

A parallel universe? Blogs, wikis, Web 2.0 and a complicated future for scholarly communication

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The Internet has yet to come of age, but there seems to be no industry that has yet to feel the transformative effects of its arrival. Change has come fast, and the pace of innovation and the multitude of issues that are raised with each development can seem overwhelming at times. Once upon a time, publishers and librarians were the clear custodians of access to scholarly information; but now, the ability to self-publish via tools such as blogs and wikis, a deluge in the availability of seemingly valuable scholarly information, and a radically different attitude and approach to the promulgation and use of that information, are utterly transforming the environment in which we operate. Yet the core values of publishing are going to be more important than ever as this new environment evolves. Publishers and librarians should be excited by the opportunities that await us.



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"The WWW project merges the techniques of information retrieval and hypertext to make an easy but powerful global information system. The project started with the philosophy that much academic information should be freely available to anyone. It aims to allow information sharing within internationally dispersed teams, and the dissemination of information by support groups."

Tim Berners Lee, 15 August 1991, Usenet posting

The good old days

In the good old days, scholars came to publishers, who controlled how scholarly research was published and held the keys that enabled access to the corpus of scholarly literature. Scholars and students came to librarians, who also held the keys that enabled access (after paying us publishers, of course). After a suitable training period, a scholar was ready to search and discover information contained within the library holdings. Between publishers and librarians, we built some great tools for resource discovery and dissemination. Then

one day the World Wide Web arrived¹. A few years later, a neat little search engine named Google showed up.

And then came other free (or very inexpensive) web-based tools for 'publishing'. Tools like Blogger and Typepad for blogging^{2,3}, like Wiki software; sites like Digg and Connotea^{4,5,6}. Digg is an attempt to democratize editorial choice in determining what 'stuff' is interesting/useful in a given subject area. People submit links, articles, whatever they might find on the web to Digg and then the crowd, being all-wise and all-knowing, will vote on the value of those items and (in theory) the quality material rises to the surface. Connotea (from Nature Publishing Group) is a free online reference management service for scholars, which allows sharing and serendipitous discovery of saved scholarly references.

Looking at something like Typepad, one wonders exactly what is there to stop someone using this platform to publish a journal. One could submit a blog-based journal to PubMed. One could submit it to the Science Citation Index for the all-important journal metrics. The idea of a blog as a serious publication may be hard to swallow, but

sites such as The Huffington Post, which focuses on American politics, show that traditional publishers are no longer the sole gatekeepers of content for communities in need of a conversation space⁷.

Now people have a choice in how to consume and produce content. However flawed it is, Wikipedia can be a reference source of sorts, and sites like Connotea or Digg point the way to post-publication review tools. Content can be found through the carefully constructed library catalogue system of an institution or through Google. (There's a reason Google is a verb.) A scholar can publish in a traditional journal, or in ScienceBlogs (see later in this article)⁸, or in a subject-specific wiki⁹. It's not happening, of course ... yet.

It is easy to be scared or threatened and difficult to have to engage in the uncertain world of change that the web is pushing upon us. Or is it? Timo Hannay from Nature makes this observation: *"The web is the most disruptive influence on publishing since the invention of moveable type in 1450... And now we have at our disposal the most powerful information dissemination tool in human history. If that doesn't make you feel excited and empowered then nothing will."*¹⁰

At the moment, our formal publication products deal with the end-points of the scholarly communication process. All sorts of communication of a less formal kind happens, and it is reasonable to think that blogs and wikis will have an impact in those areas. We need to try and understand the implications as the avenues to easy communication open up. Some of the issues that the scholarly use of blogs, wikis and other such tools put front and centre in my thoughts are: identity, privacy, authority, reputation, intellectual property, thought leadership and copyright. So let's examine what we need to pay attention to.

Useful wikis

Dr Wiki is a place 'where you can publish your review articles, clinical notes, pearls, and medical images...'⁹. How can a librarian keep up with the arrival of such offerings? Can the authority of the entries in the wiki be authenticated? How can the librarian evaluate them and advise others to evaluate them? How often must these guidelines be re-evaluated as more and more of these sites show up?

Wikis also raise some interesting considerations for publishers. Dr Wiki would like scholars to post

review articles, and even boasts an editorial board. Dr Wiki probably isn't really going to compete with anything a medical publisher offers (hopefully). But there are other sources out there that certainly will.

Citizendium may be one of those sources¹¹. The problem with Wikipedia is inherent in the concept that underpins it: in a completely open repository of material there can be no authority, no real control of the editing process. Citizendium is simply the Wikipedia model with open editorial control systems in place. Larry Sanger, the creator of Citizendium, is discovering what it takes to put together an authoritative encyclopaedia, something that publishers know an awful lot about. So far there is no business model associated with this project. Sanger is still working on that.

Encyclopaedia of Life (EOL) is another wiki-type offering being put together with some \$30 million in initial funding. The demo has some innovative ideas, particularly the apparent ability to alter the configuration of the site according to the knowledge level of the user. CABI builds similar products called Compendia¹². What is very interesting to note for CABI is that one of the expert resources that is cited on the demo is actually a free version of some expert material that we publish. This could be a threat to our traditional subscription-based offerings. But then it could also be a huge opportunity if CABI can take advantage of the inbound web traffic coming from EOL.

What is to stop publishers using these tools? The above examples are all about individuals who have decided to use web-based tools to put some authoritative content together. Publishers already know how to persuade authoritative figures to come together to provide content for others to consume. They know how to edit it, how to present it and how to market it. There is nothing to stop publishers choosing to use these new tools. Obviously, publishers need revenues from the enterprise, but that is really an argument about alternatives to subscription models. Anyway, couldn't a wiki be marketed via a subscription model?

