Oltre le riviste.
Come cambia la comunicazione scientifica

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Di cosa parliamo oggi

**Open Access**
- Nuove riviste
- Disgregazione/riaggregazione
- Nanopublications
- Enhanced publications

**Web**
- Comunicazione scientifica
- Nuove funzioni
- Nuovi contenuti

**Altmetrics**
- Workflows online
Web, Open Access e comunicazione scientifica / 1

Our world is changing fast. Twenty years ago few had heard of the Internet. Today, it's used by 2 to 3 billion worldwide; it's a trillion-euro marketplace; it's the platform for innovation transforming every sector from healthcare to transport.

These days, it's hard to predict how the world will look in a few months, let alone years: there's so much potential in the path ahead.

Those changes are thanks to research and innovation; in new technologies, new products, new business models.

But those changes also enable a new kind of research and innovation: open, agile and collaborative. Innovation using new forums like online collective platforms; new resources like open data; new techniques like data-mining.

Meanwhile, **Open Access is growing**: today representing well over 7 500 Journals, and 20% of scientific articles. But that is slow growth. **It is not enough.** We can’t accept that, by and large, the results of publicly supported research are not yet available to the public.
In every sector of our economy, every corner of our society, the Internet is bringing huge changes, and huge benefits for end users.

In so many sectors, we are seeing costs cut, value chains disrupted, and business models totally rethought.

In spite of the importance of science – indeed because of it – this sector should be no different.

Let's show them that this sector, too, can respond positively.

Making Open Access a reality for science, 29 maggio 2012
I quattro principî

...age of networked intelligence...

...open world is bringing freedom...

collaboration

transparency

sharing

empowerment

D. Tapscott, *Four principles for the open world*, giugno 2012
“Articolo” per secoli è stato veicolo della conoscenza scientifica...

...“articolo” fa parte di un mercato anelastico della conoscenza dove sono in vigore scarsità artificiale e regole decise dall’alto su cosa sia l’impatto...

...ma, come il mercato della musica, il mercato della conoscenza è soggetto alla stessa forza disaggregante di Internet

J.Wilbanks
The Fragmentation and Re-Integration of Scholarly Communication, UCLA 2011
Disgregazione/riaggregazione

...come possiamo ancora parlare di “fascicolo” e “deadline” per la pubblicazione nell’era di Internet?

**DISGREGAZIONE:** enhanced publications, nanopublications, dataset publications; blog post, tweet...

**RIAGGREGAZIONE:** servizi che riaggeregano contenuto (anche on demand); progetti come Science Commons; Hubs come PLoS Biodiversity

Licenze per il riuso
Nuove funzioni

Quali funzioni possono essere ripensate?

DISSEMINAZIONE

Open Access; rapidità

ORGANIZZAZIONE DEL CONTENUTO

A POSTERIORI: sul reale impatto

M. Patterson, Re-engineering the functions of a journal, OAI7, Geneva 2011
Disseminazione

Rapidità

Open Access

RIUSO

Text mining

Immagini

Ri-distribuzione

Uso didattico

Download dati
Disseminazione

...in questo modo si massimizzano disseminazione e impatto...

... e si possono misurare a livello di articolo...
Riaggregazione... riaggregazione di contenuti...

... valore aggiunto post-pubblicazione...

http://hubs.plos.org/
Nuove riviste: eLIFE

Publishing is just the beginning.

http://www.eelifesciences.org
Nuove riviste: eLIFE

THE ELIFE INITIATIVE
Curs is a unique collaboration between researchers and three influential funders of research in life science and biomedicine to advance science through effective research communication. Learn more.

THE JOURNAL
The first aim of the initiative is to launch an open-access journal covering the most outstanding advancements – from basic biological research through to applied, translational, and clinical studies. Learn more.

ELIFE LABS
With eLife, the scientific community is taking a new, collaborative approach to research communication. eLife Labs: space to share and discuss goals, new developments, experiments, and challenges. Learn more.

eLife is a researcher-led digital publication for outstanding work, a platform to maximise the reach and influence of new findings and a showcase for new approaches for the presentation and assessment of research.

Labs: per condividere idee

...nasce dalla collaborazione fra ricercatori ed enti di finanziamento della ricerca
Nuove riviste

http://www.gigasciencejournal.com/

http://www.jnrbm.com/

...pubblicano datasets

http://www.earth-system-science-data.net/

...e risultati negativi
Enhanced publications

“accresciute”
“valorizzate”

RESEARCH DATA
EXTRA MATERIALS
POSTPUB DATA

INTEGRAZIONE [offre link espliciti]

collega la pubblicazione con materiale multimediale, datasets, blogs, commenti altrimenti dispersi sul web...

