.nytimes.com/2009/03/29/weekinreview/29cohen.html?ref=technology.

- Newspaper Article: Takes a look at the Wikipedia facts, seven years after launch it remains one of the top ten websites in the world. Why is this, and will it be around for a while?

Crumlish, Christian and Erin Malone. 2009. *Designing Social Interfaces: Principles, Patterns, and Practices for Improving the User Experience*. Canada: O'Reilly Media/Yahoo Press.
http://proquest.safaribooksonline.com/64.

- Book: The authors created Yahoo!'s Design Pattern Library. The book provides more than 100 patterns, principles, and best practices, along with salient advice for many of the common challenges you'll face when starting a social website. Designing sites that foster user interaction and community-building is a valuable skill for web developers and designers today, but it's not that easy to understand the nuances of the social web. Insights into what works, what doesn't, and why. Learn how to balance opposing factions and grow healthy online communities by co-creating them with your users.

Dawson, Ross. 2009. "Launch of Social Media Strategy Framework." *Trends in the Living Networks* (blog). 20 July (3:21pm).
http://www.rossdawsonblog.com/SocialMediaStrategyFrameworkv1.pdf.

- Blog Post: Provides a useful diagram of the social media strategy framework.

De Rosa, Cathy, Joanne Cantrell, Diane Cellentani, Janet Hawk, Lillie Jenkins, Alane Wilson. 2005. *Perceptions of Libraries and Information Resources: A Report to the OCLC Membership*. Dublin, Ohio: OCLC Online Computer Library Center, Inc.
http://www.oclc.org/reports/pdfs/Percept_all.pdf.

- Report: This report to the OCLC membership summarizes findings of an international study on information-seeking habits and preferences. It compiled 3,300 responses from information consumers in six countries, noted that 89% of college students in all regions began their search for information on a particular topic with a search engine. Google was the search engine most frequently used.

Deloitte. 2009. *2009 Tribalization of Business Study: Transforming Companies with Communities and Social Media.* New York: Deloitte Development Inc. http://www.deloitte.com/assets/Dcom-UnitedStates/Local%20Assets/Documents/TMT_us_tmt/us_tmt_TribofBusFlipBook_100609.pdf.

- Report: Results of the study from Deloitte, Beeline Labs and the Society for New Communications Research on the perceived potential of online communities and how better to leverage them. The survey measured the responses of over 400 companies, including Fortune 100 organizations, which have created and maintain online communities today. The 2009 Tribalization of Business Study Highlights Flipbook shows most of the respondents were predominantly business-to-business and business-to-consumer; fewer than 20% were from non-profits. Nevertheless, some of the findings are similar to those of the Social Metadata Working Group. Increasing word-of-mouth (38%), customer loyalty (34%) and brand awareness (30%) continue to be the top business objectives of online communities, followed by idea generation (29%) and improved customer support quality (23%). Thirty two percent of respondents are capturing data on how "lurkers"—people who observe the community, but don't participate in the discussion—derive value from the community. Twenty percent of survey respondents have set up formal "ambassador" programs, which give outsiders preferential treatment in return for being more active in the community. Thirty nine percent of the survey respondents indicated that more full-time people are being deployed to manage the communities. The top two analytics for measuring success are the number of active users (34%) and how often people post/comment (32%). The biggest obstacles to creating a successful community are getting people to join (24%), stay engaged (30%), and keep returning (21%).

Ditkoff, Mitch. 2010. "The Top 17 Reasons Why Human Beings Love Lists." *The Heart of Innovation* (blog). 10 April (5:04 pm). http://www.ideachampions.com/weblogs/archives/2010/04/post_19.shtml.

- Blog Post: Lists the top 17 reasons why human beings love lists. "Lists" are one of the growing social media features on websites so the motivation of users behind creating and reading lists is interesting.

Evangelista, Benny. 2010. "Blogging is for Old People, Pew Report Finds." *SFGate*. 4 February. http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2010/02/03/BU3O1BRJDU.DTL.

- Newspaper Article: Gives an overview of the latest findings from a Pew Internet report on social networking. Blogging is dropping off with teenagers who prefer to engage via Facebook. Twitter is preferred by older rather than younger people.

Flickr. 2012. "The Commons." Yahoo! Inc. http://www.flickr.com/commons/institutions/.

- Web Page: Lists all the current participants in the Flickr Commons.

Gilmour, Ron and Jennifer Strickland. 2009. "Social Bookmarking for Library Services: Bibliographic Access Through Delicious." *C&RL News*. 70 (4): 234-237. http://web.archive.org/web/20110208102032/http://www.ala.org/ala/mgrps/divs/acrl/publications/crlnews/2009/apr/socialbookmrkg.cfm.

- Journal Article: Describes how Ithaca College Library New York uses social bookmarking and tagging applications.

Gordon Daines III, J. and Cory L. Nimer. 2009. "Web 2.0 and Archives." *The Interactive Archivist*. Society of American Archivists. 18 May. http://lib.byu.edu/sites/interactivearchivist/.

- Web Page: Outlines the changing expectations of users with regard to accessing and interacting with archive content. Explains web 2.0 technologies for archivists so that they will be better able to experiment with them and pick the right tools to meet their own and user needs.

