NextGen Libraries at OSU
Discussions on the future and change

Topic: Future of the journal

Research and Innovative Services (RIS) has come to the end of its first experiment in scanning and blogging, on the future of the journal. In the NextGen Libraries at OSU blog these topic pages are a place to summarize the posts and comments received on a topic and to allow us to transition to our next topic.

How did “the future of the journal” posts begin?

At the Open Access panel discussion in October 2009, Michael Boock said that “the future of the journal is the article.” This statement sparked interest in RIS for doing an environmental scan on the future of the journal. We wanted to see what changes are already afoot. We scanned the literature and internet and just kept our ears open for to see what we might learn. We observed some of the subtopics attached to “the future of the journal” e.g. how are journals changing in the social sciences? the humanities? sciences? how is content and access to that content evolving? what is happening to peer review and is it changing with the advent of social networking tools? Are there standards emerging that new modes of scholarly communication will use? We assigned ourselves to these sub-topics and on January 6, 2010, began with the first of 6 posts on the “future of the journal” as the inaugural topic of our NextGen Libraries at OSU blog.

- January 6: Articles on the Run
- January 7: Future of Social Science/Humanities Journals
- January 8: Shape of the Scientific Article
- January 11: Tools for Authors
- January 13: Peer-Review
- January 15: Reader Comments

Our process has been a partial success. We hoped our colleagues in the library would read these posts and add their thoughts so we would benefit from their perspective. Given the wave of silence greeting our posts, it is clear we have something to learn about publishing fundamentals and the role of the flashy dust jacket perhaps. We continue to encourage you to read the posts if you have not had a chance to do so and consider posting a comment.

What have we learned: the journal is dead, long live the journal article?

It is clear to us that what is “happening” with the journal is going on at the "article” level. While some may want to hasten the demise of the journal as the
solution to the library’s collection woes, that future is probably a few years away at best.

Meanwhile the library might do better to insinuate itself into some of the key roles that the journal now plays in the scholarly communication process. These need to continue in one form or another and include:

- Peer review which could find other vehicles for delivery but those too will require structure (a niche that for profit journals have currently laid claim to);
- Post-publication review and commentary that may augment pre-publication, peer review is increasing as comments are posted to articles available electronically (historically these are linked to journal “Letters to the editor”);

But there are other expressed needs, ranging from the provision of peer reviewer training to open archiving of datasets associated with articles. These are part of this future as well and are clearly in the domain of the current academic library.

Blog posts (most recent first):

Posts tagged future-of-the-journal

Reader Comments and the Journal
January 15, 2010 | Filed under: Future of the journal | bridges

Journal articles are not physically bound to the printed page, but instead, many live online where they can be viewed, downloaded, and emailed. What more do you need? You can sit in your chair in the evening, cuddle up to the warmth of your laptop, and sip some hot chocolate while you read the most recent edition of your favorite library journal. Isn’t that enough? No.

Recently I read an article, The Future of the Electronic Journal, which suggested reader comments may be an option in more journals in the future. Reader comments are a way for people to “socially network” with one another and the author. To give you a commonly used example: online comments at the end of GT Journal articles and editorials (see this letter and comments about faculty furloughs). Some journals are currently allowing for reader comments including code4lib, PLoS One, and Biomed Central journals.

What happens when readers aren’t allowed to comment at the end of an article or paper? Recently, Stephen Abram, VP at SirsiDynx, published a controversial report about open source software and libraries. Many readers were so upset about the paper, they re-posted it onto a different Web site that allowed for comments and editing. The editing and comments are just as interesting as the original paper!
Questions to consider:
1) How will reader comments influence the future of the journal article?
2) What are the downsides and upsides to reader comments?
3) Will readers eventually want the capability to make comments in ScholarsArchive?

Laurie Bridges for RIS

Peer review: a role for librarians?
January 12, 2010 | Filed under: Future of the journal | averyb

One of the givens for scholarly journals publishers is that they provide a vehicle for peer review of research findings. Students sometimes miss the point that while their professors insist they find information in “peer reviewed” journals, it is really the article that undergoes peer review, not the journal itself. The process and standards of peer review differ from journal to journal.

