Open Access: is the community governing or suffering the change?

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Summary

- Introduction
- Open Access
- Publishing Market
- Plan-S
- Problems
- Conclusions: what to do?
The Italian GRIN and Spanish SCIE are cooperating in defining a shared position on Open Access (OA)

- GRIN and SCIE (and GII) already had fertile cooperation on the definition of the GGS conference rating system
- The starting point has been a GRIN initiative that finalized a document summarizing a precise position about OA that has been shared among the community
• Open Access is inducing profound changes in the scientific publishing comparable to the introduction of movable type printing (AD 1455) and the transition to electronic publishing

• It will have a strong impact on the dissemination of knowledge and resources among researchers
Introduction

- Open Access is inducing profound changes in the scientific publishing comparable to the introduction of movable type printing (AD 1455) and the transition to electronic publishing.

- It will have a strong impact on the dissemination of knowledge and resources among researchers.

Global and local actions are needed.
What is Open Access

- Open Access permits to openly and instantly access without costs for the reader research results and data

  Authors retain the copyright in their articles

- The basic principle is that the research outcome of public research programs and agencies must be openly accessible
Open Access / Objectives

- Enhancing the dissemination on a global scale
- Providing access to people who have not access to paywall-based distribution systems
- Increasing the use of scientific contributions and knowledge transfer, e.g. in teaching programs, in SMEs
- Making research results perpetual
- Making the research process more transparent to the taxpayer and to assessment processes
- etc
Open Access / Costs

- Open Access does not nullify the costs despite many might object that most of the editorial costs are done pro-bono

- Costs are covered by
  - **Authors**: Article Processing Charge
    hybrid and gold route
  - **Community**: non-profit organizations, academic or governmental institutions
    platinum/diamond route
  - **Institutions**: overlay platforms, repositories
    platinum/diamond, green route
## Open Access / Models

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>APC</th>
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<tbody>
<tr>
<td>Bronze</td>
<td>Products are openly accessible on the site of the publisher without <strong>any specification about the copyright</strong> license.</td>
<td></td>
</tr>
<tr>
<td>Hybrid</td>
<td><strong>Some</strong> subscription-based journals make papers <strong>openly accessible under the payment of an APC</strong>.</td>
<td>Yes</td>
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<tr>
<td>Green</td>
<td><strong>Some</strong> subscription-based journals permits the authors to <strong>distribute the products on institutional platforms</strong> (e.g., ArXiv, PubMed), in some cases after 6-12 months from the publication.</td>
<td>No</td>
</tr>
<tr>
<td>Gold</td>
<td><strong>All products are openly accessible.</strong> Publication costs are <strong>covered with APC</strong> usually paid by the researcher institution or the funding agency. <strong>The APC does not automatically imply the copyright non-transfer.</strong></td>
<td>Yes</td>
</tr>
<tr>
<td>Platinum or Diamond</td>
<td><strong>All products are openly accessible</strong> without any financial and temporal constraint. Products are distributed with flexible and liberal copyright licenses, typically CC-BY. <strong>Production costs are covered by non-profit organizations</strong>, academic or governmental institutions.</td>
<td>No</td>
</tr>
<tr>
<td>Black</td>
<td>All products are openly accessible on platforms that distribute the content <strong>illegally</strong>.</td>
<td>No</td>
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The market is defined by the goods that are exchanged, in scientific publishing the good exchanged is knowledge in terms of contents and indexing

- scientific knowledge (contents), it is the research product
- bibliographic knowledge (indexing), knowing the existence of a research result, e.g., SCI-HUB is different from Google Scholar
The accesses in Italy and Europe explains researchers' needs:

- it is not just about Open Access
- the paywall model jeopardizes usability and immediacy

Sci-Hub combines Open Access and indexing.
The Myth of free market

In Scientific Publishing, prices are not self-regulated by buyers and sellers negotiating without coercion
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What we usually have for common goods does not hold for scientific papers.

If a publisher does not provide access to this paper, can it offer a "similar" paper?

The market is not (technically) competitive because

- the demand is **inelastic**: if one is looking for an article, she cannot be happy with a "similar" one: publisher acts in a monopoly regime

- production costs are mainly fixed costs
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- the demand is inelastic: if one is looking for an article, she cannot be happy with a "similar" one: publisher acts in a monopoly regime

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The clearing price is equal to the marginal cost in a competitive market when the companies operating in it make no economic profits

- Publishers have huge profits and few players share the entire market
• Publishers are selling
  – Contents, the research products
  – Organization of the activities, content collection, and platform
  – Certification based on the reputation of journals and editorial series consolidated over time

• Publishers produce the organization; the contents are researchers responsibility, the certification is the responsibility of both
  – the work done by researchers is pro-bono
From proportional to fixed costs

- historically, costs were variable costs and depending on #copies to be produced and #copies to be distributed

- today, costs are (almost) fixed and related to processing, production, distribution platform
  - reproduction costs are nonexistent
Awareness among university populations

Figure 12. Awareness of scientific publishers’ open access policies among different university populations

- Researchers
- Early-stage researchers
- Institutional leadership
- Librarians

Percentage

- Very good
- Good
- Neither good or bad
- Bad
- Very bad
- Don’t know

Open Access 2016-2017 EUA Survey Results, European University Association, Feb 2018
Plan-S