ISKO (International Society for Knowledge Organization). 2009. "Conference Proceedings." *Content Architecture: Exploiting and Managing Diverse Resources*. ISKO UK Conference. International Society for Knowledge Organization UK. http://www.iskouk.org/conf2009/proceedings.htm.

- Web Page: Presentations for the conference many of which have relevance for social media, networking, web 2.0, ontologies, folksonomies, etc.

Kirkpatrick, Marshall. 2009. "Google's Eric Schmidt on What the Web Will Look Like in 5 Years." *Read Write Web* (blog). 27 October (2:17 PM). http://www.readwriteweb.com/archives/google_web_in_five_years.php.

- Blog Post: Google CEO Eric Schmidt envisions a radically changed Internet five years from now: dominated by Chinese-language and social media content, delivered over super-fast bandwidth in real time. Figuring out how to rank real-time social content is "the great challenge of the age," Schmidt said in an interview in front of thousands of CIOs and IT Directors at Gartner Symposium/ITxpo Orlando 2009. The whole interview is 45 minutes and link to this from the post, a 6 minute excerpt is embedded in the blog. This was tweeted and has hundreds of user comments. It's because of this fundamental shift towards user-generated information that people will listen more to other people than to traditional sources. Learning how to rank that "is the great challenge of the age." Schmidt believes Google can solve that problem.

Landon, Kaia, Caroline Wallis and Peter Davies. 2010. *Twitter for Museums: Strategies and Tactics for Success; A Collection of Essays*. Edinburgh: MuseumsEtc.

- Book: Written by some of the museum community's most experienced and creative Twitter users on three continents, this publication describes the best ways in which museums, galleries and cultural organizations can use Twitter to involve and expand their audiences. The first section guides you through everything you need to know to have a successful Twitter presence; the second section presents a series of in-depth case studies.

Lankes, David R., Joanne Silverstein, Scott Nicholson and Todd Marshall. 2007. "Participatory Networks: The Library as Conversation." *Information Research*. 12(4). http://quartz.syr.edu/rdlankes/Publications/Journals/COLISFinal-v7.pdf.

- Journal Article: Knowledge is created through conversation. The theoretical foundation of this model, Conversation Theory, posits that individuals, organizations, and even societies build knowledge through conversation; specifically, by interacting and building commonly held agreements. Since libraries are in the knowledge business, they are also in the conversation business. The library community implicitly adds a corollary to this theory: The best knowledge comes from an optimal information environment, one in which the most diverse and complete information is available to the conversant(s). Conversation Theory is very much in line with current and past library practice, and shows a clear trajectory for the future. Facilitation not only enriches conversations with diverse and deep information, it also serves as a memory keeper, documenting agreements and outcomes to facilitate future conversations. The

library serves this vital role for many communities. This document describes the participatory model of libraries and provides an overview of current Web 2.0 technologies and a brief discussion of how current Library 2.0 efforts point the way to an even greater change in library as a facilitator of conversations. Specific challenges and opportunities of participatory networking are reviewed. Finally, the authors recommend the creation of a shared participatory test bed for libraries. This network would not only experiment with new collaborative Web technologies, but also work with library organizations and vendors to speed innovation in traditional library systems.

Malone, Erine. 2009. "5 Steps to Building Social Experiences." *Boxes and Arrows* (blog). 23 December. http://www.boxesandarrows.com/view/5-steps-to-building?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+BoxesAndArrows_Stories+%28Boxes+and+Arrows%29.

- Blog Post: Nowadays everyone wants social in their sites and applications. It's become a basic requirement in consumer web software and is slowly infiltrating the enterprise as well. So what's a designer to do when confronted with the requirements to "add social"? Designing social interfaces is more than just slapping on Twitter-like or Facebook-like features onto your site. Not all features are created equal and sometimes a little bit can go a long way. It's important to consider your audience, your product—what your users will be rallying around and why they would want to become engaged with it and each other, and that you can approach this in a systematic way, a little bit at a time. The concepts given come from a book the author wrote with Christian Crumlish, Designing Social Interfaces (both authors worked for Yahoo). They are quick and easy things to remember when infusing social into your site. Each point offers some simple suggestions and points to consider when designing. Potential design patterns are recommended (and linked to) as examples for what could be done in your interface as you design and grow your service. Keep in mind that your context will dictate different specific solutions but the questions and concepts to think about will still be applicable.

Middleton, Michael R., and Julie Lee. 2007. *Cultural Institutions and Web 2.0.* Eveleigh, Australia: Smart Internet Technology CRC. http://eprints.qut.edu.au/10808/1/Cultural_Institutions_and_Web_2_0.pdf.

- Report: This 46 page report gives an international overview of web 2.0 activities in cultural heritage institutions in 2006. At that time only a few organizations were doing anything significant. The report is similar in style and topic to the

reports produced by the Social Metadata Working Group and so will make an interesting historical comparison.

Oreskovic, Alexei. 2010. "Twitter Snags over 100 Million Users, Eyes Money-making." 14 April. http://www.reuters.com/article/2010/04/15/us-twitter-idUSTRE63D46P20100415.

- Newspaper Article: Twitter makes clear its primary goal (to make money) now it has got 100 million users. It plans to integrate Twitter directly into Web sites and focus more on customizing the service for mobile devices.

