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Bridging the digital divide: libraries providing access for all?
Peer-review innovations in Humanities: how can scholars in A&H profit of the “wisdom of the crowds”?

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Abstract
Though supported by a large number of scholars in Scientific, Technical, and Medical (STM) disciplines traditional peer review does not live up to the needs of an efficient scholarly communication system and of quality research control. Therefore journals in STM are experimenting different forms of refereeing in combination with more traditional peer review system. Such is the case of PLoSONE, Biology Direct, Atmospheric Chemistry and Physics, Electronic Transactions on Artificial Intelligence, and JIME. However in STM disciplines public peer review is not considered an alternative to more traditional quality certification forms. It may be the case in the Arts & Humanities. In A&H publishing system peer review is by far a less common practice. Therefore the adoption of a social peer review process could be very useful to foster research in humanities. Scholars in A&H can profit of the interactive evaluation forms of the public peer-review to strengthen the scholarly debate, to foster active international and interdisciplinary discussions, to focus social attention on topics in Humanities, to broaden the borders of the cultural and intellectual discourse among non-scholars (public debate). This paper will provide some examples of how social peer review has been adopted by innovative communities of scholars in humanities to publish new experimental digital book models.

In the digital environment the concepts of “document”, of “completeness of a document” and of “evaluation” is fast changing. In a close future in scholarly publishing it might become possible to overcome the rigid distinction between ex-ante and ex-post evaluation as the evaluation process might become an enduring part of the text itself.

Keywords: peer review, social peer review, public peer review, Humanities, scholarly publishing, scholarly communication, Web 2.0.

Traditional peer review forms and how they work (or don’t)

In its modern meaning the practice of peer review dates back to the 1731 when the Royal Society of Edinburgh consulted individuals “most versed in these matters” before publishing a collection of articles in Medical Essays and Observations. Yet it was not until the end of the second World War that peer review became a widespread practice in STM disciplines. The need for quality control and the growing volume of articles submitted to journals led editors to invite experts to take part in the selection of papers. More recently the paradigmatic “editor plus two referees” system has become widespread (Rowland, 2003).

Traditionally in scholarly publishing we distinguish three forms of peer-review:

- single-blind peer, which is the most common refereeing form in the traditional publishing system: the identity of the author is known to the reviewer, but not vice-versa;
- double-blind peer review which masks the identity both of the reviewer and of the author. The American Psychological Association\(^1\) adopts a double-blind peer review system;

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\(^1\) Read the paragraph “Masked review policy” on the APA web site http://www.apa.org/pubs/journals/amp/index.aspx.
- open peer review\(^2\) that is the form by which both the reviewer and the author know each other identity.

This latter refereeing system is rarely adopted in traditional print journals, but is becoming quite ordinary in Open Access publishing. As a matter of fact the large majority of journals published by BioMed Central, the greatest Open Access publisher, uses an open peer review process and the pre-publication history (initial submission, reviews and revisions) is posted on the web with the published article.\(^3\) The BMJ also adopts an open peer review system. Although open peer review is still rarely adopted in traditional publishing many scholars perceive it as an ethic refereeing form and an opportunity to progressively move away Science from anonymity (Smith, 1999).

STM scholars’ attitude towards whatever forms of peer review is generally speaking positive. “Whenever surveys of scholars’ opinion about scholarly publishing have taken place, the maintenance of peer review systems has been a top priority requirement” (Rowland, 2003).

This statement has been reinforced recently by a survey carried out by the Mark Ware Consulting for the Publishing Research Consortium (2008). According to the PRC survey peer review is widely supported by academics: 93% of the respondents to the survey disagreed that peer review is unnecessary. The large majority (85%) agreed that peer review greatly helps scientific communication and 83% believed that without peer review there would be no control. 71% of the respondents perceived the double-blind as the most effective form of refereeing.

In a previous survey carried out by the ALPSP (2001) almost 70% of authors were "satisfied" or "very satisfied" with the current system of peer review, but when asked in their referee role one six of the scholars said they were overloaded with papers to review.

Peer review drawbacks have also been at length discussed in the huge professional literature on the topic: Meadows 1998, Smith 1999, Rowland, 2003, McCormack, 2009 to cite only a few of them.

