Knowledge economy and knowledge ecology - can they be compatible?

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Knowledge ecology and knowledge economy interests - can they be compatible?

About ENCES

ENCE (European Network for Copyright in support of Education and Science) is an EU-wide network of organizations and individuals in science and education who share the view that copyright is a socially valuable construct and that the primary objective of copyright is to promote the progress of science, education, and culture as public goods.

ENCE's basic assumption is that knowledge and information in its digital form should be made available to everyone from everywhere and at any time under fair conditions. This is particularly true in science and education, where access to knowledge and information is indispensable.

More Information (pdf)

News

Press release on German ancillary copyright for media publishers
On 12 November 2012 we publish our comment on the proposed German ancillary copyright in small parts of journalistic articles in favor of media publishers ("Leistungsschutzrecht für Presse...

German Federal Court of Justice asks European Court of Justice to clarify copyright directive
After a long court proceedings and different decisions taken by different courts in Germany the question of whether and under which circumstances German libraries are allowed to digitize textbooks...

ENCE is on Facebook
ENCE e.V. has a newly created page on Facebook. Please don't hesitate to visit us there and make friends.

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You are welcome to follow us on Twitter!
Open access information and communication platform.

designed as a European initiative, EIS is open to authors from the entire world

a multilingual platform with English the default language

experimenting with different forms of reviewing and online web metrics for quality control

focus on the cognitive, pragmatic, social, political, cultural, legal and ethical aspects of information

strengthen information science in Europe

Knowledge ecology and knowledge economy interests - can they be compatible?
Proprietary and open Information markets
Knowledge economy
Knowledge ecology
Towards a commons-based understanding of knowledge and information
Open Access - way of institutionalizing knowledge as a commons
Open access and information economy
Open access enforced
OA Business/Financing Models
Will Open Access destroy commercial information markets? It depends

Knowledge ecology and knowledge economy interests - can they be compatible?
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Proprietary and open Information markets

access to and use of knowledge and information

proprietary
private
commercial
Information markets

open
public
commons-based
Information markets

Knowledge economy

Knowledge ecology

Knowledge ecology and knowledge economy interests - can they be compatible?
Knowledge economy – knowledge ecology

Knowledge ecology does not object to the commercial use of knowledge, but suggests that publishing models are only acceptable when they acknowledge the status of knowledge as a commons, allowing free and open access for everyone not claiming exclusive property rights.

Knowledge ecology and knowledge economy interests - can they be compatible?
Knowledge economy the private commercial exploitation of knowledge and information

Distributed, sold or licenced on global information markets

Information products - protected by copyright and considered private intellectual property

people can thus be excluded from an unrestricted use of knowledge.
Knowledge economy

Publishing industry in science

Journal publishing

Knowledge ecology and knowledge economy interests - can they be compatible?
broader STM information publishing market (including journals, books, technical information and standards, databases and tools, and medical communications and some related areas) worth some $23.5 billion

annual revenues generated from English-language STM journal publishing are estimated at about $9.4 billion in 2011
Journals publishing revenues are generated primarily from academic library subscriptions (68-75% of the total revenue).

Publishing industry employs an estimated 110,000 people globally.

USA continues to dominates the global output of research papers with a share of about 21%.

M. Ware/M. Mabe; The stm report . an overview of scientific and scholarly journal publishing.
STM, Third edition November 2012
About **5000–10,000 journal publishers** globally, of which around 5000 are included in the Scopus database.

**28,100 active scholarly peer-reviewed journals** in mid 2012

grown steadily for over two centuries, by about **3% and 3.5% per year**

M.Ware/M. Mabe; The stm report . an overview of scientific and scholarly journal publishing.
STM, Third edition  November 2012

Knowledge ecology and knowledge economy interests - can they be compatible?
publishing about **1.8–1.9 million articles a year**

the CrossRef database included **over 56 million DOIs**, of which **46 million refer to journal articles**

**10,675 journals** included in Thomson Reuter’s Journal **Citation Reports database** (8200 in the Science Edition and 2900 in the Social Sciences Edition)

M.Ware/M. Mabe; The stm report . an overview of scientific and scholarly journal publishing. STM, Third edition November 2012
Knowledge ecology

Knowledge ecology the **sustainable treatment of knowledge and information**.