Overly, Steven. 2010. "Social Networking Sites: 10 Mistakes Organizations Make." *The Washington Post*. 28 June. http://www.washingtonpost.com/wp-dyn/content/article/2010/06/25/AR2010062504382.html

- Newspaper Article: Lists ten mistakes organizations make when trying to implement social engagement features on their websites or for their organizations, and why using Facebook and Twitter is not always effective.

Pew Research Center. 2012. "Web 2.0." *Pew Internet: Pew Internet and American Life Project*. http://www.pewinternet.org/topics/Web-20.aspx.

- Web Page: Contains useful research and reports on social media, social networking and web 2.0.

Price, Gary. 2010. "Resource of The Week: Social Media News—Web 2.0 Clock Counts Upwards; 'Suicide Machine' Cleans Your Social Media Record." *Resource Shelf* (blog). 26 April. http://www.resourceshelf.com/2010/04/26/web-2-0-clock-counts-up-suicide-machine-cleans-your-social-media-record/.

- Blog Post: Mentions the recently developed Gary Hayes Social Media Count site which measures in real time new blog posts, Facebook members, tweets etc. Also the Social Media Suicide Machine, which in January 2010 Facebook were trying to stop, since it gives people the ability to delete all their records and history from Facebook and other social networking sites.

Shirky, Clay. 2009. "Clay Shirky: How Social Media can Make History." *Talks*. *TED*: *Ideas Worth Spreadin.(v*ideo recording). TED@State Conference, Washington DC, 3 June 2009. TED Conferences, LLC. Posted 16 June. http://www.ted.com/talks/clay_shirky_how_cellphones_twitter_facebook_can_make_history.html.

- Video Recording: A 15 minute embedded video and transcript with user comments of Shirky's presentation at TED. Shirky shows how Facebook, Twitter and TXTs helped citizens in China to report on the earthquake and give real news, bypassing censors before they were shutdown. He discusses how Barack Obama used similar technologies in his run up to presidency.

Silverthorne, Sean. 2009. "Understanding Users of Social Networks." *Research and Ideas*. *Working Knowledge: The Thinking That Leads*. Harvard Business School. 14 September. http://hbswk.hbs.edu/item/6156.html.

- Web Page: Summarizes the results of Harvard Business School associate professor Mikolaj Jan Piskorski's research of online social networks. Key concepts: Online social networks are most useful when they address failures in the real world; pictures are the killer app of social networks; women and men use these sites differently; businesses shouldn't consider social networks as just another channel.

Singh, Timon. 2010. "Blogging: Not for the Young?" *NG: Next Generation Online* (blog). 2 April (16:07). http://www.ngonlinenews.com/news/blogging-not-for-the-young/.

- Blog Post: Traditionally blogging is seen as the activity of choice for online teens and young adults, informing the online world of their every thought and idea, be it social problems or their theories on who was really behind 9/11. However, it seems that blogging is no longer the pastime of the young (who have instead been drawn to simple and quick social media networks) and has instead risen in popularity among older adults.

Skågeby, Jörgen. 2009. "Exploring Qualitative Sharing Practices of Social Metadata: Expanding the Attention Economy." *The Information Society: An International Journal* 25 (1): 60-72. http://www.informaworld.com/smpp/content~content=a907447270~db=all~order=page.

- Journal Article: Social metadata are receiving interest from many domains, mainly as a way to aggregate various patterns in social networks. Few scholars have, however, taken the perspective of end users and examined how they utilize social metadata to enrich interpersonal communication. The results of a study of end-user practices of

social metadata usage are presented in this article. Data was gathered from a variety of online forums by collecting and analyzing user discussions relating to social metadata supporting features in Facebook. Three hundred and fifteen relevant comments on social metadata usage were extracted. The analysis revealed the use of experimental profiles, clashes between work-and non-work-related social metadata usage and differences in users' social investment, causing social dilemmas. The study also resulted in developments of theory relating to social metadata and relationship maintenance. In conclusion, social metadata expand a pure "attention economy," conveying a much wider qualitative range of social information.

Solis, Brian. 2010. "The 10 Stages of Social Media Business Integration." Business. *Mashable*. 11 January. http://mashable.com/2010/01/11/social-media-integration/.

- News Article: Although oriented to businesses, this is a useful overview of implementing social media practices for any organization. The bottom-line is using social media to "identify opportunities for interaction, direction, and action."

Solis, Brian. 2010. "The Maturation of Social Media ROI." Business. *Mashable*. 6 January. http://mashable.com/2010/01/26/maturation-social-media-roi/.

- News Article: The advice to businesses is also appropriate for cultural heritage organizations. "We must establish what we want to measure before we engage." "What is it that we want to change, improve, accomplish, incite, etc.?"

Theimer, Kate. 2009. "What does it take to join the Flickr Commons? Find out in an Interview with Newest Member." *ArchivesNext* (blog). 4 March. http://www.archivesnext.com/?p=247.

- Blog Post: An interview with Tiah Edmunson-Morton at the Oregon State University Archives, the Flickr Commons most recent member. OSU's main objective with Flickr Commons was to reach a wider audience. It explains the process and outcomes in brief.

Torkington, Nathan. 2010. "Community Management Workshop." *Ti Point Tork* (blog). 21 February (10:36 am). http://nathan.torkington.com/blog/2010/02/21/community-management-workshop/.

- Blog Post: Summarizes the key points from a community management workshop in Webstock. The take-away: "You need a community manager; build it and they won't come!"

