Research Communications Strategy Project

Want to know more?

The Research Communications Strategy project is a JISC-funded activity working to identify current issues in research communications, to generate responses at a strategic level and to develop an understanding of the processes of advocacy for open access within the sector. We welcome feedback from all interested parties.

We are based in the Centre for Research Communications at the University of Nottingham.
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Current Issues in Research Communications 4: Social Networking Sites for Sharing Research
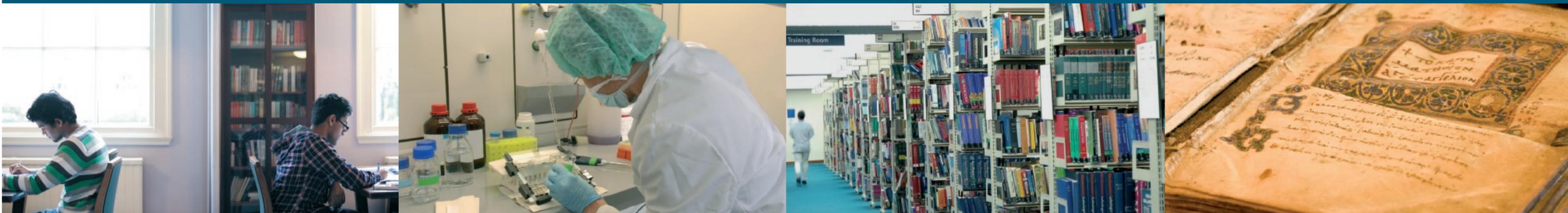
The fourth in our series of discussion papers on academic communications focuses on researchers' use of Web2.0 applications – and in particular, the popularity of sites such as Mendeley that combine bibliographic management tools with social spaces. Are these sites genuine alternatives to more traditional systems?

How do researchers manage their research in a Web2.0 world?

The list of Web2.0 tools that academics and educators are using continues to grow. Significantly, the academic "social/research space" service Mendeley continues to expand. In March 2010 the site was claiming to make available 16.3M document references or full text articles. Currently (February 2011) that figure stands at over 66M documents, with 770,684 users from 19,007 institutions. Whatever the specifics of these figures, the sheer volume and rapidity of growth is sufficient to warrant attention and give an indication of the popularity of the system.

Reasons for the popularity seem varied: in conversation, academics report using it primarily as a bibliographic tool, but at the same time talk enthusiastically about contacting other colleagues through the system and sharing information. When asked, they give no clear indication of its advantage as a bibliographic system over existing tools such as EndNote, so it may be that the reported subsidiary benefits are the true unconscious drivers.

Although it remains to be seen how well supported this particular service will be after the initial burst of novelty and enthusiasm, this does point towards a trend in research communication that we can see in other non-academic areas. This well-known trend is for the creation of ground-up communication networks and emergent taxonomies, groups and protocols, both technical and social. This has been a feature of Web2.0 social networking and shared tools such as Facebook, Flickr etc, but its application as a research communication tool is intriguing. While other Web2.0 tools have been used by academics for research purposes, "social" tools like Mendeley, Academia.edu and ResearchGate are aiming to become embedded within the research culture as communication and information mechanisms.

Proprietary-based services and commercial pressure

These developments seem exciting and beneficial: communities creating their own networks and ways of communicating. This has led to the massive growth of such services, now including those which are targeted at research support. However, such apparent freedoms can mask some quite restrictive mechanics. The emergent methods and behaviours are rarely as free and community-sourced as they might first appear: for example, Mendeley itself is, inevitably, a formal framework within which development and social experimentation occurs. Mendeley underwent two-and-a-half years of development and required substantial investment on the scale of other commercial information services before its launch. This is in line with other comparator Web2.0 services in other areas, which may start as small "garage projects", but which quickly amass significant developmental frameworks, potentially restrictive structures and commercial imperatives.

While it is too soon for such restrictions, if they exist, to arise within Web2.0 research tools, none the less this is a strategic concern. As proprietary software systems they are used by individuals and exist outside formal service contracts with institutions. Notice has to be taken of the business drivers and structures of such services if they are to be used as underpinning future research practice.