A widespread concern among scholars is about the effectiveness of the system in ensuring quality control: undetected mistakes and falsifications are quite common in the peer review history. Bias is also frequently cited as a general drawback. It is often ascribed to the single-blind peer review form.\(^4\) Delay in publication and costs associated with a high rejection rate of articles are also perceived as weaknesses of the current refereeing system. Very recently peer review scalability, i.e. the ability to cope with the increasing number of articles submissions, has also become a huge problem, worsened by the trend to the cross-fertilization of the science. As matter of fact the traditional peer review system shows many signs of obsolescence.

Public peer review in STM journals

Electronic publishing has made it possible to overcome some of the above cited problems with peer review. “The Net offers the possibility of implementing peer review more efficiently and equitably” wrote Stevan Harnad in 1996. Since then scholarly electronic publishing has experimented new approaches in reviewing. Very recently the success and widespread adoption of the Web 2.0 tools have fostered some publishers of the STM disciplines to test alternative peer review mechanisms by combining the traditional refereeing system with the open peer commentary. We will call this system “public peer review”.

Harnad himself is a forerunner of the debate on the public peer review. As editor of the OA journal “Psycoloquy” he experimented an after publication peer review by publishing referred peer comments on articles. In fact Open Access journals are leading the way to interactive public review.

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\(^2\) In the professional literature it is not uncommon to read about open peer review as of a form of refereeing open to the public comments. In our paper we prefer to make a distinction between open peer review to mean that both identities of the reviewer and of the author are known and public peer review, i.e. papers hosted on an open server and submitted to Internet public comments.

\(^3\) See for instance the publication and peer review process of BMC Gastroenterology [http://www.biomedcentral.com/bmcgastroenterol/ifora/#peerreview](http://www.biomedcentral.com/bmcgastroenterol/ifora/#peerreview)

\(^4\) Scholars supporting the idea of the single-blind peer review stress that anonymity is necessary in order to allow reviewers the freedom to say that an article should not be published.
The peer commentary phase can either follow the articles publication (PLoSONE, Biology Direct) or be embedded in the articles publication workflow (Atmospheric Chemistry and Physics, Electronic Transactions on Artificial Intelligence, JIME).

The latter OA journals present very interesting cases of public peer review:

- **Atmospheric Chemistry and Physics** is a journal of the European Geosciences Union. ACP peer review is based on a two-stage process: a fast access review allows articles to be published in an discussion open section where articles are submitted to open comments for a period of eight weeks. Referees and registered readers can discuss the papers. Authors can replicate and are advised to perform technical corrections. In the second stage peer review is completed and the final manuscript, if accepted, is published.\(^5\)

- Very similar to ACP review is the two stages process of **Electronic Transactions on Artificial Intelligence (ETAI)**, a journal published by the Linköping University Electronic Press. In this case the open review stage lasts three months. After that period articles are submitted to a speedy revision - referees are only supposed to return a verdict of 'pass' or 'fail' - and published.

- **Journal of Interactive Media in Education (JIME)** is an interactive journal on media in education. In this case the review process is a mixing of private and public peer review. It follows like this: authors submit articles; reviewers post their comments on website; authors respond to comments leading to discussion; readers build on review debate (public peer review), editors may adjoin additional editorial comments in review debate and require changes.\(^6\)

Interactive public peer review enhances scholarly debate and quality assurance, deter submission of low-quality manuscripts, reduces articles rejection rate, speeds up research outputs’ dissemination, enhances the density of information in final papers (Koop, Pöschl, 2006).

In all above cited journals’ examples public peer review is complementary to the refereeing system and is not regarded as a real alternative to more traditional quality certification forms. It may be the case in the Arts & Humanities.

**Peer review in Arts & Humanities**

Whatever types of peer review the certification function is mainly performed in the STM scholarly publishing.

