Evidence Based Library and Information Practice

Commentary

Openness: The Essential Quality of Knowledge

Martin Hall
Vice-Chancellor
University of Salford
Salford, United Kingdom
Email: martin.hall@salford.ac.uk

Received: 23 Aug. 2011 **Accepted:** 25 Aug. 2011

Openness is an essential quality of knowledge, enabling academic practice and driving key aspects of the knowledge economy. In contrast, inappropriate restrictions on the distribution of knowledge damage innovation and discovery and have a direct effect on the quality of life. This has been appreciated for a very long time. Thomas Jefferson, for example, famously used the metaphor of the candle, pointing out how many flames could be ignited without extinguishing or diminishing the light from the original. However, the over-commercialization of intellectual property in the early years of the digital revolution has left a legacy that is both inappropriate and dangerous.

The case for openness was made powerfully and eloquently by Peter Drahos and John Braithwaite in their book *Information Feudalism: Who Owns the Knowledge Economy*, published in 2002. Their case, still well worth reading today, was based on a careful analysis of the April 1994 Agreement on Trade-Related Aspects of Intellectual Property Rights, or TRIPS for short. This had been adopted by over one hundred countries meeting in Marrakech; Drahos and Braithwaite (2002) showed how it had been put together by a remarkably small group of international interests, dominated by the entertainment industries. "TRIPS", they wrote, "was the first stage in the global recognition of an investment morality that sees knowledge as a private, rather than public, good" (p.198). The deleterious consequences were immediately apparent to, for example, a large number of small scale Indian farmers, since it patented seed, preventing them from using their own seed stock rather than seeds licensed by multinational corporations such as Monsanto. Drahos and Braithwaite show how the Marrakech agreement was profoundly at odds with the development objectives of many of its

signatories. In contrast, the profound financial benefits to a narrow set of commercial interests were illustrated through a simple metaphor analogous to Thomas Jefferson's candle, "If you came to own a patent in a genetically engineered cow that produces twice as much milk as existing cows, you had an asset that was equal in value to all the herds of all the world's dairy farmers. And a more liquid asset than all that milk and all those cows" (Drahos and Braithwaite 2002, p. 198).

Given this, the release of *Digital Opportunity: A Review of Intellectual Property and Growth* in 2011, along with the quick announcement that the British government has accepted all its recommendations, is particularly to be welcomed. This review is sharply critical of the consequences of over-enforcement of intellectual property rights and the damage done by protectionism: "The copyright regime cannot be considered fit for the digital age when millions of citizens are in daily breach of copyright, simply for shifting a piece of music or video from one device to another. People are confused about what is allowed and what is not, with the risk that the law falls into disrepute." Digital material is "rotting away" because libraries are not allowed to archive it. Reliance on enforcement is inappropriate; "Instead, Government should respond in four ways: by modernising copyright law; through education; through enforcement and by doing all it can to encourage open and competitive markets in licensed digital content, which will result in more legitimate digital content at prices which appeal to consumers" (Hargreaves 2011, p. 6).

The Hargreaves review, and other reports and reviews like it, help us to regain the qualities and principles of openness that prevailed before TRIPS and the commercial appropriation of new digital knowledge technologies some twenty years ago. This includes re-examining access to published research results; the search for new models of distribution, including "green" and "gold" systems; and the role of open access repositories at universities and other research institutions.

A stable point is to see universities as organizations that are the opposite of the for-profit organizations that were so advantaged by TRIPS and related policies. Why? Because the essence of academic life is to give intellectual property away rather than to set up secretive and legally-defended systems in order to extract maximum financial returns (Hall, 2010).

Disciplines, and fields of study, are and always have been sophisticated global networks in which ideas and information circulate and are formalized. Systems of circulation include flexible and open networks of collaboration, shared databases, conferences, workshops, and a wide variety of mechanisms for bringing people together to share their insights and information about commonly prioritized problems. Systems of formalization include peer-reviewed academic journals, books by publishers with recognized academic credentials, edited collections of papers, and conference proceedings.

