

"Knowledge Networks" or Discourse Communities?

by Archie Zariski

Professor Bernard Hibbitts commented on my article in support of scholarly electronic journals in his piece [E-Journals, Archives and Knowledge Networks: A Commentary on Archie Zariski's Defense of Electronic Law Journals](#) by suggesting there were now other more efficient and effective models of scholarly communication using computer networks. In this response, I question whether the networked alternatives Hibbitts recommends will enable scholarly discourse to continue in the way necessary for the maintenance of disciplinary knowledge or whether they merely provide for the bare exchange of data and information.

Knowledge or Information

I must admit that Professor Hibbitts in his commentary in the previous [issue](#) of First Monday has pretty well convinced me that the technical obstacles to scholarly self-publication can be overcome without too much difficulty. However, in pursuing his vision of "knowledge networks" as the successor to electronic journals he has left me with some further doubts. Of these, one may be called primarily "technical" in nature, and the other "principled" or "theoretical", but they have certain links which I will explore.

Hibbitts' idea of "knowledge networks" firstly seems to me to suffer from a common mistake in the online community and that is conflation of the concepts of knowledge and information. It is to be expected I suppose that computophiles would tend to see information processing as tantamount to knowledge but I beg to differ. For me knowledge consists in those human cognitive structures which give data their meaning and value as information. Knowledge therefore is socially mediated through language and individually constructed. It therefore cannot be transmitted but must be recreated by individual minds. If this is the true characterisation of knowledge then I suggest it is inaccurate to describe it as being networked.

For me it is more important to keep in mind that knowledge is more a matter of participating in a relatively well-defined discourse sustained and enriched by debate. As Professor Hibbitts and others [\[1\]](#) have noted our conceptions of knowledge structured by scholarly disciplines are intimately related to those vehicles which have supported their discourses - scholarly and scientific journals. These media have contributed to the establishment and refinement of what we now call paradigms - the prevailing explanatory frameworks of a coherent field of study. It is as media of dissemination and interaction that journals have played such a significant role. To assume that individual scholars using search engines can keep in touch with one another and contribute to the evolving discourse of their field without such channels seems to me farfetched.

We do I think run the real risk of a loss of knowledge without agencies to focus and direct thought within, and sometimes against, our paradigms. This brings to my mind the perils of relying solely on search strategies over indexing for the pursuit and advancement of knowledge. Computers are very good at searching for data, but to date very poor at indexing it within any useful framework. This I suggest stems from the circumstance that indexes require abstract knowledge bases, something only humans seem able to create for themselves through language. For this reason, for instance, the e-journal I edit has adopted subject indexing based on a widely known framework (Library of Congress system) rather than trying to provide the latest search engine. Word searches can be a very misleading and dangerous method of research if not informed by rigorous conceptual analysis, but to engage in that analysis requires an initiation into a discourse, an ongoing scholarly conversation which journals embody best.



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There is an academic joke that students often appear to believe if they photocopy something they have learned it. I am afraid that Hibbitts' model of "knowledge networks" may be based on a similar misconception. One cannot expect to become conversant in say, the principles of constitutional democracy or the theory of quantum chromodynamics merely by locating and downloading the appropriate files. To become adept one must actually converse - that is enter into a discourse community. Self-publication of writing on the Web is not an environment in which such communities may flourish. Scholarly electronic journals, however, can provide the requisite medium for the spread of knowledge as opposed to merely the collection and distribution of data. As one example of their potential I would direct readers to conference proceedings recently published by E Law in which presenters can speak to readers by means of a multimedia format [\[2\]](#). Legal discourse is thus enriched and expanded far beyond the scope of print on paper.

In relation to my second "theoretical" reason for rejecting the demise of journals it may be my turn to suggest that Professor Hibbitts is somewhat naive or romantic. Like many other Internetters, he appears to believe that the Web has a kind of democratic nature that may lead to a creative explosion of knowledge. Encouraging every scholar to publish to the world on their own websites is considered to contribute to the "marketplace of ideas." In my view, however, this hope is somewhat fanciful, if one keeps in mind the nature of the knowledge we seek as described above.

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Paradigms are imperial, rather than democratic, by nature. They seek to enlarge their territory of influence to encompass all that a discipline can discover or imagine. All knowledges comprise power relations between those persons who are expert in disciplinary discourses and those who are less so. Such hierarchies can contribute efficiencies to the pursuit of further knowledge. As one commentator puts it: "Certainly we do not wish to create the electronic equivalent of the cacophony of Hyde Park or the community bulletin board. There must be a reliable, orderly, and controlled environment in which electronic scholarly communication may take place [\[3\]](#)."

Even Stevan Harnad, the proponent of "scholarly skywriting" has insisted on the necessity of a hierarchy of contributions to disciplinary knowledge. He remarks:

"The objective of those of us who have glimpsed this medium's true potential is to establish on the Net an electronic counterpart of the 'prestige' hierarchy among learned paper journals in each discipline. Only then will serious scholars and scientists be ready to entrust their work to them, academic institutions ready to accord that work due credit, and readers able to find their way to it amidst the anarchic background noise." [\[4\]](#)

If the Web is currently "undisciplined" it will have to become more so if it is to live up to its potential as a revolutionary breakthrough in the pursuit of knowledge. Electronic journals have the capacity to facilitate this channelling and focussing of thought through their

selection and refereeing processes. It is difficult for me to believe that open commentary posted on self-publication Web sites will have the same effect.

In the end I suppose I am not denying that the world of scholarly self-publication described by Professor Hibbitts is possible, but I do insist that it would be quite a different scholarly and academic world than we now know. My boldest prediction would be the disappearance of the scholarly disciplines as we now know them, perhaps to be replaced by more functional divisions such as "management theory and application" and "technology research and design". Our very conception of knowledge may change. We may look back at e-journals as the last gasp of an outmoded approach to scholarship. But for the time being I continue to believe in the enduring contribution of such publications to the intellectual life of scholars, academics and ultimately society as a whole. 

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Notes

[1] See for instance, Jerry Willis, 1995. Bridging the Gap Between Traditional and Electronic Scholarly Publishing, at <http://www.coe.uh.edu/~brobin/Educom95/EducomJW/index.html>

[2] See the following **E Law** articles: Sir Ronald Wilson, 1996. "Why Human Rights Matter for Everyone," **E Law - Murdoch University Electronic Journal of Law**, Volume 3, number 3 (September), at <http://www.murdoch.edu.au/elaw/issues/v3n3/wilson.html> and, June Williams, 1996. "Western Australian Anti-Discrimination Law and Proposals for Change," **E Law - Murdoch University Electronic Journal of Law**, Volume 3, number 3 (September), at <http://www.murdoch.edu.au/elaw/issues/v3n3/williams.html>.

[3] Bruce Morton, 1997. "Is the journal as we know it an article of faith? an open letter to the faculty," **Public-Access Computer Systems Review**, Volume 8, number 2, at <http://info.lib.uh.edu/pr/v8/n2/mort8n2.html>

[4] Stevan Harnad, 1996. "Implementing peer review on the Net: scientific quality control in scholarly electronic journals", pp. 103-118, In: R. Peek and G. Newby, (eds.), **Scholarly publishing: the electronic frontier**. Cambridge, Mass.: MIT Press, and at http://cogsci.soton.ac.uk/harnad/Papers/Harnad/harnad96_peer.review.html

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Knowledge Networks or Discourse Communities?: Response to Hibbitts' Commentary on Electronic Journals by Archie Zariski.

First Monday, Volume 2, Number 8 - 4 August 1997

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