Institutional archives for research: experiences and projects in Open Access

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«Open Access is a unique opportunity for research»: so speaking Valentina Comba, wishing new synergies between researchers and information specialists in the scenario of a University enterprise-oriented, opened as chairperson the works of the congress *Institutional archives for research: experiences and projects in Open Access*, held in Rome on November 30th – December 1st, 2006. The congress, hosted by the Italian Istituto Superiore di Sanità (ISS), aimed at achieving more than one target: consciousness of the benefits of depositing research material in digital open archives and publishing in Open Access (OA) journals, mostly in the biomedical area; outline of the impact of the OA publishing model on the assessment of research output; enhancement of the adoption of policies encouraging the OA paradigm; promotion of cooperation between research institution in Italy and abroad to share resources and experiences. Moreover, it could be a chance to make the recently set ISS Institutional repository more known among researchers. In order to achieve these aims, the scientific committee gathered some of the earliest advocates of OA in Italy, Paola Gargiulo and Valentina Comba, and Paola De Castro, Elisabetta Poltronieri, Claudio Di Benedetto, Martino Grandolfo, of the ISS, in different roles involved in the OA initiative. The congress was talking mainly to biomedical researchers, largely presents at the event together with information specialist, and had a high profile, with an English-speaking session on the first day, to offer an international frame, and an Italian-speaking session on the second day, to investigate the Italian reality. Being all the .ppt presentations available on E-LIS, we will focus mainly on the second session, to better understand what happens at a national level[1].

Right to the researchers, and to the new pathways shown by Open Access (OA) towards a new scholarly communication was dedicated the first session, *Open Access and authors: support from the international community*, opened by Jean-Claude Guédon with a masterly historical excursus on the channels of the scholarly communication from the founding of the first scientific journals to the Web. The early "republic of letters" could now – making the most of the networked environment and the OA strategies – become a diffuse, democratic, freely accessible "republic of knowledge". Self-archiving and the publication in OA journals – which the author in his *The "green" and the "gold" road to Open Access: the case for mixing and matching*[2] pointed out as complementary to a mature open landscape – can achieve the widest dissemination of the information and the global growth of knowledge. Guédon's proposal was to create "symbolic value" on Institutional Repositories with a more diffuse mandate to deposit, to make them count as a new paradigm in research assessment.

Derek Law, talking about *Making science count: Open Access and its impact on the visibility of science*[3], supplied facts and figures to show the increasing awareness about OA in all fields,

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[1] Conference proceedings will be published by Istituto Superiore di Sanità. Presentations are accessible in E-LIS; (English abstracts are available also for the second day contributions):
http://eprints.rclis.org/view/conftitle/Institutional_archives_for_research_:_experiences_and_projects_in_Open_Access.html. A selected bibliography on Open Access in the biomedical field, prepared for the congress, is available and updated online in http://hal9000.cisi.unito.it/wf/BIBLIOTECH/Portale-bi/Open-Access/Bibliograf/index.htm.

[2] GUEDON, J.C., *The "green" and the "gold" road to Open Access: the case for mixing and matching*, «Serials Review», 2004, 30(4), 315-328, http://eprints.rclis.org/archive/00003039/01/science.pdf; see also *In Oldenburg's Long Shadow : Librarians, Research Scientists, Publishers, and the Control of Scientific Publishing*. In *Proceedings Creating the Digital Future : Association of Research Libraries 138th Annual Meeting*, Toronto, Ontario (Canada) http://www.arl.org/arl/proceedings/138/guedon.html

[3] Conference proceedings will be published by Istituto Superiore di Sanità. Presentations are accessible in E-LIS; the first day saw English-speaking sessions; English abstracts are available also for the second day contributions: http://eprints.rclis.org/view/conftitle/Institutional_archives_for_research_:_experiences_and_projects_in_Open_Access.html. A selected bibliography on Open Access in the biomedical field, prepared for the congress, is available and updated online in http://hal9000.cisi.unito.it/wf/BIBLIOTECH/Portale-bi/Open-Access/Bibliograf/index.htm.

highlighting the new mandatory policies of public funding agencies and the new hybrid options of the traditional publishers. To fill the archives – depositing the final draft in the native format, to allow a deeper data-mining – the best strategy should be staking on the citation advantages of OA articles and on the new metrics developed in the OA environment, more fitting to the networked scholarly communication. Law pointed out also the role that IR can play as research outputs' showcase of an Institution or a whole country, like the Dutch Cream of Science[4].