This can only be achieved not by making knowledge a scarce resource but making it **an open space and providing open access to and free use of it**.
Towards a **commons-based** understanding of knowledge and information
Towards a commons-based understanding of knowledge and information

The concept of **knowledge and information as commons** will be used to **overcome** both

- the **current deadlock in the worldwide copyright regulation**
- the dominance of the commercial exploitation of knowledge and information

And to restore the **legitimate claims** of the public need for free and **open access** and use of published knowledge.
Towards a commons-based understanding of knowledge and information

Commons

Knowledge ecology and knowledge economy interests - can they be compatible?
Towards a commons-based understanding of knowledge and information

Common heritage of nature

Commons are institutionalized "common-pool resources"

Common heritage of social life

Commons are institutionalized "common-pool resources"

Commons heritage of cultural creativity

Knowledge and information

Knowledge ecology and knowledge economy interests - can they be compatible?

From: Peter Barnes: Capitalism 3.0
Towards a commons-based understanding of knowledge and information

Commons are socially constructed.

Common Pool Resources

- clean air
- water
- oil
- knowledge

principles

institution- alization

procedures

Commmons

accessible usable under certain conditions

Knowledge ecology and knowledge economy interests - can they be compatible?
Towards a commons-based understanding of knowledge and information

It’s our choice

Principles, values

sharing justice, fairness openness inclusion sustainability

institution-alization

communication (reaching a consensus)
committments contracts rules, laws, legal norms control mechanisms, sanctions

knowledge resources

privatization enclosure of the mind profitability scarce resource

access to information products services systems

Commons-based information markets

Private information markets

Knowledge ecology and knowledge economy interests - can they be compatible?
Open Access

a way of institutionalizing

knowledge as a commons
Open Access - way of institutionalizing knowledge as a commons

Open access contributions must satisfy two conditions (according to Berlin OA Declaration):

“(1) The author(s) and right holder(s) of such contributions grant(s) to all users a free, irrevocable, worldwide, right of access to, and a license to copy, use, distribute, transmit and display the work publicly and to make and distribute derivative works, in any digital medium for any responsible purpose, subject to proper attribution of authorship (community standards, will continue to provide the mechanism for enforcement of proper attribution and responsible use of the published work, as they do now), as well as the right to make small numbers of printed copies for their personal use.”

Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities
Open Access - way of institutionalizing knowledge as a commons

Open access contributions must satisfy two conditions:

“(2) A complete version of the work and all supplemental materials, including a copy of the permission as stated above, in an appropriate standard electronic format is deposited (and thus published) in at least one online repository using suitable technical standards (such as the Open Archive definitions) that is supported and maintained by an academic institution, scholarly society, government agency, or other well Established organization that seeks to enable open access, unrestricted distribution, inter operability, and long-term archiving.”

Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities

Knowledge ecology and knowledge economy interests - can they be compatible?
Open information markets in science

Commons-based Information markets

Directory of OA Journals:

7183 journals, 650572 articles (19.10.2011)
7449 journals, 745962 articles (31.1.2012)
9411 journals, 1099912 articles (1.6.2013)

almost 4 journals per day since 10/2011
still only about 2.4% of all commercially available articles

“Ulrich’s Directory lists 4365 peer reviewed OA journals, or about 13% of the total number of peer reviewed journals included”
“Scopus covers 18,500 peer-reviewed journals, of which 1800 or 9.7% are open access, while the proportion of OA journals covered by Journal Citation Reports is about 8%.”