Due to epistemological, historical and economic motivations the refereeing process is rather an unusual practice in the Arts & Humanities. Among the different reasons we can identify as predominant the following ones:

1. the communities of humanists are often small, self-referential, distributed, and scarcely cohesive. Peer review system is build upon fairly large communities, where a sufficient number of scholars is willingly to act as reviewers;
2. the monograph is the predominant means of publication in the humanities and, traditionally, monographs are not subject to the peer review process;
3. research funds allocated in STM sector are by far higher than those allocated to the humanities. This is not to say research in humanities is not funded at all. As a matter of fact there are plenty of bodies, both public and private, that fund research projects in the humanities, i.e. the Mellon

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\(^6\) [http://www-jime.open.ac.uk/](http://www-jime.open.ac.uk/)
Foundation and the National Endowment for the Humanities (NEH) in the United States, the European Science Foundation Standing Committee for the Humanities for Europe, the Arts and Humanities Research Council and the Research Information Network in the UK, both founded in 2005, the Social Science and Humanities Research Council in Canada and the Human Sciences Research Council in South Africa - but the total value of publicly funded research in the humanities is well below the value of research funded in STM.

3. quality control is by far a greater concern in medicine and biology than, for example, in philosophy or history.

It would however be wrong to argue that in humanities there is a complete lack of quality assessment.7

To certify academic monographs quality, for instance, university presses generally apply to editorial boards whose revision tasks are of general scientific coordination and evaluation. The publication of a monograph in a series may also be regarded by itself as a quality indicator, notably if the volume is a part of multi-annual publishing schedule, which reinforces the value and the prestige of the monograph to the scholarly communities.

Reviews are also another means to evaluate scholarly monographs. This is obviously an ex-post evaluation mechanism and has the weakness to be ineffective for a real revision of the text.

As to the journals in humanities it should be stressed the deep difference between journals internationally targeted that in many cases adopt certification systems very similar to those used by the journals of the STM segment and fulfil international standards (i.e. ISSN, timeliness of publication, complete bibliographic information for all cited references, full address information for every author) and journals aimed to a local market, whose target group is the domestic academic community.8 In the latter journal category a certification system for the publication of the articles is very seldom adopted. In this case the selection of articles is rather a task of the editor, personal relationships between editor and author prevail and the reviewing function remains mostly unapplied.

However the widespread transition from print to digital, the wide dissemination and use of the Web 2.0 tools and last but not least the growing mass of open access content are opening new perspective to the research in humanities and fast changing the logic and the channels of scholarly communication both in hard and in soft sciences.

New ways of performing the certification function (mostly but not exclusively ex-post) are advancing:

- the retroactive peer review performed through the overlay journals9 which select the content archived in repositories (generally as preprints) and validate it;
- the social peer review, i.e. ex-post quality control performed through the social tools of the Web 2.0, particularly through the online reference managers and social bookmarking systems such as Connotea, CiteUlike or Delicious or through the professional hubs, such as Nature Precedings.

Dario Taraborelli (2008) defines the particular form of social peer review performed though the online reference managers and the social bookmarking tools "soft peer review”. He stresses the possibility that “social software metrics might help bridge the gap between traditional quality

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7 To a certain extent many scholars recognize that also in humanities a work without scholarly review diminishes its value to the faculty member and to the discipline (Shulenburger, 2007).

8 Recently journal in humanities have been ranked in three categories according to the European Reference Index for the Humanities (ERIH) http://www.esf.org/research-areas/humanities/research-infrastructures-including-erih/erih-initial-lists.html

9 A definition of “overlay journal” is proposed by Peter Suber in its Guide to Open Access Movement “An open-access journal that takes submissions from the preprints deposited at an archive (perhaps at the author's initiative), and subjects them to peer review [...] Because an overlay journal doesn't have its own apparatus for disseminating accepted papers, but uses the pre-existing system of interoperable archives, it is a minimalist journal that only performs peer review.” http://www.earlham.edu/~peters/fos/guide.htm
indicators and raw usage factors”.
- the public peer review, as discussed above. Public peer review is obviously also a form of social peer review. Still its application domain is a bit narrower as it notably refers to discussions embedded in scholarly publishing. To a certain extent public peer-review is a more-formalized kind of social peer-review.

All the above mentioned peer review forms can be successfully adopted in humanities both for monographs and for journals, provided that humanists complete their transition to digital.