Taken together, this is a massive, open knowledge system that has been established over several centuries and which joins together some 10,000 institutions which are recognizable as universities, as well as hundreds of thousands of libraries and other forms of knowledge repositories (David, 2005).

What drives this network? The fundamental imperative is maintaining and advancing the reputation of individual academics and research groups. We do this through well tested systems of recognition and authentication. At the heart of the system of recognition is citation, and citation is a sophisticated form of distributing intellectual capital. A major point of the work of universities is to have the scholarship of its academics cited with approval and respect by as many other academics as possible across the widest geographical span, forming what Paul

David has called "invisible colleges" (David, 1998).

This system, of course, long predates the digital revolution of the early to mid-1990s although the digital revolution gives us immense opportunities to expand long established, open networked forms of academic knowledge distribution. And the university, too, is a resilient form of institution in its own right, despite the fact that every ten years or so its demise is predicted.
Why is this open academic network so resilient? It is as a result of the nature of knowledge itself. One of the beneficial consequences of the digital revolution of the mid-1990s has been the stimulation of research into the nature of knowledge. Work in the field of the knowledge economy has shown how knowledge is best understood as a spectrum from tacit to highly codified forms. Tacit knowledge is often shared by individuals on a face-to-face basis, circulating informally within groups. Codified knowledge is expressed in ways that can be easily summarized, communicated, and distributed (see, for example, Foray, 2004; Collins, 2010).

The work of a typical university science laboratory illustrates the spectrum. Ideas originate in informal discussions and seminars and are tossed around until they have some valency and coherence. As this tacit knowledge takes shape, it begins to be codified, first as working papers and then as a formal publication. In its most advanced form, codified knowledge is expressed in the binary code that enables our digital world. The more knowledge is codified, the more it can be shared. In its codified forms, knowledge can be reproduced, potentially infinitely, without exhausting the original. The more knowledge is shared and reproduced, the more futile our attempts to contain, limit, or own its distribution. And the more that knowledge is distributed, the more likely new combinations with their own potential will be enabled and promoted (Foray, 2004).

It is clear that these particular and peculiar qualities of knowledge make it different from other categories of phenomena. The history of knowledge, and its exponential tendencies in explaining the world, can be mapped against the great inventions that facilitated communication of codified information, i.e., the printed book, the telegraph, and the Internet. While we tend to think of the explosion of knowledge as a recent phenomenon, these essential qualities of knowledge have always been at the heart of the university and have been known for a long time.

Acknowledgement

This paper is based on a keynote address given at the 6th International Evidence Based Library and Information Practice conference (EBLIP6), held at the University of Salford, June 27-30, 2011.

References

Collins, H. (2010). *Tacit and explicit knowledge*. Chicago IL: University of Chicago Press.

David, P. (1998). Communication norms and the collective cognitive performance of 'invisible colleges'. In G. B. Navaretti, P. Dasgupta, K.-G. Maler and D. Siniscalco, *Creation and transfer of knowledge: Institutions and incentives*. Heidelberg: Springer-Verlag.

David, P. (2005). *Innovation and universities' role in commercializing research results: second thoughts about the Bayh-Dole experiment*. Palo Alto, CA: Stanford Institute for Economic Policy Research.

Drahos, P. and Braithwaite, J. (2002). *Information feudalism: Who owns the knowledge economy?* New York, NY: New Press.

Foray, D. (2004). *Economics of knowledge*. Cambridge, MA: MIT Press.

Hargreaves, I. (2011). *Digital opportunity: A review of intellectual property and growth*. London, Intellectual Property Office.

Hall, M. (2010). Minerva's owl. A response to John Houghton and Charles Oppenheim's 'The economic implications of alternative publishing models'. *Prometheus*, *28(*1), 61-71. doi: 10.1080/08109021003676375