STM report 2012
Results

Overall, average citation rates, ... were about 30% higher for subscription journals. However, after controlling for discipline (medicine and health versus other), age of the journal (three time periods) and the location of the publisher (four largest publishing countries versus other countries) the differences largely disappeared in most subcategories except for journals that had been launched prior to 1996.
Results

OA journals that fund publishing with article processing charges (APCs) are on average cited more than other OA journals. In medicine and health, OA journals founded in the last 10 years are receiving about as many citations as subscription journals launched during the same period.

Conclusions

Our results indicate that OA journals indexed in Web of Science and/or Scopus are approaching the same scientific impact and quality as subscription journals, particularly in biomedicine and for journals funded by article processing charges.

Open access and information economy
Commercial adaptation of Open Access

More and more publishers (in particularly the four dominating ones) accept the OA-paradigm and see their future in OA publishing

enforced by

users markets legislation/copyright private or public foundations political commitment

golden delayed subsequent subscription green

Knowledge ecology and knowledge economy interests - can they be compatible?
Academics (12.663 – Stand 10092012) have protested against Elsevier’s business practices for years with little effect. ... The key to all these issues is the right of authors to achieve easily-accessible distribution of their work.

I fully agree with this initiative - even more I hold the view that the commercial exploitation of knowledge should be the exception and free open access the default.
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- The right to post a pre-print version of the article on Internet web sites including electronic pre-print servers, and to retain indefinitely such version on such servers or sites (see also our information on electronic preprints for a more detailed discussion on these points).

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- The right to present the article at a meeting or conference and to distribute copies of such paper or article to the delegates attending the meeting.

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- Patent and trademark rights and rights to any process or procedure described in the article.

- The right to include the article in full or in part in a thesis or dissertation (provided that this is not to be published commercially).

- The right to use the article or any part there of in a printed compilation of works of the author, such as collected writings or lecture notes (subsequent to publication of the article in the journal).

- The right to prepare other derivative works, to extend the article into book-length form, or to otherwise re-use portions or excerpts in other works, with full acknowledgement of its original publication in the journal.

Knowledge ecology and knowledge economy interests - can they be compatible?
Open access enforced

Open access for authors in all disciplines

SpringerOpen makes it easier than ever for authors to comply with open access mandates, retain copyright and benefit from Springer’s trusted brand.

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- E-only and continuous publication.
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- Considered by ISI and other abstracting & indexing services; the services apply the same standards as they do for traditional journals.
- Thumbnails of additional files (e.g. embedded movies) shown in the article.
- Quick navigation in article HTML | XML can be downloaded.
- See 'most viewed' articles and articles citing an article.

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- Authors can supply information about payment by invoice or credit card or indicate their eligibility for waivers.
- Articles by authors from a member institution enjoy centralized payment and/or a discounted fee as well as promotion on a special member page.
- Use of blogs, tweets and social networking for promotion and visibility.
In this model, High-Energy Physics (HEP) funding agencies and libraries, which today purchase journal subscriptions to implicitly support the peer-review service, **federate to explicitly cover its cost**, while **publishers make the electronic versions of their journals free to read**. **Authors are not directly charged** to publish their articles OA.

Today, most publishers quote a price in the range of 1’000–2’000 Euros per published article. On this basis, we estimate that the annual budget for the transition of HEP publishing to OA would amount to a maximum of 10 Million Euros/year, sensibly lower than the estimated global expenditure in subscription to HEP journals.

Each SCOAP³ partner will **finance its contribution by canceling journal subscriptions**. Each country will contribute according to its **share of HEP publishing**.
Open access enforced

Foundations

Golden

Encourage request, not require

Publications Policy

Open Access Archiving

Nach: http://www.sherpa.ac.uk/juliet/index.php?fPersistentID=5#oapublishing

<table>
<thead>
<tr>
<th>Whether to Archive:</th>
<th>* Encourages deposition in Open Access archives</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>What to Archive:</strong></td>
<td>* Peer-reviewed publications</td>
</tr>
<tr>
<td></td>
<td>* Publisher's version and/or Author's final version</td>
</tr>
<tr>
<td></td>
<td>* PDF file</td>
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<tr>
<td><strong>When to Archive:</strong></td>
<td>* At the date of publication</td>
</tr>
<tr>
<td></td>
<td>* Acceptable embargo: up to 12 months after publication</td>
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Open Access Publishing