SURF, Enhanced publications
Enhanced publications involves presentation in a Web environment with interlinking of the 'objects' of a document such as: data on which the publication is based, supplementary materials, post-publication reactions and secondary analyses. This website is the central location for an ongoing project of creating, co-locating, and intertextual linking of Enhanced Publications of traditionally published books related to Digital Scholarship.

Central to this effort is the release of Semantic WordPress for Digital Scholarship, or Semantic WORDS, a pair of custom plugins developed to introduce traditionally published books to the realm of web-based scholarly communication. The four book Web sites developed to launch this project contain a broad range of features intended to enhance the printed versions of these books, including supplementary resources, visualizations, intertextual linking of content, and formal structuring of content using Semantic Web ontologies. In the next phase, this project involves development of a central database that allows for aggregation of content across the individual book Web sites, such that object relationships, discursive threads, and contextual factors can be made explicit.

The first of the Semantic WORDS plugins, enhanced plug-ins, provides a suite of features for authors, which are focused on organization and publication of academic content on the Web. Features include custom page templates for academic texts, integration with Zotero for citation management, and expanded author profile pages for CV content management, such as publications.

http://ep-books.ehumanities.nl/
Enhanced publications e scienze umane
Nanopublications

la più piccola unità di informazione scientifica pubblicabile

formate da triple:
SOGGETTO-PREDICATO-OGGETTO

entità univoche, con URI

http://nanopub.org/wordpress/

Datarrhoea?
Publicatarrh?
Nanopublications

Nanno identificativo univoco; metadati sulla provenienza (autore-fonte) SONO CITABILI

...e processabili dal computer per creare percorsi inediti

J.Velterop, *Science publishing: the different interests of record keeping and knowledge transfer*, 2010
H. van Hagen et al. *Novel Protein-Protein Interactions Inferred from Literature Context*, 2009

...non riflettono tutte le sfumature ma indicano una direzione, una ipotesi, una visione d’insieme
Nanopublications sono funzionali alla scienza data-intensive, più rispondenti alle nuove esigenze... occuperanno il posto centrale riservato finora alle pubblicazioni?

B. Mons, Nanopublications, OAI7, 2011
Workflow online

Knowledge Burying in paper publication

- Publishing/mining cycle results in loss of knowledge
  - ≥ 40% of information lost

S. Bechhofer, Research Objects: Towards Exchange and Reuse of Digital Knowledge, OAI7, 2011

...servono strumenti per trasmettere/conservare la “digital knowledge”

...Research Objects (RO) sono aggregazioni di risorse funzionali a un esperimento

http://www.myexperiment.org/
Workflow online

...riconoscere il ruolo centrale dei workflow per la e-research

- **Reusable** – used as part of new study;
- **Repurposeable** – reuse the pieces in a new (and different) study;
- **Repeatable** – repeat the study, possibly years later;
- **Reproducible** – a special case of repeatability with a complete set of information/results to work towards;
- **Replayable** – go back and see what happened;
- **Referenceable** – cite in publications;
- **Revealable** – provenance and audit;
- **Re-interpretable** – crossing boundaries;
- **Respectful** – appropriate credit and attribution;
- **Retrievable** – discover and acquire.

D. De Roure [Replacing the Paper: The Twelve Rs of the e-Research](http://www.nature.com/nature/blogs/), Nature blogs, 2010
Workflow online

Workflow = dati + processo

...creazione e gestione di complessi Research Objects che tengano conto della natura statica/dinamica dei workflows

...conservazione e classificazione di workflows e materiale associato, in modo che sia ricercabile e accessibile

...communities che condividano, riusino e migliorino i workflow, favorendo la creazione di nuova conoscenza

http://www wf4ever-project.org/home
Altmetrics

peer review: lenta, spesso inefficace

citazione: considera solo chi scrive

Impact Factor: facilmente manipolabile

... il lavoro dei ricercatori si è spostato sul Web dove possiamo:
contare i downloads
ascoltare i tweet
tracciare l’uso...
tutte queste “tracce” sono ALT-METRICS

http://altmetrics.org/manifesto/
Altmetrics

Altmetrics expand our view of what impact looks like, but also of what’s making the impact. This matters because expressions of scholarship are becoming more diverse. Because altmetrics are themselves diverse, they’re great for measuring impact in this diverse scholarly ecosystem.
Let’s make science open

The best thing about Internet is that it’s open. In every field it let us share and innovate.

In science, OPENNESS IS ESSENTIAL

Let’s tear down the walls that keep learning sealed off. And let’s make science open.

Open science doesn’t mean ignoring economic reality. Of course we need business models to be sustainable. But that doesn’t mean we have to carry on doing things the way they have always been done.

So, wherever you sit in the value chain, whether you’re a researcher or an investor or a policy maker, my message is clear: let’s invest in collaborative tools that let us progress...
Buona Open Access Week!

www.oa.unito.it