I came across two surveys of the international scholarly community concerning peer review recently. The first was completed in 2007 was commissioned by the Publish Research Consortium. That survey (Ware, 2008a and Ware, 2008b) went out to some 40,000 authors (drawn from Thomson Scientific/Web of Science author listings) and received a 7.7% response rate overall – staggering when you consider respondents were replying to 100+ questions.

Among the 19 points made regarding attitudes toward peer review was an a clear preference for double-blind peer review as the preferred standard by all — unstated is the fact that this requires an unbiased mediator (the journal publisher?). There was “mixed support for review of authors’ data. A majority of reviewers (63%) and editors (68%) said that it is desirable in principle to review authors’ data. Perhaps surprising given that many reviewers report having too much to do, a majority of reviewers (albeit a small one, 51%) said they would be prepared to review authors’ data themselves. For comparison, only 19% indicated they would not be willing to do this.

A follow-up study (Sense about Science, 2009) was undertaken in Summer 2009 because, as Tracy Brown, Managing Editor of Sense about Science observes on their website, “the 2007 survey had raised some of the issues. We sought to broaden that, particularly to find out whether the demand for all this free, independent scrutiny from the research community is sustainable, and what the future of quality control is likely to be. It’s a matter of public as well as scientific interest.”

The preliminary findings from their Peer Review Survey 2009 are available now with full findings due soon. They surveyed a population similar to the 2007 study, randomly selected from the Thomson Scientific author listing, with with ~4000 respondents. I encourage you to take a look at the findings. I found the following bits thought provoking.
1. Providing peer review serves as a way to be an active participant in one’s scholarly community and is the primary motivation noted by reviewers surveyed. That said, researchers want to improve, not replace peer review: 84% believe that without peer review there would be no control in scientific communication, 91% say that their last paper was improved through peer review. While 86% enjoy reviewing, 56% say there is a lack of guidance on how to review; 68% think formal training would help. Related to this, the majority opinion (81%) is that peer review should ensure previous research is acknowledged yet only a slight majority (51%) report that the process currently accomplishes this. Detecting plagiarism is a big concern as well though one for which less than 40% consider peer review an adequate tool.

2. The survey analysts suggest that the journal editors may need help locating peer reviewers. This survey reports reviewers want anonymity. Fifty-eight percent would be less likely to review if their signed report was published. As was found in the 2007 survey, about 76% favor the double blind system where just the editor knows who the reviewers and authors. These seem to me important considerations when discussing the future of “non-journal centered” peer review vehicles. It also speaks to a clear distinction between comments (from peers and others) made after an article is posted to a website and peer review — though each may have an important role to play.

3. The survey asked about incentives for being a reviewer. As previously noted, the primary reward is reported as intrinsic. However, for about half of the respondents, receiving a payment in kind (e.g. a journal subscription) would make them more likely to review; 41% wanted payment for reviewing but this interest drops to just 2.5% if the author had to cover the cost. Acknowledgement in the journal is the most popular option.

None of this seems particularly earth-shattering nor unexpected but it makes me wonder:

- Given the fact that these studies were funded in part by the larger publishers might they be positioning themselves to make an economic argument for their “value-added” role in providing the only environment for peer review as we know it?
- Sh/Could we not work with faculty and graduates students to provide them with tools for improving their current and future role in the peer review process? As reviewers? As Editors?
- In so doing, might other vehicles for peer review be possible?

–Bonnie Avery for RIS.

Sources:


**Tools for Authors**

January 11, 2010 | Filed under: [Future of the journal](#) | chaum

There are new conceptual tools developing in the scientific communities which can potentially revolutionize scientific publication and knowledge distribution in the 21st century. These new concepts include standardization of environmental symbols, tiers of editing, open access to datasets, and recognition of dataset creation and values through peer review process. These concepts are discussed as following.

