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The web gets social

AFRICA AI ALGORITHMS ARCHITECTURE ATTENTION BAYESIAN BIOINFORMATICS BIOLOGY BLOG BOOK CHANGE CLASSIFICATION CLUSTERING COGNITION COLLABORATION COMMUNICATION COMMUNITY CONTEXT CONTROL CSCW CULTURE DATA DESIGN DEVELOPMENT DISTRIBUTED DOPAMINE ECOLOGY ECONOMICS EDUCATION EMOTION EVOLUTION FMRI GENDER GENETICS GOOGLE ...

TODD DAVIDSON/CORBIS

ADVANTAGES OF SHARING OUTWEIGH DRAWBACKS.

Connotea may sound like a sexually transmitted disease, and RSS something from Star Trek. But along with Del.icio.us, Flickr, Furl, Wikis and the more familiar Blogs, a new generation of tools is reinventing the web. They are making it much more the shared workspace originally envisaged by Tim Berners-Lee, when he invented the web at CERN to enhance collaboration among geographically disparate research groups.

Scientists created the Internet and the web, and continue to lead innovation in such areas as distributed data and computing Internet Grids. The grid behind CERN's Large Hadron Collider in April delivered 500 terabytes of data during a ten-day run, an amount that would take 250 years to download using an average high-speed broadband connection.

Yet, although almost every corner of society is adopting RSS, blogs and other 'disruptive' technologies, scientists, and physical scientists, in particular, seem reluctant to embrace them. At its simplest, RSS simply saves you going to multiple websites to check what's new. You choose what sites you want to watch. It automatically downloads the latest changes — be it news headlines or journal Table of Contents — from all of them in real time. 16.5 million of the BBC's news stories every month are now read, not by people visiting the BBC site, but by them clicking on links from their RSS readers.

Connotea (an open source software developed by the Nature Publishing Group) and Cite-U-Like are 'social bookmarking' services. They are academic clones of the popular general public services Del.icio.us and its photo-sharing counterpart Flickr. With one click a scientist can store any URL or reference on Connotea, where they are publicly visible on the web. As a perk, the software goes off to publisher sites, finds associated metadata for the link such as author names, and displays this.

Taking sharing further, users tag papers with whatever they feel best describes the article, for example, 'cold plastic deformation' or 'residual stress'. As more users use such services, they begin to discover that the clicking on the tag 'cold plastic deformation' now brings up papers not only just posted by you but by others.

In this way communities and resource discovery develops. But as with ArXiv, eBay, or any service that depends on user input, the more use it, the more valuable it becomes. Intense competition means, however, that researchers are often loathe to use such tools. They don't want competitors to see what they are reading. Yet the value of greater sharing is obvious. In particular in cutting across disciplinary boundaries. Sharing nurtures serendipity.

RSS is also much more than just an alerting service. Its real power kicks in when it is considered in the context of social software such as blogs and social bookmarking services. RSS allows you to find information. Blogs and tools such as Connotea and Cite-U-Like allow you to store information, and more importantly to share it with others in new ways. RSS then comes full circle, allowing you again to keep abreast of changes made by others to blogs or Connotea tags you are keeping an eye on. It's a sort of collaborative glue, like that Berners-Lee first had in mind.

There are also some 10 million blogs, but hard-core science blogs make up only a handful. Yet blogs, whether individual, or by groups of scientists in a field, are an ideal means to draw attention to, and comment on, the latest research, whether for colleagues or the public. Scientists should not shirk from stepping outside the formal publishing system. Blogs are not some sort of lower life form. They are a valuable adjunct to formal papers, and an efficient filter in the big picture of current awareness, based on selection by experts.

ArXiv is a leader in electronic publishing. It may soon spur greater blogging. It intends to link automatically to blogs discussing a particular paper, which would be displayed on ArXiv as 'external links discussing this article'. Paul Ginsparg, its founder, says he hopes the new service will promote 'coffee shop' discussion of articles, and greater visibility of physical science blogs. Researchers should be leading the use of innovative tools, instead of lagging behind. Sharing involves surrendering some privacy, and a risk of free riders. But if many participate the advantages far outweigh these drawbacks.

WEBSITES
ArXiv: http://arxiv.org
Cite-U-Like: http://www.citeulike.org
Connotea: http://www.connotea.org
Del.icio.us: http://del.icio.us
Flickr: http://www.flickr.com
LHC grid: http://lcg.web.cern.ch/LCG/
RSS example: http://www.nature.com/npg/servlet/Content?data=xml/02_newsfeed.xml&style=xml