Tagging

Albrittain, Kristen. 2009. "Question: Should we allow the Public to Tag Descriptions in our Online Catalog? Why or Why Not?" *NARAtions: The Blog of the United States National Archives*. 12 August. http://blogs.archives.gov/online-public-access/?p=49.

- Blog Post: The (US) National Archives asked on their blog if archivists felt the public should be "'allowed' to tag on their new catalog, since this would be technically possible. This generated a storm of comments from archivists, a large majority of whom were very much against tagging because they felt the public would 'abuse' the system or put the 'wrong'" tags in. After the initial negative reactions some archivists started to post positive comments about tagging. This post was of interest to the Social Metadata Working Group because it showed how far behind archives are in thinking than libraries and what a lot of negativity still existed about any user interactions in archives. Other posts on crowdsourcing in archives were similar.

Allen, Laurie and Winkler, Michael. 2006. "Penntags: Social Bookmarking in an Academic Environment." Presented at the Digital Library Federation (DLF) Fall Forum 2006, Boston, Massachusetts. 8 November. http://www.diglib.org/forums/fall2006/presentations/winkler-2006-11.pdf.

- Presentation: Provides an overview of the University of Pennsylvania's experiences with library catalog tags.

Brinkerink, Maartin. 2009. "Waisda? Video Labeling Game: Evaluation Report." *Images for the Future: Research Blog*. 18 January (1:11 pm). http://bvdt.tuxic.nl/index.php/waisda-video-labeling-game-evaluation-report/.

- Blog Post: The Waisda? (what's that?) video labeling game was launched in May 2009. It invites users to tag what they see and hear and receive points for a tag if it matches a tag that their opponent has entered. Waisda? is the world's first operational video labeling game. The underlying assumption is that tags are most probably valid if there's mutual agreement. Over 2,000 people played the game and within six months, over 340k tags have been added to over 600 items from the archive. This is another site the working group reviewed in its first report.

Campbell, Douglas. 2008. "Adding Tags to DC Metadata." *LibraryTechNZ* (blog). National Library of New Zealand. 18 September (9:28 am). http://librarytechnz.natlib.govt.nz/2008/09/adding-tags-to-dc-metadata.html.

- Blog Post: How and where would do you put tagging data into Dublin Core metadata records? The main issue is that tags are generally not appropriate under dc:subject as often they aren't 'about' the item, eg. 'ToBeRead'. However, if the tags are 'typed' during collection they can be placed into the appropriate DC field, eg. geocodes into dcterms:spatial, Otherwise, there probably needs to be a separate catch-all field 'tags'. The various schemas available for tags were surveyed,, unfortunately most of them have sub-classed dc:subject. The interesting discovery was that tagging schemas are richer than traditional library-like metadata. They capture a lot of contextual information about the tagging activity – who created it, when, other related tags, etc. This contrasts against traditional DC metadata (or MARC to an extent) that just gives each field data with no provenance. It makes tags stand out – when looking at a metadata record you can discover all about how and by whom each tag was created, but you've no idea who created the title, date, description, subject terms, etc. The record doesn't even tell you which library did the cataloguing.

Chan, Sebastian. 2007. "Tagging and Searching – Serendipity and Museum Collection Databases." Edited by J. Trant and D. Bearman. In: *Museums and the Web 2007: Proceedings*. Toronto: Archives & Museum Informatics. 1 March. http://www.archimuse.com/mw2007/papers/chan/chan.html.

- Conference Paper: In mid-2006 the Powerhouse Museum launched a new on-line catalog. Inspired and informed by the explosion of Web2.0 sites and services, the new collection database aimed not only to provide a "better," more usable museum catalog, but also to explore ways to leverage user interest and community knowledge. The new catalog put more than 70% of the Museum's collection on-line. The museum collects detailed information about search terms and object relationships as well as tagging and controlled vocabulary usage patterns. This paper examines the project and its impact on the Museum. It presents initial usage patterns, search trends, and social tagging trends over the first six months of operation (from 14 June to 31 December 2006). This is another site the working group reviewed in its first report.

Clayton, Sarah, Sue Morris, Arun Venkatesha and Helena Whitton. 2008. *User tagging of online cultural heritage items: A project report for the 2008 Cultural Management Development Program.* Canberra, Australia: National Library of Australia. http://www.nla.gov.au/openpublish/index.php/nlasp/article/view/930/1205.

- Report: Gives a state of the art perspective of current and proposed use of tagging in Australian cultural heritage institutions.

Dalton, Joseph B. 2010. "Can Structured Metadata Play Nice with Tagging Systems? Parsing New Meanings from Classification-Based Descriptions on Flickr Commons." Edited by J. Trant and D. Bearman. In: *Museums and the Web 2010: Proceedings.* Toronto: Archives & Museum Informatics. 31 March. http://www.archimuse.com/mw2010/papers/dalton/dalton.html.

- Conference Paper: The New York Public Library (NYPL) joined The Commons on Flickr, almost a year after The Library of Congress had launched the initial pilot project. When the library uploaded its first set of 1,300 images in late 2008, it was faced with a number of questions about what type of metadata should also be uploaded. Should we hide or cloak the structured metadata (subject headings, name authority files, etc.) associated with these images? Or could we try to contribute our pre-existing subjects as tags? Although Flickr machine-tags have emerged as one option for exposing controlled vocabularies on Flickr, what if our structured metadata could look—and behave—more like user-generated tags from the beginning? The article discusses the rationale behind NYPL's decision to combine existing metadata—in the form of subject headings—with user-generated tags, and demonstrates some of the challenges, benefits and drawbacks for institutions that may be interested in using similar approaches for their own collections.