Standardization:

The Integration & Application Network is formed by a collection of scientists who aim to solve environmental problems. Among their many projects, the digital Symbol Libraries contain over 1500 custom made vector symbols; allowing diagrammatic representations of complex processes to be developed with minimal graphical skills. This project furnishes a standard resource for those who are interested in solving environmental problems free of charge. [http://ian.umces.edu/](http://ian.umces.edu/)

Co-editing and data sharing

There is a new concept developing to enhance scientific communications between scientists and society through aggregated publication environments. The goal is to make scientific research more transparent and facilitate editing of the publications at hierarchical levels according to rights. That is the creator has full editing right, while researchers can edit part of it according to various information objects. General public can read but has no editing rights. This process is designated as enhanced publications (EP). [http://www.ariadne.ac.uk/issue61/hogenaar/](http://www.ariadne.ac.uk/issue61/hogenaar/)

A new technology supporting the model of overlay journals is already available. This technology allows the usage of content stored in other pre-existing repositories. The overlay journal database contains a number of documents that are structured to annotate another resource (e.g. dataset) with information on the quality of the resource. Quality of the resources include information on (1) metadata about the overlay document itself (2) the quality of process for which the document was constructed and (3) metadata from referenced source to aid discovery and identification. This model allows a peer review process for submitting and reviewing dataset that is analogue to that of a conventional
paper online, giving recognition and credit to those who created the dataset. Instead of PDF file, author of dataset will submit XML document using the web editor. Reviewer reviews the XML file according to the journal’s acceptance criteria. http://www.ariadne.ac.uk/issue60/callaghan-et-al/

A project known as OJIMS (Overlay Journals Infrastructure for meteorological science) is a collaborative work between the Royal Meteorological Society (RMetS), British Atmospheric Data Center and the University of Leeds. It introduces the Overlay Journal concept and its impact on meteorological sciences. Business case and requirement to make overlay journal become operational as data publications are discussed. http://www.ariadne.ac.uk/issue61/callaghan-et-al/

This paper discusses (1) overlay journal mechanics (2) open access subject based repository for meteorology and atmospheric sciences and (3) construction and evaluation for business modes for potential overlay journals.

May Chay for RIS

The Shape of the Scientific Article
January 8, 2010 | Filed under: Future of the journal | mellinma

Scientific articles have a recognizable structure or shape. Researchers conduct experiments, collect data, analyze the data and report findings in a narrative format often characterized as IMRD (introduction, methods, results, discussion). That shape is beginning to change. Articles are no longer bound to a flat, linear and 2-dimensional structure, but can be imagined as 3-dimensional shapes that include datasets, simulations, software, author and reader comments, and other artifacts of the research process (see Van de Sompel et al., 2004).

In 2007, Clifford Lynch wrote that political, technological and societal forces were driving changes in scientific research and the structure of scholarly communication. These forces combine to make possible a new type of science known as “e-Science,” which depends on powerful, distributed networking and new information technologies that the NSF calls “cyberinfrastructure.”

Large Hadron Collider
Consider the vast amounts of data collected by the Mars rover program, accumulated global weather data, or all the scientific data that has been, or will be, generated by sensors, satellites or other devices like the Large Hadron Collider at CERN. Enormous datasets. Research can be conducted on new data or on existing datasets.

The high-performance computing environment enabling the capture of all this data invites new approaches to scholarly communication. In 2009, journal publications still dominate scholarly communication, although some publishers are using information technology to invite reader interactivity. Elsevier and Cell Press partnered recently on two prototypes of the "Article of the Future." The prototypes allow readers to navigate through the articles in a non-linear way, incorporate multimedia (such as interviews with the authors), focus on specific results through clickable graphs and figures, and explore references through dynamic citation analysis.

Some critics dismiss these efforts as cosmetic changes to the traditional journal format by publishers rather than structural innovations. But alternatives to the traditional journal format exist, as well. For example, the Journal of Visualized Experiments (JoVE) is a peer-reviewed video journal for biological research. One rational for the video journal is that the "[w]ritten word and static picture-based traditional print journals are no longer sufficient to accurately transmit the intricacies of modern research."

Going back to Michael Boock’s comment that “the future of the journal is the article,” Institute of Physics now offers compilations of article by topic, rather than by journal. These are articles from the American Astrophyysical Society’s Astronomical Journal and the product is named AJ Compilations. The American Institute of Physics and the American Physical Society is offering Virtual Journals in the Physical Sciences Series, in which articles are selected by editors expert in particular fields.