Francis André, of the INIST-CNRS, provided the French perspective in *Support of Open Archives at national level : the HAL experience*. After a starting survey on the budget and the organization of research in France – with two new key bodies, ANR – Agence Nationale de la Recherche and AERES – Agence pour l'évaluation de la recherche et de l'enseignemeint supérieur, deeply involved in Open Access – André explained the HAL platform's features: multidisciplinary, international, research-centred, with a commitment to long-term preservation of the outputs of the French research. The choice of a rich set of metadata for each of the three entities (author, laboratory, bibliographic record) allows a rich data-mining; the choice of an OAI-PMH architecture shapes HAL as a customizable metasearcher, which can also extract virtual collections. Due to a national agreement towards open archiving, signed by the 80% of the French research institutions, HAL saw an exponential growth of deposits. HAL is also involved at European level into the DRIVER project, Digital Repository Infrastructure Vision for European Research[5].

Another prestigious experience was presented by Peter Morgan, *Capturing research outputs at the University of Cambridge : experiences with DSpace*. Starting with an overview on the Library's policy context (digital preservation, scholarly communication – SPARC Europe -, local archiving, visibility and credibility among scientist), Morgan outlined the DSpace@Cambridge project, its vision - that is to identify and respond to user requirements in settling an institutional repository -, its assumptions - that is space to all type of data, not only peer-reviewed material, metadata provided directly by submitters (afterwards validated by librarians), copyright maintained by the owners, repository licensed to make copies for dissemination and preservation, open access by default, but possibility of restricted collection. That's why one of the most involved community, the chemists, called for developing a set of customized software tools that will enable them routinely to deposit experimental data - much of which is currently lost - in Open Access repositories. A spin-off project, named SPECTRa, Submission Preservation & Exposure of Chemistry Teaching and Research data, deals with the complex questions posed by open data – embargo, reuse... Morgan's final points to ponder included: finding out what the researchers really need; building solutions together, assuming that each community has different behaviours; considering both not-peer reviewed papers and the open/close choice for a repository; demonstrating the added value a repository can provide in supporting research.

The lively discussion was mainly user-centred: Guédon underlined the users' need like a guidance in the further development of OA, while Law stressed the definite responsibility of the Institution in order to make the outputs public and Guédon reaffirmed that also in a landscape of growing privatization of the research, OA is not but an alternative way to "publish", i.e. "making public" the outputs, with the precautions shown by Morgan. Making public also needs new metrics and assessment models instead of the misused Impact Factor, and OA could guarantee effective alternatives: in November, the Andrew W. Mellon Foundation has awarded a grant to Los Alamos National Laboratory (LANL) in support of a two-year project that will investigate metrics derived from the network-based usage of scholarly information [http://www.mesur.org/Home.html]. ???

The second session, *Open Access in Italy: knowledge and tools to write and search*, chairperson Martino Grandolfo, researcher at the ISS, saw more technical presentations, tailored on the Italian situation.

Maurella Della Seta and Rosanna Cammarano, of the ISS Documentation Service, in *Citation tracking of scientific publications through two different searching tools : Google Scholar and Web*

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[4] http://www.creamofscience.org/en/page/language.view/keur.page
[5] http://www.driver-repository.eu/

of Science carried out a comparative study on a set of 44 papers published in 2002 by ISS researchers. An analysis of unique and overlapping citations was performed considering both 2005 and 2006 citations. In 2006 the amount of citations retrieved has been almost equal. Since resulting citations do not match exactly, due to the difference in type of documentation considered by search algorithms, the two instruments can be seen as complementary, being only 51% the overlapping material.