Social networks and open access

Within the sector, concerns about tie-ins to commercial systems are beginning to be expressed and discussed on blogs. Part of the current drive towards Open Access is to free up the research process from the limitations it has adopted by default, through the commercial system of subscriptions, journals, journal brands and impact factors. It would be ironic if at the point of freeing research communications from one set of restrictions, researchers unwittingly tied themselves into another.

The system of Open Access through repositories and OA journals (OAR/J) now finds itself being challenged by some Web2.0 services and can even be seen as being cast into a defensive position. Instead of being seen as a potential liberator, the OAR/J axis may now seem restrictive itself, modelled as it is currently on the traditional publication system. While there is work underway to help repositories in particular to move out of this tradition and start to hold integrated research outputs (articles, data and grey literature), support long-term peer-review etc, the basis of the repository system revolves around articles and formal metadata descriptions.

The limitations of proprietary search engines

Similar concerns exist within search. One intention of the OAI-PMH, which allows cross-searching across repositories, was to facilitate search through the use of a formal metadata structure. The system was created before Google and other full-text search facilities became established. But is it used?

Full text searching using Google, Alta Vista, Bing or others has now become the reported norm for academic researchers, even if only as a "first pass", and OAI-PMH-style searches begin to look fairly old-fashioned, no matter that they can be more precise and analytical. One of the advantages of more formal search is that it operates on a known system with known mechanics and resources. The databases that are searched can be listed or chosen: the results that are returned are based on a known, or knowable, algorithm. Therefore, researchers can be assured of the comprehensiveness of that search within known bounds. Other search services, such as Google, Alta Vista or Bing, are commercial services, with proprietary algorithms to select results, order results, promote selected results etc. The user does not know the extent of the search. Google already gives different results based on the same search in its different domains: for example, www.google.ca and www.google.co.uk. Google, Bing and others are now moving towards explicitly selective searches, based on data they hold or can gather about the user.

This issue is discussed in general terms within the library and information science community, and there are signs of concern from academics using the service. Proprietary search mechanisms are a potential future issue where academic search is concerned: not so much that there are particular search filters, but that as a principle there are unknown and commercially secret systems influencing what is found. This has worrying implications for future research if commercial decisions lead to emphasis or quashing of particular search results: maybe from one country, a commercial interest, etc. For example, Google has already suppressed search results on request from at least one government and is already the subject of an anti-trust probe from the EU for bias from commercial pressures.

It's free – but is that enough?

So, as a trend, there is a general move among researchers towards free-text Google-style search from commercial companies as there is a move towards Web2.0-style mounting, sharing of articles and other research information, again, based on commercial company services. The question has to be asked: how suitable are these tools? What controls exist for their modification or for exposure of their mechanics and methodologies?

Current commercial systems, like library-based search services, are typically sold to institutions with a consequent measure of institutional overview and control being possible. Web2.0-based services typically operate on a more diffuse commercial model and are adopted by individuals free at the point of use. By taking the commercial base away from a direct institution-to-supplier relationship, there is also lost any idea of service-level agreements, or contract-based assurances of independence from political or commercial influence in the service.

It should be emphasised that we do not seek to denigrate Web2.0-style services from some assumed position of moral high ground; or wish to criticise these services for what they are (or are not). We recognise their excellence and innovation. It is simply that the context of such services is important if we are to adopt them to the extent of underpinning research communication. If adoption and use is at the level of the individual, and if concerns become justified, it may be a more difficult task to deal with than cancelling a traditional service contract.

While we are at a crossroads in the development of new research communications, we have to note there is a risk if such services become embedded in a new standard research practice, even if using open access materials. Research communications could find itself locked into a new commercial paradigm, just as it moves from behind the toll-gates of traditional publishing.

This is an edited version of a fuller report.
To see the full report along with associated footnotes and references, please go to **http://crc.nottingham.ac.uk/projects/rcs/reports**