Examples of overlay journals in Arts & Humanities are Perspectives in electronic Publishing http://www.ecs.soton.ac.uk/research/projects/176, an experimental journal connected with electronic publishing and Edernet http://france.barbz.org/archives/12, an overlay journal/blog on peer review by the Italian researcher Francesca Di Donato.

Up to date humanists can count on a fair number of dedicated repositories upon which the idea of overlay services could be build and developed: i.e. the Cultural Studies e-Archive (CSeARCH) Cogprints, the History and Theory of Psychology Eprint Archive, E-LIS, the international archive for information science, HAL, the central repository of French CNRS with the section on Humanities (HAL-SHS), Kultur the Eprints inter-institutional repository in creative and applied arts, the Nordic Arts and Humanities e-print archives, the Open Language Archives Community, the PhilSci Archive, and the two data repositories Data Archiving and Networked Services (DANS) and the Arts and Humanities Data Service (AHDS).

However to Arts & Humanities the great opportunity in order to establish a quality control system is offered by the public/social peer review. The takeover of an effective refereeing system in humanities is crucial as in the soft sciences the bibliometrics analysis based on citations count is also very weak. As a matter of fact the Journal of Citation Reports does not index the Arts & Humanities Citation Index.

Some innovative experiments of public/social peer review have been recently carried out in open scholarly monographs publishing and in this case humanists are leading the way to innovation. Innovation is affecting both the way of producing the text and of searching and benefiting of it. At last but not at least, innovation is reshaping the nature of peer review.

Innovations in scholarly monograph publishing (included peer-review)

As we already stated humanists still rely heavily for their research and intellectual dissemination on monographs (Hughes, Buchanan, 2001). Though the scholarly book might be seen to a certain extent as an outdated research output, it is undeniable that “the monograph remains valuable (and, indeed, necessary) as a venue for a certain form of intellectual work” (Fitzpatrick, 2007).

However due to the serials crisis pricing, to the global economic restrictions, to the deep cuts in the library budget and to the unsustainable burden of the academic publishing scholarly monographs in humanities that are worthy publishing often find no market.

In this critical situation open digital scholarship in A&H becomes a necessity. The move to digital format is not merely a replication of the print environment. For humanists as researchers the move to digital is uttermost a way to explore the text, to profit of the power of the technologies in order to change the way research in Humanities is performed. Let’s think for instance of the computational methods applied to the Humanities, the computational linguistics, the computational semantics, the

10 Taraborelli’s idea has been later carried out by a very innovative program led by the Public Library of Science (PLoS). In March 2009 PLoS launched the “Article level metrics” http://www.plosone.org/static/almInfo.action. Scope of the program is to determine the value and the real impact of an article on the scientific community by combining the citation measuring metrics based on Scopus, PubMed and CrossRef with the online usage data, the comments and notes posted by the users on the PLoS site, the social bookmarks provided by Connotea and CiteULike, the citation provided in blog services i.e. Nature Blogs, Postgenomic and Bloglines.

11 It is very intriguing the idea by John W.T. Smith (2003) of considering the weblogs as precursors to overlay journals.
Computational methods in Humanities are becoming widespread. They are conjointly driven by the technology, the mass digitization project (Google Book Search, Open Content Alliance), the growing bulk of content available open access and by a fair number of computer-oriented humanists (Howard, 2009).

For humanists as authors the digital text may even be a mean to get tenures but it also represents a way to foster the public debate, to gather multiple perspectives, to recover the very first discussion function of the scholarly text. Blogs and wikis, particularly if embedded in the publishing workflow, have the potential to reassess this function, to transform the peer review system, a practice never really established in A&H, from “a system of gatekeeping to a mode of manifesting the responses to and discussion of a multiplicity of ideas in circulation” (Fitzpatrick, 2007).

To this scope the Institute for the Future of the Book developed in 2007 Commentpress, an open source theme and plugin for the WordPress blogging engine that allows readers to comment paragraph by paragraph in the margins of a text, to annotate, to gloss, and to debate on it. Commentpress was originally developed by Eddie Tejeda at the Institute for the Future of the Book and continued by Christian Wach in conjunction with Giant Chair.