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<th>Whether to Publish:</th>
<th>* Encourages publication in Open Access publications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Where to Publish:</td>
<td>* in a peer-reviewed open access journal (Optional)</td>
</tr>
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Knowledge ecology and knowledge economy interests - can they be compatible?
Open access enforced

Public foundations
NIH
require

golden

The law states:
The NIH Public Access Policy ensures that the public has access to the published results of NIH funded research. It requires scientists to submit final peer-reviewed journal manuscripts that arise from NIH funds to the digital archive PubMed Central upon acceptance for publication. To help advance science and improve human health, the Policy requires that these papers are accessible to the public on PubMed Central no later than 12 months after publication.

The NIH Public Access Policy applies to all peer-reviewed articles that arise, in whole or in part, from direct costs funded by NIH, or from NIH staff, that are accepted for publication on or after April 7, 2008.

http://publicaccess.nih.gov/policy.htm

Knowledge ecology and knowledge economy interests - can they be compatible?
Private foundations require golden

*Wellcome Trust* policy tightening (June 2012)

introducing sanctions for non-compliance and a move to CC-BY licenses

Knowledge ecology and knowledge economy interests - can they be compatible?
Policies on open access to scientific research results should apply to all research that receives public funds.

Open access is a key feature of Member States’ policies for responsible research and innovation by making the results of research available to all and by facilitating societal engagement.

“Accessibility, sustainability, excellence: how to expand access to research publications”
"British universities now pay around £200m a year in subscription fees to journal publishers, but under the new scheme, authors will pay "article processing charges" (APCs) to have their papers peer reviewed, edited and made freely available online. The typical APC is around £2,000 per article."

"In all cases universities upon receipt of funding should transfer these charges to their institutional publication fund" …

"A university can then use these funds to pay for APCs for any article resulting from research council funding."

“cost of the transition, which could reach £50m a year, must be covered by the existing science budget and that no new money would be found to fund the process.”
COMMISSION RECOMMENDATION of 17.7.2012 on access to and preservation of scientific information


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COMMISSION RECOMMENDATION of 17.7.2012 on access to and preservation of scientific information

result of these policies:

there should be open access to publications resulting from publicly funded research as soon as possible, preferably immediately and in any case no later than six months after the date of publication, and twelve months for social sciences and humanities;

licensing systems contribute to open access to scientific publications resulting from publicly-funded research in a balanced way, in accordance with and without prejudice to the applicable copyright legislation, and encourage researchers to retain their copyright while granting licences to publishers;
In Horizon 2020, both the ‘Green’ and ‘Gold’ models are considered valid approaches to achieve open access.

All projects will be requested to immediately deposit an electronic version of their publications (final version or peer-reviewed manuscript) into an archive in a machine-readable format.

This can be done using the ‘Gold’ model (open access to published version is immediate), or the ‘Green’ model.

In this case, the Commission will allow an embargo period of a maximum of six months, except for the social sciences and humanities where the maximum will be twelve months (due to publications’ longer ‘half-life’)

The European Commission will continue to fund projects related to open access. In 2012-2013, the Commission will spend €45 million on data infrastructures and research on digital preservation. Funding will continue under the Horizon 2020 programme.
Knowledge ecology and knowledge economy interests - can they be compatible?
“author-side payment” model, where the author (or usually his/her research funder or institution) pays a publication charge (article processing charges" (APCs) )

Table 4: Publication charges for a selection of full and hybrid OA journals. Various discounts (society members, subscribing/“member” institutions, low-income countries, etc.) not shown. (Source: publisher websites, October 2012; £/$=1.6, €/$=1.3)

