HyperJournal

Michele Barbera *(barbera@netseven.it)*
University of Bologna
Nicolò D'Ercole *(nicolo.dercole@virgilio.it)*
University of Pisa

During the last decades a market failure known as serial price crisis has led to a market configuration where the major editorial groups retain oligopolistic control over the editorial market. This market situation is reflected in the research community which largely depends on public founding.

The access to research output in form of articles has become difficult because articles are often not easy to find and (even worst) subscription fees are often unaffordable for a large number of libraries.

This situation has potentially devastating consequences over the publicly founded research field and threatens the freedom to share scientific knowledge (Guédon). During the last 5 years the Open Access movement have proposed some solutions to the problem (Suber). Some of the Open Access initiatives gained wide acceptance in natural sciences (Public Library of Science;Los Alamos ArXiv). Unfortunately within the Humanities the situation is worst than in the natural sciencies, as the Open Access movement received only partial attention and little have been done for the cause (Di Donato). A point of peculiar interest is the small number of humanities-related open access journals if compared with its natural science counterpart. The reasons for the little adoption of open access journals could be identified in both the less founding the Humanities receives and the traditional resistance for the use of computers and the Internet as research tools.

HyperJournal (Hyperjournal) is a web application that facilitates the administration of academic journals on the Web. Conceived for researchers in the Humanities and designed according to an easy-to-use and elegant layout, it permits the installation, personalization, and administration of a dedicated Web site at extremely low cost and without the need for special IT-competence. *HyperJournal* can be used not only to establish an online version of an existing paper periodical, but also to create an entirely new, solely electronic journal. In comparison with existing software applications, *HyperJournal* introduces four major innovations:

1. *Dynamic contextualization* automatically transforms cross-references contained in journal articles into hypertextual, bidirectional links. When the reader views an article published in *HyperJournal*, a contextualization bar provides immediate access to a) all the articles the author has cited, and b) all the articles that cite the article currently being viewed.

2. *The HyperJournal Network*. Dynamic contextualization is not limited to one journal only: it connects all the journals that use the *HyperJournal* software in a distributed, semantically structured and scaleable peer-to-peer network (Hyperjournal). Additionally, Compatibility with the *Protocol for Metadata Harvesting of the Open Archives Initiative* ensures maximal interoperability between the *HyperJournal Network* and other electronic publications. The *HyperJournal Network* thereby creates a space in which knowledge is freely shared and readily accessible. Rather than using mere keyword searching or importing artificial conceptual tables to organize this space, *HyperJournal* transposes the time-honored system of scholarly citation into an electronic environment.

3. *HyperJournals versus core journals*. By clicking on an author's name, the *HyperJournal* system automatically searches the entire *HyperJournal* network and produces a citation list that includes all the articles written by the author, all the articles the author has cited, and all the articles that cite the author. Comprehensive bibliometric lists can thereby be composed without the need to rely on the manual consultation of a small set of core journals, often exclusively in English. In this system, by contrast, it will be the actual give-and-take of academic discourse, registered automatically on the network through citations, which will signal the prestige of a journal (even of small niche journals written in so-called minor languages) and establish the reputation of scholars. In addition, through the use of (*Semantic Web*) RDF describers, bibliometric lists can be constructed that distinguish, for example, between positive and negative citations(Barbera and Di Donato).

4. Structured vs. Opaque Formats. Although *HyperJournal* let the editorial board choose which document formats are acceptable for submission, *HyperJournal* offers to the authors all the tools they need to use structured formats for writing their articles. The adoption of structured formats such as XML has enormous advantages over unstructured or opaque ones (such as *MS Word* or PDF) (Hockey). One of the major advantages is that structured formats are machine understandable thus perfecly suited to be used in conjunction with *Semantic Web* technologies. The most widely adopted structured format is undoubtely *LATEX* which is wide spread within the scientific community. Unfortunately its usage within the Humanities is very limited. On one hand this is a disvantage, on the other hand it leaves space for the diffusion of XML (who has even nicer computability properties then *LATEX*) as the format of choiche. Initiatives such as TEI has already gained wide

acceptance among Humanities Scholars. TEI and other XML dialects such as DOCBOOK have the potential to be used directly to author articles, not only to encode existing texts (Piez). For this reason the *HyperJournal* developer's community is customizing and adapting some XML editors to facilitate the authors in their work. If the adoption of XML as a format for writing articles will be succesful we can expect searches to be easier and much more powerful than today's heuristic search tecniques and even to greatly reduce the cost of paper publication, as transforming XML to other formats suited for paper printing is a trivial task.

Free access and respect for copyright: legal framework

*HyperJournal*aims at contributing to academic research on Internet publishing and encourages the birth of scholarly communities on the Internet. In order to achieve this goal, *HyperJournal* not only delivers IT solutions, but also tries to offer models for the independent organization and governance of scholarly communities, to develop systems for Internet peer-review, and to establish a legal framework for the free diffusion of knowledge on the Web that respects the principles of copyright. The documentation accompanying the software describes and comments on several models for the statutes of scholarly communities (the presence or absence of an Editorial Board; the constitution of the scholarly community by election or by other means; peer review and anonymity policies; criteria for publication; etc.), the administration of which is supported by the software. In addition to the licences provided by the Creative Commons initiative(`<http://creativecommons.org/>`) *HyperJournal* contains three models of copyleft legal licenses (FreeKnowledge, OpenKnowledge, LimitedKnowledge`<http://www.hypernietzsche.org/licenses/en/index.html>`) designed to reconcile the goal of open access to scholarly articles with the need to protect against plagiarism and to respect the moral right of the author.

Founding and Distribution

The *HyperJournal Software* has been initially founded by the Groupement de Recherche Européen (GDREplus) *Hyper-Learning. Modèles ouverts de recherche et d'enseignement sur internet* which is a multidisciplinary research infrastructure promoted by the Centre National de la Recherche Scientifique (CNRS) regrouping 29 partners of 9 countries (universities and research centers, a large corporation (IBM), and three small enterprises). The software is currently being developed by both project members and volounteers and it is supported by *Dipartimento di scienze della politica*, University of Pisa. *HyperJournal* is scaleable modular software distributed freely with an Open Source license. For these legal and technical reasons it is free to use and easy to modify and so can be adapted to the exigencies of a large number of scholarly communities. A prototype of *HyperJournal* has been released in February 2005.

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