CommentPress allows a revision of the literary text open to all, academics and not, a form of social peer review applied to the monograph. By using a tool like CommentPress the notion of “monograph” is challenged: the text is no more crystallized into a "solid" form, but becomes a dynamic “liquid publication” (Casati et al., 2007) that overcomes the monolithic distinction between qualitative research assessment (ex ante) and quantitative assessment (ex post) and the concept of article’s “version” or book’s “edition”.

Examples of publications built upon CommentPress are the volume “GAM3R7H3ORY” by McKenzie Wark and the article “The Holy of Holies” by Stephen Mitchell.

More recently the Public Knowledge Project (PKP) developed an open source software to publish monographs both in digital and print forms: Open Monograph Press. The software provides the possibility to activate both an incubation stage and an assessment stage.

Scope of the incubation stage is “to realize the possibilities of a book by engaging with interested and encouraging readers. This puts social networking to a new kind of test: whether it can guide work into the form of a book, or a better book, than might otherwise be written […] It builds on the existing ability of online networks to link communities of shared interest, which are willing to contribute to the work of others while that work is in progress or has reached a working-paper stage.” (Willinsky, 2009)

The advantage of activating an incubation stage is to use the Web 2.0 technologies to assess the potential interest of the online communities and to lower the financial risk of the monograph’s publication.

The assessment stage is a module to manage an internal and external review process. It is a clear sign that the qualitative assessment will become increasingly important in A&H.

Social peer review in A&H: challenge and opportunity

12 An example of computational methods applied to Humanities is the work carried out by the Perseus Digital Library at Tufts University. The Perseus Digital Library is examining how words in Latin and Greek have changed over time by comparing the linguistic structure of classical texts with works written in the last 2000 years. A great number of projects in Digital Humanities is described in the volume “Digital Humanities 2008: book of abstracts”. Available at http://www.ekl.oulu.fi/dh2008/Digital%20Humanities%202008%20Book%20of%20Abstracts.pdf

13 While it is true that digital publications are still regarded by a large majority of the academics as a lower medium, particularly in humanities, it is also true that this attitude is changing. A very recent Italian law, for instance, states that articles published both in print and in electronic journals should be taken in account to assess a researcher’s output (Art. 3 of the D.M. n. 89, July 28th 2009).

14 The idea of “liquid publication” appears to be especially suited for textbooks that have companion material and are evolutionary, collaborative and even composable (Casati et al., 2007).
Up to date social peer review is not a real substitute to the current forms of qualitative research evaluation. Neither it is flawless. A real concern among academics is about the participation of the research communities to the public revision. In the social Web communities are self-managed and there are no obligations neither responsibilities (Siemens, 2009). Scholars’ time is scarce and the collaborative approach is often time-consuming.

In June 2006 the Nature Publishing Group launched a very interesting experiment of public peer review for the journal “Nature”. The online peer review ran parallel to the traditional peer review system. The authors of 71 (or 5%) out of 1369 articles published by the journal between 1 June and 30 September 2006 agreed to display their papers for open comment. “Of the displayed papers, 33 received no comments, while 38 (54%) received a total of 92 technical comments. Of these comments, 49 were to 8 papers. The remaining 30 papers had comments evenly distributed. The most commented-on paper received 10 comments (an evolution paper about post-mating sexual selection)” (Greaves et al., 2006). The community participation was actually rather scant. This happened in 2006 in the scientific domain. It was probably too early to bring about an experiment like this in a scientific research journal.

In humanities the problem of fostering a collaborative revision of the text from the research communities is negligible as the public debate is embedded in the scholarly communication and is a vital part of a humanist’s research working day.

“...For humanities - which deal with human beings - it is crucial to communicate and to energize the new cultivated public opinion that is arising from the Internet.” (Pievatolo, 2007).

As a matter of fact humanists are already accustomed to cooperate in networked discussion groups, mailing lists, in the others’ researches: “we answer questions, provide references for citations, engage in discussion. From here, it’s a small step to collaboration, using those same channels as a way to overcome geographical dispersion, the difference in time zones, and the limitations of our own knowledge [...] These network discussion groups--which are really communities of interest--make it possible for people to break out of their underfunded, undercapitalized, under-recognized institutional contexts, and become recognized for their own contributions to the community” (Unsworth, 2003)... And discussion groups are uttermost active on the Net.