Ding, Ying, Elin K. Jacob, James Caverlee, Michael Fried and Zhixiong Zhang. 2009. "Profiling Social Networks: A Social Tagging Perspective." *D-Lib Magazine* 15(3/4). http://www.dlib.org/dlib/march09/ding/03ding.html.

- Journal Article: The web is rapidly becoming both more open and more social through the provision of technologies that make it easier for end users to access resources and join in social networks. Social networks have pioneered online communities, allowing users to contribute to collective knowledge by tagging online resources. Tagging behavior increased dramatically between 2005 and 2007. This article reports on an investigation of social tagging using data gathered from Delicious, Flickr and YouTube for the years 2005, 2006 and 2007. Preliminary findings indicate both that it is possible to profile a social network through the analysis of tagging data and that Delicious is a

more representative venue for analyzing the social tagging behavior of users than either Flickr or YouTube.

Gligorov, Riste, Lotte Belice Baltussen, Jacco van Ossenbruggen, Lora Aroyo, Maarten Brinkerink, Johan Oomen, Annelies van Ees. 2010. "Towards Integration of End-User Tags with Professional Annotations." In: Proceedings of the WebSci10: Extending the Frontiers of Society On-Line, 26-27 April. Raleigh, NC: US. http://journal.webscience.org/363/2/websci10_submission_65.pdf.

- Conference Paper: Assessment of the quality of end-user tags from a video labeling game as a first step in the process of integrating them with the annotations made by professionals. Tags lack precise meaning, whereas the terms and concepts the professionals are used to have a clearly defined semantics given by structured vocabularies. The possibility of mapping user tags to their semantic counterparts from domain and lexical vocabularies is explored. A senior cataloguer analyzed the general usefulness of the user tags in terms of video and fragment retrieval. The paper presents the distribution of tags with respect to the audio and visual portions of the video content.

Guy, Marieke and Emma Tonkin. 2006. "Folksonomies: Tidying Up Tags?" *D-Lib Magazine*. 12(1). http://www.dlib.org/dlib/january06/guy/01guy.html.

- Journal Article: Examines the issue of "sloppy tags", a problem to which critics of folksonomies are keen to allude, and ask if there are ways the folksonomy community could offset such problems and create systems that are conducive to searching, sorting and classifying. The "tidying up" approach is questioned and its underlying assumptions, highlighting issues surrounding removal of low-quality, redundant or nonsense metadata, and the potential risks of tidying too neatly and thereby losing the very openness that has made folksonomies so popular.

Hadro, Josh. 2008. "Tagging Added to WorldCat.org." *Library Journal*. 30 September. http://www.libraryjournal.com/article/CA6600525.html.

- Web Page: Tagging facility has now been added to WorldCat.org. Logged-in users can add an unlimited number of their own tags to any item retrievable by the WorldCat.org search engine. New tags will not interfere with official library cataloguing of an item. New tags are not included in searching.

Herzog, Christoph, Michael Luger and Marcus Herzog. 2007. "Combining Social and Semantic Metadata for Search in a Document Repository." In: *Proceedings of the 4th European Semantic Web Conference (ESWC) Workshop "Bridging the Gap between Semantic Web and Web 2.0,"* Innsbruck, Austria. 3-7 June. http://www.kde.cs.uni-kassel.de/ws/eswc2007/proc/CombiningSocialandSemantic.pdf.

- Conference Workshop: Discussion of the properties of metadata in social systems (folksonomies) compared to metadata in semantic systems (ontologies). The authors propose creating a link between a folksonomy and ontology to combine the usability and flexibility of folksonomies with the precision of ontologies for a semantic search application. The idea is motivated by the requirements of the OnTourism project, which has the goal of creating a document repository which benefits from both ontology and folksonomy metadata.

Holley Rose. 2010. "Tagging Full Text Searchable Articles: An Overview of Social Tagging Activity in Historic Australian Newspapers August 2008—August 2009". *D-Lib Magazine*. 16 (1/2). http://dlib.org/dlib/january10/holley/01holley.html.

- Journal Article: In August 2008, tagging was implemented on articles that were full text searchable within the National Library of Australia's historic Australian Newspapers service http://newspapers.nla.gov.au. During the first year, 500 users created over 100,000 tags, 38,000 of which were distinct. The tagging was very successful and the National Library will be extending the tagging functionality to all of its other collections before the end of 2009. In this article, the tagging activity, behaviors and outcomes are analyzed and compared with other research on image tagging.

Kipp, Margaret E.I. 2007. "Tagging Practices on Research Oriented Social Bookmarking Sites." Edited by Clément Arsenault and Kimiz Dalkir. In: *Proceedings of the Canadian Association for Information Science (CAIS) Conference, Information Sharing in a Fragmented World: Crossing Boundaries. Montreal, Quebec: McGill University.* http://www.cais-acsi.ca/proceedings/2007/kipp_2007.pdf.