Valentina Comba, University of Bologna, drew a survey of the methods of research assessment in Italy, and the misusing of the Impact Factor as a quality indicator, which at the moment forces researchers to follow a standard path when deciding where to publish their works, in order to get funds and prestige for their carrier. Her *A toolkit for Research Communities : helping Authors choose the right mode of publication to maximise impact* is a valid checklist of useful tools, a sort of "Instructions to authors" – and to competent librarians who have to support them – to know the real advantages of publishing OA, as shown by recent studies on citation impact[6], and as a consequence to take aware decisions about submission.

Enrico Alleva, of the ISS Dept. of Cellular Biology and Neuroscience, focused on OA opportunities and critical points in *Making available scientific information in the third millennium: perspectives for the neuroscientific community*. Wishing a gradual but substantial shifting towards OA, Alleva considered the advantage of a publication free of interests of other nature than the growth of the science which makes possible, for instance, at least three OA journals devoted to the publication of negative results, so important in the progress of the research, or the deposit, in open archives, of raw data or parts of experiments that don't find place in scientific articles due to commercial reasons. Criticizing the "author pays" model, Alleva also called for new sustainable economic models for OA.

Alessandro Giuliani, Dept. of Environment and primary prevention, ISS, gave an attractive, deep re-thinking of the very bases of the scientific knowledge, discussing about *Open Access as an antidote for the self-referential character of science.* This increasing self-referential character poses strong constraints to the innovative power of science: if only scientists of a specific field can judge about the merit of the work of other scientists of the same (or very related) fields, this gives rise to very self-referential "cliques" constraining science investigation into a very narrow "orthodoxy" with no room for real innovation. Expanding the basis of the readers of scientific works by means of Open Access strategies could cope with this evident limitation, helping to give new visibility and divulgation to science.

Franco Toni, Head Librarian, ISS, surveyed the *Statistics of Open Access Journals*. The role of statistics, in order to evaluate use and define collection strategies, has strongly enhanced. In the OA world, BioMedCentral only offers such a feature. But, as the cited Eisenbach's study demonstrates, OA articles presents an IF and a citation level higher than non OA. It should be fundamental to verify the use of OA journal compared to the non OA in the same fields: the result could become an important factor for the success of the OA initiative in terms of reducing library's serials expenditures.

The debate started right from the traditional publisher's oligopoly and the serials' pricing crisis passing through the critics to the "author pays" model: Comba reaffirmed the need of new synergies also in the starting budget definition, by the interaction between the librarian area and the research area (in the Italian University they are world apart), considering the costs of publication just as the final act of the research itself. Susanna Mornati (CILEA consortium) insisted on the need of both using new parameters to evaluate the quality of the research –being the IF a quantitative measure – and obtaining consensus from researchers, who depositing could create a critical mass of works involving as a consequence all the other stakeholders.

The first session of the second day of the congress dealt with *Institutional policies for Open Access*, chairperson Antonella De Robbio, with concrete experiences of promotion of the OA strategies.

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[6] The latest and most famous is EISENBACH, G. *Citation advantage of Open Access articles*, PLoS Biology, 2006;4(5) p. 157, http://biology.plosjournals.org/perlserv/?request=get-document&doi=10.1371/journal.pbio.0040157

Roberto Delle Donne, University of Naples, presented the guidelines of the "OA working group" he presides over within the Conference of the Rectors of the Italian Universities (CRUI). CRUI has acknowledged the importance of full and Open Access to information, and, fostering the web dissemination of scientific knowledge produced by Italian Universities and Research Institutions, promoted the agreement of the Italian Universities to the "Berlin Declaration". The group is discussing about the complex problem of the deposit of Ph.D. dissertations in the archives, about the function that open archives may have in the research assessment procedures, about the best practices for the creation of Open Access journals.