Blogs

ScienceBlogs is a blog aggregation site from Seed Media Group⁸. It is a place for scientist bloggers to call home. Some have moved from their own blogging sites to this platform in order to be part of

this community. Some of the content crosses over into Seed, a more traditional magazine from the same publisher¹³. It is an interesting site to visit to see how the thought leaders can be harnessed to spread the conversation about science and scholarly communication, and also to look how an innovative publishing company has decided to try and monetize this process. This site really highlights many issues that challenge publishers and librarians, as these tools are used by the communities that we serve, in ways we would not perhaps expect.

Privacy At ScienceBlogs, one will find a mixture of articles, many of them discussing peer-reviewed literature or some generic issues that arise out of conferences people have attended, along with quite a bit of political writing as well. Interestingly, there is not much discussion of ongoing research in departments. As one member of Nature Networks commented recently, in conversation: 'Biologists would sooner blog their credit card details than the research they are doing.' One wonders if the calls for openness on the web will extend to such areas of the scientific process.

Identity Many of the science bloggers use pseudonyms¹⁴. For some, it may be to avoid peer-group ridicule. But there is also a belief that institutions may not understand and support the use of real names and affiliations. Dr Ben Goldacre has highlighted University College London's struggle to come to terms with the blog 'Improbable Science' by Professor David Colquhoun when confronted with legal challenges from some alternative therapists^{15,16}.

Authority and reputation ScienceBlogs contains a wealth of absolutely fascinating material, and as a conversational area, it clearly has value. However, authority comes from identity, being open, being seen and having those reputation metrics that are so important. Pseudonyms do not help to establish conventional authority and reputation. Right now a blog is not yet an aid to scientific reputation. But blogs are reputation-makers in other areas of publishing. Chris Anderson, Editor-in-Chief of *Wired* magazine started a blog called 'The Long Tail', where he expanded on an idea that efficiencies in manufacturing and distribution (especially via the Internet) can enable niche products and ideas to thrive¹⁷. His initial idea was expanded into a talk and then an article in *Wired*, which led to a book deal¹⁸. He kept firm ownership of the idea, by using the blog to continually

reinforce his authority and demonstrate his reputation.

Copyright In April 2007, Shelley Batts decided to blog about a piece of peer-reviewed research^{19,20}. As part of her detailed analysis of the research she included a graph and a chart from the paper obtained via her institutional access to the journal, published by Wiley Interscience. Shortly thereafter, she received a letter threatening her with legal action if she did not take down the two figures immediately. The wider blogging community picked up on it²¹ and excoriated Wiley for being 'evil'. A spirited discussion on fair use copyright provision ensued. Now, aside from the wisdom (or otherwise) of threatening legal action on a PhD student who is very obviously not engaging in any form of piracy or copyright violation, but clearly doing what can only be considered fair use (not to mention a service to the publisher), this tale puts front and centre the fact that copyright currently is not up to the job.

Blatt's blog post is an entry in a third party platform, which is making money (however tangentially) from the information contained within it, in this case some information published in a copyrighted journal. However, from the perspective of the blogger, the post is an educational item and covered by fair use. In a sense the blogger is having a semi-private conversation with other interested people, but doing so by using a public platform. This example clearly illustrates that the world has moved on and copyright is left spinning in its wake. And here is the point that needs to be made: please, let's not have the lawyers decide on the ability of our communities, our content providers, to hold important communications using these new exciting channels of collaboration. It should be the last choice, not the first.

Academic blogging is starting to get serious. Bloggers for Peer Reviewed Research (BPR3) is an initiative that is all about deriving authority and reputation from blogging activities²². Bloggers who wish to comment on the peer-reviewed literature that they see, follow guidelines that this community has drafted and put a standard icon on their blog post to signify that it is a serious piece of scientific discourse. BPR3 are already looking at aggregating such posts to further enhance the reputation of the symbol as a measure of authority. This is the community publishers and librarians serve: it is fast moving and self-organizing. It conceives of ideas and then goes into action, using the tools that

are already available. Activities like those of BPR3 are things that publishers and librarians should support. We rely on the activity of our various communities for content, and it is in our interests to build the best possible relationships.

Where do we go from here?

Publishers and librarians must adapt. Online communities require organizers, thought leaders and moderators; in other words, they need what publishers and librarians have always done. We are really well-placed to figure out the trust metrics that are required for this new world, managing the reputation signposts that scholarly communication relies on. It is a case of applying our knowledge and skills to a new environment. Initiatives like MESUR (MEtrics from Scholarly Usage of Resources), whose aims are to 'enrich the toolkit used for the assessment of the impact of scholarly communication items, and hence of scholars, with metrics that derive from usage data' should be supported and built on enthusiastically by publishers²³. Publishers have been the experts in information dissemination and still are (just). But they must engage with the people they serve, at the places where they go to discover, talk about, and announce the information that they have. This is why:

*"In a few years you may be able to carry the Library of Congress around in your hip pocket. So? You're never gonna read the Library of Congress. You'll die long before you access one tenth of one percent of it. What's important – increasingly important – is the process by which you figure out what to look at. This is the beginning of the real and true economics of information. Not who owns the books, who prints the books, who has the holdings. The crux here is access, not holdings. And not even access itself, but the signposts that tell you what to access – what to pay attention to. In the Information Economy everything is plentiful – except attention."*²⁴

Bruce Sterling spoke these words in his speech to the Library Information Technology Association in June 1992. He was right. What a great time to be a publisher or a librarian.

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