- Conference Paper: Examines the tagging practices evident on CiteULike, a research oriented social bookmarking site for journal articles. Tagging practices were examined using standard informetric measures for analysis of bibliographic information and term use. Additionally, tags were compared to author keywords and descriptors assigned to the same article.

Matthews, Brian, Catherine Jones, Bartłomiej Puzoń, Jim Moon, Douglas Tudhope, Koraljka Golub, Marianne Lykke Nielsen. 2009. "An Evaluation of Enhancing Social Tagging With A Knowledge Organization System." In: *Proceedings of the International Society for Knowledge Organization (ISKO) UK Conference*, 22-23 June. London, UK: ISKO. http://www.iskouk.org/conf2009/papers/matthews_ISKOUK2009.pdf.

- Conference Paper: Traditional subject indexing and classification are considered infeasible in many digital collections. Automated means and social tagging are often suggested as the two possible solutions. Both, however, have disadvantages and, depending on the purpose of use or context, require additional manual input. This study investigates ways of enhancing social tagging via knowledge organization systems, with a view to improving the quality of tags for increased information discovery and retrieval performance. Benefits of using both social tags and controlled terms are also explored, including enriching knowledge organization systems with new concepts.

Oomen, Johan, Belice Baltussen, Sander Limonard, Maarten Brinkerink, Annelies van Ees, Lora Aroyo, Just Vervaart, Kamil Afsar, and Riste Gligorov. 2010. "Emerging Practices In The Cultural Heritage Domain—Social Tagging of Audiovisual Heritage." In: *Proceedings of the WebSci10: Extending the Frontiers of Society On-Line*. Raleigh, North Carolina: Web Science Trust. Last modified 25 October 2011. http://journal.webscience.org/337/2/websci10_submission_23.pdf.

- Conference Paper: Cultural heritage institutions and their users are beginning to inhabit the same, shared information space. New, innovative services are launched, such as social tagging. Engaging in social tagging is beneficial for both parties, as it improves access to data and stimulates active engagement with the content. To explore the impact and success criteria of social tagging in the cultural heritage domain, a large-scale video labeling pilot was executed: Waisda? It built on earlier work, and introduced three innovations: [i] Using gaming as method to annotate television heritage [ii] Actively seek collaboration with communities connected to the content [iii] use curated vocabularies as a means to integrate tags with professional annotations. Within a period of 7 months, 350,000 tags were added in Waisda?. An extensive evaluation was conducted, that provided input on the usability of the tags, the game design and so on. Based on this input, a roadmap for future developments towards a fully operational service was drafted.

Rethlefsen, Melissa L. 2007. "Tags Help Make Libraries Del.icio.us." *Library Journal*. 15 September. http://www.libraryjournal.com/article/CA6476403.html.

- Journal Article: Gives examples of libraries that have embraced tagging and/or use of Del.icio.us in their catalogues as well as libraries that have opted to use LibraryThing for Libraries as their primary catalogue because of its interactivity. Social bookmarking and tagging tools help Librarians Bridge the gap between the library's need to offer authoritative, well-organized information and their patrons' web experience.

Shirky, Clay. 2005. "Ontology is Overrated: Categories, Links and Tags." Economics & Culture, Media & Community. *Clay Shirky's Writings about the Internet*. May. http://www.shirky.com/writings/ontology_overrated.html.

- Web Article: A classic, well used and influential article that talks about ontology (how we categorize and classify things). He uses the library as an example and suggests that since there is no longer a shelf (because of the web), we need to re-evaluate how we categorize and describe things. He discusses both tags and linking.

Steve.Museum. 2007. "Links and Resources." *Hello My Name is Steve*. Steve: The Museum Social Tagging Project. [*Editor's Note: Unsafe URL Removed*].

- Web Page: Links and downloads for project resources, including papers and presentations, research documentation, software and software documentation, and press clippings, as well as archives of the project's listservs.

Steve.Museum. 2007. "Research." *Hello My Name is Steve*. Steve: The Museum Social Tagging Project. [*Editor's Note: Unsafe URL Removed*]

- Web Page: From this page you can access the raw tagging data collected during the 2006-08 Steve research project. It is available to scholars and students who may be interested in studying it to answer a range of questions about social tagging, language, cognition, and other matters. This project was part of the Social Metadata Working Group's review in its first report.

"Tagging Along with the Crowd." 2010. *State Library of Queensland Magazine*. 7(Autumn): 29. http://www.nla.gov.au/ndp/news_and_events/media_releases/documents/TheStateLibraryo fQueenslandMagazineAutumn2010issue7page29.pdf.

- Magazine Article: Interview with two of the top text correctors in the Australian Newspapers service and mention of tagging in the State Library of Queensland's new discovery service "one search".

Trant, Jennifer. 2009. *Tagging, Folksonomy and Art Museums: Results of Steve.Museum's Research*. Toronto, Canada: Archives and Museum Informatics. [*Editor's Note: Unsafe URL Removed*]

- Report: Tagging has proven attractive to art museums as a means of enhancing access to on-line collections. The steve.museum research project studied tagging and the relationship of the resulting folksonomy to professionally created museum documentation. A variety of research questions were proposed, and methods for answering them explored. Works of art were assembled to be tagged, a tagger was deployed, and tagging encouraged. A folksonomy of 36,981 terms was gathered, comprising 11,944 terms in 31,031 term/work pairs. The analysis of the tagging of these works – and the assembled folksonomy – is reported here, and further work described.