Scholars in A&H can profit in various way of the social peer-review system:
the interactive discussion helps humanists to build and reinforce their reputation among peers; it strengthens the scholarly debate, it fosters active international and interdisciplinary discussions; it focuses social attention on topics in humanities;15 it broadens the borders of the cultural and intellectual discourse among non-scholars; it allows the different distributed communities to interact and exchange ideas overcoming the fragmentation of research in humanities.

Where the discussion does not begin by itself, it would always be possible for editors or authors to invite scholars and non-scholars16 to the public debate.

A part from the concern about the social participation at the text revision we can identify two further possible drawbacks in the adoption of a public/social peer review system in humanities:

1. first of all we must recognize the fact that public/social peer review is still far from being

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15 Social attention is very important indeed to increase fund-raising.
16 It should be remarked the importance to involve students in the public debate. Faculty should provide students with the opportunity to collaboratively study and work.
accepted by the academia as a real qualitative assessment of the scientific research output. This is partly due to the inertia of the scientific communities and their scarce ability to accept and absorb the changes and partly to the idea that social peer review is mainly still a form of ex-post qualitative assessment only partially embedded in the production of the text, and therefore scarcely effective. It is obviously possible to push the comments in the text by publishing a new version of the document. This drives our reflection to the second drawback of adopting a social evaluating system for humanists’ communities;

2. as a consequence of what we have just discussed the public/social peer review may challenge the concept itself of authorship. Collaborative revision might make scholars feel uncomfortable, notably humanists as most of them are still accustomed to the idea of individual authorship. Still the change is in act. Technology is ripe. Computer-oriented tenured scholars and young researchers may lead the way and bring about these new forms of qualitative assessment. The successful case of Wikipedia, the world-known collaborative encyclopaedia, shows the power and the effectiveness of the so called “wisdom of the crowd”. Collaborative work is also becoming more and more common in Digital Humanities. Due to the complexity and the variety of skills and expertise involved in digital research environment, to the increasing number of calls for collaborative projects, notably in Europe, and to the generational change humanists are learning to collaborate within their institutions and both at national and international level (Siemens, 2009). As a consequence of this change in digital humanities collaborative authorship is becoming an ordinary practice, certainly more common than it was only a few years ago in traditional paper publishing.18 Hopefully in a close future publishers, editorial boards, learned societies, and scholarly communities will find new copyright’s forms to protect the collaborative scholarly work and to recognize the single credit at the same time.19

Finally we should consider that scholarly publishing is deeply and fast changing. In the digital world the distinction between the different types of documents blur, the blogs where scholars gather ideas and opinions become a first approach to the scientific publication, the idea of “liquid publication”, “scientific knowledge object” (Casati et al., 2007), and “enhanced publication” (Hogenaar, 2009) challenge the concepts of “document”, of “completeness of a document”, and of “evaluation”. In this context “monographs” and “journals” as they are conceived today will soon become obsolete. We don’t know how scholarly publishing will look like in ten years’ time but if humanities want to preserve their eminence they should strive to establish a qualitative evaluation system. One way to achieve this is to foster “the acceptance of these innovative evaluation models by the community, including the bodies in charge of deciding on careers of individuals” (Casati et al., 2007).

References:  


17 An extreme consequence of this statement might even be the difficulty to quantitatively evaluate a researcher’s output.

18 In a post of April 2009 on her blog Lisa Spiro reported the results of an investigation on the number of collaborative articles published between 2004 and 2008 in two well-respected quarterly journals, American Literary History (ALH) and Literary and Linguistic Computing. She discovered that 5 of 259 (1.93%) articles published in ALH—about one a year—featured two authors (none had more than two), while 70 out of 145 (48.28%) of the articles published in LLC were written by two or more authors and concluded that collaborative authorship is more common in digital humanities.

19 I found very intriguing and innovative the Kumar’s idea of offering co-authorship of the manuscript to the reviewers (Kumar, 2010).

20 All URLs were last controlled on the 15th of January.


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