Another thing to look for in the future is articles that are connected in some way to the dataset from which the research was conducted. One way to do this is to create overlay journals. The future of the journal may not be only the article; other building blocks of scholarly communication may emerge from the research process. For example, the Open Data in Chemistry initiative started by Peter Murray Rust, aims to facilitate data-sharing and the re-use of data in chemistry and biochemistry. Scientists are sharing research methods in a community known as myExperiment. (See May Chau’s upcoming post “Tools for Authors” for some ideas on standards that are needed to enable overlay journals, and the sharing and re-use of open data).

From incremental changes by existing publishers to the sweeping structural changes suggested by e-Science and Open Data proponents, we are clearly in a state of transition. These changes beg the question... what happens to the peer review process? That is the topic of Bonnie Avery’s post.

Margaret Mellinger for RIS
In this post, I present trends that rose to the top in my journey to learn about, synthesize and succinctly present issues facing the future of the journal (or the article) in Social Sciences/Humanities. Are there trends you’d like to add? Do you have thoughts about OSU Libraries and how we are addressing these trends (or might do so)?

1. **The future of the journal (or the article) in Social Sciences/Humanities** seems to be closely connected to the rise of Digital Humanities (formerly called Humanities Computing). “Digital humanities is a diverse and still emerging field that encompasses the practice of humanities research in and through information technology, and the exploration of how the humanities may evolve through their engagement with technology, media, and computational methods.” One outlet for their work is the Digital Humanities Quarterly “an open-access, peer-reviewed, digital journal covering all aspects of digital media in the humanities. Published by the Alliance of Digital Humanities Organizations (ADHO), DHQ is also a community experiment in journal publication‖. DHQ publishes articles, experiments in interactive media, editorials and reviews. Another form of Digital Humanities work is the HASTAC (Humanities, Arts, Science and Technology Advanced Collaboratory) Scholar’s Program. This consortium of seeks “to collaborate across communities and disciplines fostered by creative uses of technology” and to foster student, faculty and others’ learning through the use of new media and cross-disciplinary lenses.

2. **New publishing platforms.** Scholarly publishing on the web offers numerous opportunities for new ways of publishing scholarship and interaction with the scholarship, the author and the audience. Media Commons Press provides one example. This all-electronic scholarly publishing network focuses on Media Studies. The press plans to publish work ranging from article to book length and features the publication, a scholarly network and web-based community. It uses CommentPress so readers can discuss the publication as a whole or at paragraph level. Media Commons Press hosts Kathleen Fitzpatrick’s text Planned Obsolescence Publishing, Technology and the Future of the Academy an excellent example of an online text and one that discusses issues of “peer review for the digital age”.

3. Developing the Social Sciences/Humanities cyberinfrastructure for scholarship. Cyberinfrastructure refers to the expertise, software, hardware, data and more that allow us to create and use a digital collection, digital library or even digital scholarship. Think about all of the infrastructure used to write, publish and make a book available and then consider how all of this transfers to our digital world for the purpose of preserving and making readily available our cultural record and heritage. Both funding and expertise is needed, to ensure the continued development of this cyberinfrastructure. Our Cultural Commonwealth: The American Council of Learned Societies Commission on Cyberinfrastructure
for the Humanities and Social Sciences report details the issues and offers these recommendations:

- Invest in cyberinfrastructure for the humanities and social sciences, as a matter of strategic priority.
- Develop public and institutional policies that foster openness and access.
- Promote cooperation between the public and private sectors.
- Cultivate leadership in support of cyberinfrastructure from within the humanities and social sciences.
- Encourage digital scholarship.
- Establish national centers to support scholarship that contributes to and exploits cyberinfrastructure.
- Develop and maintain open standards and robust tools.
- Create extensive and reusable digital collections.