University of Michigan. 2010. "Usability in the Library: MTagger Reports." University of Michigan. http://www.lib.umich.edu/usability-library/usability-library-mtagger-reports.

- Web Page: A series of reports on MTagger from the University of Michigan. Find It. MTag It. Share It." MTagger is the University of Michigan Library's tagging tool, it allows you to save and label things you find on library web pages, the library catalog (Mirlyn), digital images, or any other web page. Tagging tests were conducted from May 2008 - August 2008. All evaluations were conducted by the Usability Working Group.

Wichowski, Alexis. 2009. "Survival of The Fittest Tag: Folksonomies, Findability, and the Evolution of Information Organization." *First Monday*.14 (5). http://www.uic.edu/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/2447/2175.

- Journal Article: Folksonomies have emerged as a means to create order in a rapidly expanding information environment whose existing means to organize content have been strained. This paper examines folksonomies from an evolutionary perspective, viewing the changing conditions of the information environment as having given rise to organization adaptations in order to ensure information "survival"—remaining findable.

This essay traces historical information organization mechanisms, the conditions that gave rise to folksonomies, and the scholarly response, review, and recommendations for the future of folksonomies.

Xu, Zhichen, Yun Fu, Jianchang Mao, and Difu Su. 2006. "Towards the Semantic Web: Collaborative Tag Suggestions." In*: Proceedings of Collaborative Web Tagging Workshop at the 15th International World Wide Web Conference (WWW 2006)*, 22-23 May. Edinburgh, Scotland: ACM Press. Retrieved from: http://www.semanticmetadata.net/hosted/taggingws-www2006-files/13.pdf.

- Conference Workshop: Since tags are created by individual users in a free form, one important problem facing tagging is to identify most appropriate tags, while eliminating noise and spam. For this purpose, we define a set of general criteria for a good tagging system. These criteria include high coverage of multiple facets to ensure good recall, least effort to reduce the cost involved in browsing, and high popularity to ensure tag quality. We propose a collaborative tag suggestion algorithm using these criteria to spot high-quality tags. The proposed algorithm employs a goodness measure for tags derived from collective user authorities to combat spam. The goodness measure is iteratively adjusted by a reward-penalty algorithm, which also incorporates other sources of tags, e.g., content-based auto-generated tags. Our experiments based on My Web 2.0 show that the algorithm is effective.

Training

ASH (Academy of the Sacred Heart). 2010. "The 23 Things." 23 Things ASH Faculty/Staff Need to Know About Web 2.0. Accessed 11 September. http://ash23things.blogspot.com/2009/06/23-things.html.

- Web Page: One of many examples of 23 exercises developed to help faculty and staff experiment and explore Web 2.0 tools.

Blowers, Helene. "List of Libraries & Others doing Learning 2.0" Learning 2.0. Public Library of Charlotte & Mecklenburg County Learning 2.0 Program. Posted 2 May. http://plcmcl2-about.blogspot.com/2006/05/list-of-libraries-others-doing-learning.html.

- Web Page: List of libraries (with hot links) that have developed their own programs of "23 things" to encourage staff to experiment with social media tools.

Gutsche, Betha. 2009. "Competencies for Social Networking in Libraries." *WebJunction*. Posted 22 May. http://www.webjunction.org/competencies/-/articles/content/61740835.

- Web Page: Social networking is infused into many library services. This is a list of skills, knowledge, and attitudes that will help library staff achieve competence in this area.

Johnston, Courtney. 2009. "Designing and Sustaining Creative Communities – Notes from the Webstock Workshop." *LibraryTechNZ* (blog). National Library of New Zealand. 8 March (4:52 pm). http://librarytechnz.natlib.govt.nz/2009/03/designing-sustaining-creative.html.

- Blog Post: Summary of the key points in building a community website from a recent workshop: the building blocks of community sites and what you need to consider before you launch, including having policies in place; how design and structure can affect both the tone and use of a site ("you're designing a tool, not just web pages"); and the importance of community managers.

Murphy, Joe, and Heather Moulaison. 2009. "Social Networking Literacy Competencies for Librarians: Exploring Considerations and Engaging Participation." In: *Association of College and Research Libraries (ACRL) 14th Annual National Conference, Pushing the Edge: Explore, Engage, Extend*. Seattle, Washington (US), 12-14 March. Association of College and Research Libraries. 328-330. http://eprints.rclis.org/16219/1/Social_networking_Literacy_for_librarians.pdf.

- Conference Paper: Librarians are responding to the popularity of social networking sites and their expanding role in the creation, use, and sharing of information by engaging them as a central medium for interacting with library patrons and providing services to meet their information needs. Librarians need a new branch of skill sets specific to utilizing and leveraging social networking sites to provide quality services and maintain their role as information experts in a Web2.0 world. The paper outlines what the competencies of a librarian should be in this area.

Theimer, Kate. 2010. *Web 2.0 Tools and Strategies for Archives and Local History Collections*. New York: Neal-Schuman Publishers.

- Book: An introductory guide for anyone working with collections in archives and historical organizations to assess the current utility of an organization's web presence, and to identify how to improve that presence using the latest Web 2.0 technologies. It points to examples of good practice from real archives websites and provides a wealth of checklists and available resources. "If you want to project an image of being forward thinking and people centered, then Web 2.0 tools may help to shape that image" (p. 208).

