III Międzynarodowa Konferencja Open Access w Polsce
„Otwarta nauka i edukacja"
13-14 marca 2012, Bydgoszcz, Polska

III International Conference Open Access in Poland
"Open learning and education"
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Opening up the research process

Research is a process, built around generating, validating and modifying pieces of information within the wider context of existing knowledge. Current scientific practice does not adequately reflect this dynamic aspect, with a line of research typically culminating in an attempt at formal publication of a static document, though ironically often in several iterations. The delays incurred on the way and all the effort that goes into repackaging and reformatting existing knowledge in order to convey a nugget of new information beg the question whether this time-honoured habit is still appropriate in the digital age.

It is not difficult to identify conditions under which this appropriateness vanishes. In alternative scenarios for communicating research, research documentation thus grows in public and with a public version history by default, so as to make the research process transparent and to invite feedback and collaboration right from the start.

Such an open approach to research has obvious advantages: it speeds up the research process by avoiding unnecessary delays and by allowing for collaboration on a far broader scale than what is typical today, while at the same time raising the usefulness of research materials in educational contexts and serving a steady stream of seeds for public engagement with the matter at hand. The major drawback is that none of the relevant groups of actors — authors, reviewers, editors, publishers, librarians, research funders and administrators — have so far shown signs of coherent collective movement in this direction. Although no platforms exist that would allow seamless integration of scholarly workflows with the Web across a wide range of disciplines, some research groups and small fields already achieve this integration for most of their respective research cycles. In parallel, initially independent experiments of this kind are increasingly being interconnected through the Web and the ever richer ecosystem of ways in which it is used by researchers, by tools they operate, by citizen scientists they collaborate with, and by the public at large.

One hotspot in this experimental ecosystem is the set of collaborative platforms operated by the Wikimedia Foundation, which include Wikipedias and their sister projects in multiple languages as well as a shared repository of reusable licensed image and multimedia files. Though not designed for research, together they cover all steps of the research cycle. They interface well with steps that have been taken elsewhere on the public Web, thereby highlighting the process by which encyclopaedic and related projects are being built by a global community of humans and their machines.

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Biography
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Research field: biological sciences — biophysics, brain morphometry, cognitive evolution, vocal learning, evo-devo (evolutionary developmental biology), open science, sustainable science, resilient development, steady-state economy. His PhD thesis (in physics) is available for free download, and so are all his scholarly articles and many of my talks.