4. There is greater attention being focused on the need for data preservation for data used in the Humanities and Social Sciences. One example of an effort in this area is Scholar’s Workbench (an evolution of Fedora) which plans to "examine how digital repositories can support the management of information in the support of all aspects of scholarship. Repositories could be the core systems used, or they could underpin the use of other systems through integration with research-specific tools.” Related to this is work on data archiving. Data archiving is becoming more important in the Humanities and Social Sciences. Two organizations supporting this work: Data Archiving and Networked Services (DANS) from the Netherlands and United Kingdom Data Archive (UKDA). DANS is the national organisation responsible for storing and providing permanent access to research data from the humanities and social sciences. DANS collaborates with researchers and encourages them to work in partnership with one another. DANS operates as a network, with a centre responsible for organising the data infrastructure. UKDA focuses on data acquisition, preservation, dissemination and promotion and is curator of the largest collection of digital data in the social sciences and humanities in the UK. Researchers can find and use quantitative and qualitative data for their research and teaching.

5. My last point, is not a trend but rather a finding from the National Humanities Alliance’s report The Future of Scholarly Journals Publishing Among Social Science and Humanities Associations. The main finding is the high cost of publishing in the Humanities and Social Sciences studied. Other findings that caught my eye: Social Sciences and Humanities seem to have a longer publishing process; the open access model of author/producer pays is not likely sustainable in these disciplines in part because the funding for them to do so is unclear; and last, subscriptions to print journals positively contribute to a journal’s financial success.

When discussing the future of the scholarly journal, Christopher Tomlins notes “the journey has become as important as the end result” in his American Council of Learned Societies Occasional Paper No. 43 The Wave of the Present: The Scholarly Journal on the Edge of the Internet. I feel this speaks to the significant changes in the tools and methods Social Science and Humanities
scholars use to conduct research—their journey to creating scholarship, is truly transforming.

Jane Nichols for RIS

**With articles on the run, where is home?**

January 6, 2010 | Filed under: Future of the journal | averyb

Last year, Todd Spires, a librarian at Bradley University, presented the results of a survey of content providers he had undertaken to address the future impact of wireless devices on e-journals (Spires, 2008). Setting the stage with a discussion of PDAs in research in general (and their rapid adoption in medical fields), at the time of writing he had not found many libraries with mobile sites—something which has likely changed in 12 months.

He contacted representatives from EBSCO, Elsevier (specifically their POCKETConsultant), JSTOR and Swets asking them the extent to which their content was currently available in a mobile-friendly format, their plans in this regard, what they as the costs and technical issues associated with providing this service, their perception of demand, limitations of this environment and other issues of concern.

While Swets and EBSCO representatives equated access to the full-text (“its least complex state”) versions of articles as a good indication that the technical issues were not a real issue. Beyond that they could shift the task of providing a WML-friendly versions of their articles to the publishers. JSTOR relies on page images as a faithful replication of the print product, and for a mobile user this would require redesign their entire website. Authentication was raised as a concern to while EBSCO and Swets mentioned passwords and/or locking licenses which expire. And everyone seems to agree that this is a small market right now/then (how much has changed in the intervening year). Spires suggests, “once libraries decide how to serve the needs of handheld device users, publishers and vendors will become more involved.”

In the context of the future of the journal being the article and its inevitable delivery to my iPod—I’ve been thinking of discussions about author contributions to open access repositories. We place a high priority on depositing the publisher’s pdf in our institutional repository rather than an author provided, final post-refereed draft which lacks only the journal’s frame (and pagination). Expediency may be the reason for this, still

- When the publishers make multiple versions of the same work available on their website (html, pdf, wml-friendly), why is our author provided version deemed less equal?
- Are we missing an opportunity to encourage to the gods of citation formatting (APA, CSE, MLA, etc.) to help students (and their professors) understand when multiple e-versions of the same work are equal in the same way that a less costly generic drug may be as effective as its more expensive brand name equivalent?
At the Open Access panel discussion in October 2009, Michael Boock said that “the future of the journal is the article.” This statement sparked interest in Research and Innovative Services for doing an environmental scan on the future of the journal. We wanted to see in what ways changes are already afoot. Some of the subtopics attached to “the future of the journal” are how journals are changing in the social sciences and the humanities, as well as in the sciences, how content and access is evolving, what is happening to peer review in the face of social networking tools, and emerging standards that new modes of scholarly communication will use.

Beginning January 6, 2010, NextGen Libraries blog posts will relate to these sub-topics. We look forward to your comments. If you don’t see a place to add a comment, click on the title of the posting).