<table>
<thead>
<tr>
<th>Journal/publisher</th>
<th>Full/Hybrid OA</th>
<th>Charge (US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Institute of Physics</td>
<td>Full/ Hybrid</td>
<td>1350–1800</td>
</tr>
<tr>
<td>American Physical Society</td>
<td>Full/ Hybrid</td>
<td>1500–2700</td>
</tr>
<tr>
<td>BioMed Central</td>
<td>Full</td>
<td>650–2635 (median 2025)</td>
</tr>
<tr>
<td>Hindawi</td>
<td>Full</td>
<td>300–1750 (median 600)</td>
</tr>
<tr>
<td>BMJ Group</td>
<td>Full/ Hybrid</td>
<td>1920–4000</td>
</tr>
<tr>
<td>Cambridge University Press (147 journals)</td>
<td>Hybrid</td>
<td>2700 (STM)</td>
</tr>
<tr>
<td></td>
<td>(Full planned)</td>
<td>1350 (HSS)</td>
</tr>
<tr>
<td>Elsevier</td>
<td>- Cell Reports</td>
<td>Mostly ~3000</td>
</tr>
<tr>
<td></td>
<td>- case reports, comms</td>
<td>5000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>500–600</td>
</tr>
<tr>
<td>New Journal of Physics/IOP-DPG</td>
<td>Full</td>
<td>1440</td>
</tr>
</tbody>
</table>
“author-side payment” model, where the author (or usually his/her research funder or institution) pays a publication charge

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<th>Journal/publisher</th>
<th>Full/Hybrid OA</th>
<th>Charge (US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxford University Press</td>
<td>Hybrid</td>
<td>1615–3000</td>
</tr>
<tr>
<td></td>
<td>Full</td>
<td>475–2770</td>
</tr>
<tr>
<td>PLOS</td>
<td>Full</td>
<td>2250–2900</td>
</tr>
<tr>
<td>- PLOS ONE</td>
<td></td>
<td>1350</td>
</tr>
<tr>
<td>Royal Society (London)</td>
<td>Hybrid</td>
<td>2380</td>
</tr>
<tr>
<td></td>
<td>Full</td>
<td>1932</td>
</tr>
<tr>
<td>Springer (see also BMC above)</td>
<td>Hybrid</td>
<td>3000</td>
</tr>
<tr>
<td>Wiley-Blackwell</td>
<td>Hybrid</td>
<td>3000</td>
</tr>
<tr>
<td></td>
<td>Full</td>
<td>1450–3900</td>
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</tbody>
</table>

Knowledge ecology and knowledge economy interests - can they be compatible?
### OA Business/Financing Models

<table>
<thead>
<tr>
<th>Publisher driven</th>
<th>Public pays</th>
</tr>
</thead>
</table>
| commercial reprints | APC -author-side payment”
| classified advertising | model |
| subscriptions to print editions | institutional memberships”
| value-adding services | grants by foundations |
| | sponsorship |
| | establish open access across to major fields of science such |
| | library/research budgets |

Knowledge ecology and knowledge economy interests - can they be compatible?
Perspectives

Knowledge ecology and knowledge economy interests - can they be compatible?
Will Open Access destroy commercial information markets?

It depends

If publishers keep on insisting on exclusive exploitation rights protected by copyright

yes

probably not profitable

Green (self archiving)
Secondary exploitation

New value-added products

protected by

Copyright?

Open licensing of OA allows commercial exploitation

no

New auxiliary right

Data base guideline
Models of a **commons-based information economy/society**

- **Commons-based information markets**
  - Licence for applying using rights to new products
  - Free and open access to information objects

- **Business models für value-added products**
  - multimedia presentation
  - hypertextification, dossiers
  - summaries, translations
  - retrieval and data mining
  - innovative reviewing models
  - personal und institutional background information
  - etc. etc.

- **Commercial right to a secondary exploitation of information objects**
  - realized by authors in education and science
  - modified and developed in collaborative working environments
  - legally protected by free licences (cf. CC)

- **reversing OA green**
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