Web Junction. 2010. "Social Networking & Web Tools." Web Junction. Accessed 11 September. http://www.webjunction.org/technology/web-tools.

- Web Page: A really useful page aimed at librarians with a wealth of resources and links within it on how to understand and use web 2.0 tools (e.g. blogs, RSS, Twitter, Facebook, Tags, Forums). This includes how to set up a Library Facebook page or Twitter account, getting the most from tagging and blogs etc.

———. 2010a. "Web 2.0 Fundamentals." Web Junction. Accessed 11 September. http://www.webjunction.org/catalog/-/courses/details/96301520.

- Web Page: This is a self paced online course aimed at library and archive professionals who have responsibilities for web services. Goals are: distinguish between the key characteristics of Web 1.0 and Web 2.0 sites; recognize the key 2nd generation web technologies; recognize the value and purpose of social networking platforms used in Web 2.0;recognize how social networking can be used to support business; recommend an appropriate Web 2.0-enabled business strategy to meet specific business requirements for a given scenario; recognize how Ajax is used to enable Web 2.0 web sites; identify design issues when creating a web site for Web 2.0; distinguish between SOAP-based web services and lightweight Representational State Transfer (REST) services; identify the potential benefits and drawbacks of using a mashup when designing a web site; set up web feeds to a web site; implement Web 2.0 principles and technologies.

Wikipedia. 2010. "Advice for the Cultural Sector." Wikipedia. Accessed 11 September. http://en.wikipedia.org/wiki/Wikipedia:GLAM.

- Web Page: Information aimed at cultural heritage professionals who want to create, contribute or add links to Wikipedia articles in areas they have specialist knowledge or collections. Outlines the principles of editing.

Usage Statistics

"Zeitgeist Overview." 2009. LibraryThing. http://www.librarything.com/zeitgeist.

- Web Page: The zeitgeist shows user activity and most tagged items, most used tag etc. The page is of interest to users and can be used to compare tagging activity at other sites.

Facebook. 2012. "NewsRoom." *Facebook*. http://www.facebook.com/press/info.php?statistics.

- Web Page: The Facebook page with official statistics for the press. In August 2010 More than 500 million active users, 50% of active users log on to Facebook in any given day, average user has 130 friends, people spend over 700 billion minutes per month on Facebook.

Hayes, Gary. 2011. "Gary Hayes' Social Media Count." *Personalize Media* (weblog). Updated August 2011. http://www.personalizemedia.com/garys-social-media-count/.

- Web Page: An interesting (but perhaps irrelevant or inaccurate) site that is being updated in live time which gives figures on various social media statistics e.g. number of blog posts, number of new Facebook users.

Johnson, Bobbie. 2009. "The Statistics that Show how Wikipedia has Changed." *Technology Blog*. *The Guardian*. 13 August (03.00 EDT). http://www.guardian.co.uk/technology/blog/2009/aug/13/wikipedia-edits.

- Blog Post: Refers to an article published in the Guardian. Wikipedia has just published the three millionth article. Statistics show most activity is done by 'power users'. Graphs (provided by the Augmented Social Cognition group) show the editing activity from 2001-2008 and the number of reverts, based on the number of articles contributed.

Lenhart, Amanda., Kristen Purcell, Aaron Smith, and Kathryn Zickuhr. 2010. "Social Media and Young Adults." Pew Internet: Pew Internet & American Life Project, A Project of the PewResearchCenter. 3 February. http://www.pewinternet.org/Reports/2010/Social-Media-and-Young-Adults.aspx.

- Report: Two Pew Internet Project surveys of teens and adults reveal a decline in blogging among teens and young adults and a modest rise among adults 30 and older. In 2006, 28% of teens ages 12-17 and young adults ages 18-29 were bloggers, but by 2009 the numbers had dropped to 14% of teens and 15% of young adults. During the same period, the percentage of online adults over thirty who were bloggers rose from 7% blogging in 2006 to 11% in 2009.

Warren, Christina. 2009. "How to: Measure Social Media ROI." Social Media. *Mashable*. 27 October. http://mashable.com/2009/10/27/social-media-roi/.

- Web Page: First, define clear goals – also one of the Social Metadata Working Group's recommendations. Warren provides a quick overview of the metric tools available, also useful to cultural heritage organizations.

Wikipedia. 2010. "Wikipedia:Statistics." Wikipedia. Accessed 11 September. http://en.wikipedia.org/wiki/Wikipedia:Statistics.

- Web Page: The official Wikipedia statistics page. It covers various aspects of Wikipedia statistics, whether as an encyclopedia, a website, or a community. Some statistics provide current snapshots and others track growth and development over time.

Wyatt, L. 2010. "British Museum by the numbers." *Witty's Blog*. June. http://www.wittylama.com/2010/06/british-museum-by-the-numbers/. (This blog is no longer available.)

- Blog Post: The first blog post of Liam Wyatt who is the voluntary Australian 'Wikipedian' in residence at the British Museum starting in June 2010. Post describes measures of the existing relationship - qualitative and quantitative - in order to provide a baseline against which he can compare the relationship at the end of the pilot project. Without this, it would be impossible to objectively assess whether the project here was successful or whether it could/should be implemented elsewhere. Some interesting statistics are given. Note: This blog is no longer available.