Laura Tallandini, University of Padua, following the steps of OA in Italy (from the "Messina Declaration" and the commitment to OA to the recent facts and figures about operating institutional archives), pointed out the way towards "Berlin 5", whose theme will be «From practice to impact: consequences on knowledge dissemination». *Looking at the forthcoming "Berlin 5 Open Access" conference in Padova – september 2007*, she highlighted, among several critical points of the Roadmap to Open Access, the main task of the Institutions, which should adopt mandatory policies for their researchers to deposit their works in Institutional Repositories or should encourage them to publish in OA journals. She illustrated some tools helping to create a mature OA environment: JULIET, directory of the new mandatory policies of the funding agencies, the citation studies, new searching opportunity as DOAJ searchable at article level for 749 AO journals. Berlin 5 will deal right with the dissemination of knowledge and developing of effective strategies. The general subjects of the conference will focus on: a) state of the art of the sharing of the Berlin Declaration vision: survey on the impact of the new paradigm in the institutions that signed the Declaration; supporting bodies policies and activities in favour of innovative scholarly communication processes; b) the Open Access scene in the developing countries and emerging economies: strategies, achievements, impact; c) Open Access and the e-science: how to support the free circulation of scientific raw data to facilitate cooperation and effective reuse; d) e-publishing: the emerging of new strategies in scientific data dissemination/communication: estimate of the impact in Open Access journals, new tools for scholarly evaluation in the growing layer of Open Access publications, the perspective of a changing landscape in the scientific journals policy; e) local/national IT developments that support e-publishing and Open Access, national and international consortia.

Paola De Castro and Elisabetta Poltronieri, Documentation Services, ISS, *Defining a policy for the ISS institutional repository* presented the project born in 2005 aimed at aggregating the biomedical resources (mainly scientific publications) produced by Italian research institutions and the recently set Institutional Repository of the ISS with D-Space software.

Paola Gargiulo, CASPUR consortium, illustrated the *PLEIADI iniziative: a digital platform for the Italian Open Access community*. The main features of the initiative are discovery and locate, personalized services (RSS feed, news, forum), visibility and impact, awareness and dissemination. PLEIADI aims at allowing the academic and research community to discover, to access Italian OA scholarly production in a structured way, at increasing its visibility and its impact on the Italian and the International academic and research world. Since the creation of an analogue project in Germany and the European DRIVER project, it was a prototype.

The debate stemmed from the scarce attention paid in Italy to financing and coordinating research, which in few years is going to widen the gap between italian reality and projects like JISC or DARE, collecting the efforts to a greater visibility of the national production.

In the last session, chair Sylvie Coyaud, *Opportunities and services to develop Open Access*, were shown.

Antonio Fantoni's *The digital library at Sapienza : Università di Roma and the effort for Open Access* underlined the importance of sharing research outputs because the science grows on them, and the commitment of the University to the digital library, stated that in the era of information technology the mere acquisition of commercial resources was not sufficient to be part to the process of deep innovation rendered possible for scientific communication.

Antonella De Robbio, University of Padua, reminded the significance of *Open Access and copyright*: only a clear and correct allocation of rights and responsibility, that balances the interests of all the stakeholders, can serve the interests of the scientific community in its way to progress.

A significant work in this field to assist stakeholders - including authors, publishers, librarians, universities and the public - to achieve maximum access to scholarship without compromising quality or academic freedom and without denying aspects of costs and rewards involved was carried out by the "Zwolle group" in a project ended in 2006[7]. Copyright must be a kind of protection of the intellectual property, not a barrier against its diffusion: authors must take the control of their right and learn to determine the conditions under which her or his work is made available on open access, choosing to deposit a copy of a work in a repository or publish in an open access journal. On the other side the Universities, in particular in Italy, should develop policies or agreements that seek to assure to the University and their authors the ability to use and manage the works in fulfilment of their most important interests.

Susanna Mornati, leader of the AEPIC project at CILEA consortium, presented SURPlus, a tool formed from several interoperable application modules OAI-PMH compliant that allows to collect data in order to account and report the output of the research. In Italy there are different agencies and different systems in research assessment. SURPlus, by the integration with the Institutional Repository, can contribute to solve the problem of the Research Management System.

The congress *Institutional archives for research: experiences and projects in Open Access* saw in two days the succession of technical reports and operative suggestions, experiences and theoretical tributes, providing a lively picture of the actual moment of OA in Italy.

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[7] Zwolle group: http://copyright.surf.nl/copyright/; see also F. Friend, *The application of Zwolle Principles to open access repositories and journal content*, http://copyright.surf.nl/copyright/files/Zwolle_and_Open_Access.pdf