- Plan-S is an initiative for open-access science publishing promoted by cOAlition S

- The plan requires scientists and researchers who benefit from state-funded research organisations and institutions to publish their work in open repositories or in journals that are available to all
Organisations in the coalition behind Plan S include:

- Austria: Austrian Science Fund
- Finland: Academy of Finland
- France: Agence nationale de la recherche
- Ireland: Science Foundation Ireland
- Italy: Istituto Nazionale di Fisica Nucleare
- Canada: Québec Research Funds
- Luxembourg: L National Research Fund
- Netherlands: NL Organisation for Scientific Research
- Norway: Research Council of Norway
- Poland: National Science Centre
- Portugal: Fundação para a Ciência e Tecnologia
- Slovenia: Slovenian Research Agency
- South Africa: South African Medical Research Council
- Sweden:
  - Swedish Research Council for Sustainable Development
  - Swedish Research Council for Health, Working Life and Welfare
  - Vinnova
- Jordan: Higher Council for Science and Technology
- United Kingdom:
  - UK Research and Innovation;
  - Wellcome Trust
- United States
  - Gates Foundation
  - Howard Hughes Medical Institute
  - Templeton World Charity Foundation
- Zambia: National Science and Technology Council
- Aligning Science Against Parkinson
- European Commission
- World Health Organization
Plan-S Principles

01. Authors or their institutions retain copyright to their publications. All publications must be published under an open licence, preferably the Creative Commons Attribution licence (CC BY), in order to fulfil the requirements defined by the Berlin Declaration.

02. The Funders will develop robust criteria and requirements for the services that high-quality Open Access journals, Open Access platforms, and Open Access repositories must provide.

03. In cases where high-quality Open Access journals or platforms do not yet exist, the Funders will, in a coordinated way, provide incentives to establish and support them when appropriate; support will also be provided for Open Access infrastructures where necessary.

04. Where applicable, Open Access publication fees are covered by the Funders or research institutions, not by individual researchers; it is acknowledged that all researchers should be able to publish their work Open Access.

05. The Funders support the diversity of business models for Open Access journals and platforms. When Open Access publication fees are applied, they must be commensurate with the publication services delivered and the structure of such fees must be transparent to inform the market and funders potential standardisation and capping of payments of fees.

06. The Funders encourage governments, universities, research organisations, libraries, academies, and learned societies to align their strategies, policies, and practices, notably to ensure transparency.

07. The above principles shall apply to all types of scholarly publications, but it is understood that the timeline to achieve Open Access for monographs and book chapters will be longer and requires a separate and due process.

08. The Funders do not support the 'hybrid' model of publishing. However, as a transitional pathway towards full Open Access within a clearly defined timeframe, and only as part of transformative arrangements, Funders may contribute to financially supporting such arrangements.

09. The Funders will monitor compliance and sanction non-compliant beneficiaries/grantees.

10. The Funders commit that when assessing research outputs during funding decisions they will value the intrinsic merit of the work and not consider the publication channel, its impact factor (or other journal metrics), or the publisher.
• OA shifts the costs from the reader to the writer
  – subscription costs are managed in a centralized way, while research funds are managed in a more heterogeneous way
  – funds for subscription costs need to be rearranged because who reads is different from who writes, diverging interest among

• Transformative agreements
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Transformative agreements are part of the arrangements:

- driving the transition from read-only to read&write contracts
- aiming at fair retributions for publishers

They are not mitigating costs!
Problems / Financial Bias

Requiring authors to pay for communicating their results introduces a financial bias

- publishers are incentivized to accept paper because they earn per accepted paper
- authors are invited on a financial base (they can afford the APC or their institution has an agreement)

How can we prevent authors are invited only or predominantly on a financial basis, eg they can afford the APC, or their institution has a transformative agreement?
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How can we prevent authors are invited only or predominantly on a financial basis, eg they can afford the APC, or their institution has a transformative agreement?
Publishers may be incentivized to accept papers because the more they publish, the more they earn

- IEEE Access has published 17,927 papers in 2021

Individual journals might be induced adopting practices and processes where effectiveness prevails on quality

- review processes are getting shorter and shorter
- greater pressure is exerted on reviewers
Letting the authors pay introduces more problems than the problems Open Access solves

The devil is in the details

- \textbf{LIPIcs Processing Charge is 60 E, they claim}

\textbf{Background info concerning APC:}

As a publicly funded institution, we have to recover the costs of our publishing activities so that there is no competitive advantage over commercial providers.

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<tr>
<th>Journal of Object Technology</th>
<th>PLATINUM</th>
<th>AITO</th>
<th>free</th>
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<tr>
<td>IEEE Trans Software Engineering</td>
<td>HYBRID</td>
<td>IEEE</td>
<td>$2,045</td>
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<tr>
<td>IEEE Software</td>
<td>HYBRID</td>
<td>IEEE</td>
<td>$2,995</td>
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<tr>
<td>Software and System Modeling</td>
<td>HYBRID</td>
<td>SPRINGER</td>
<td>$2,750</td>
</tr>
<tr>
<td>Journal of Systems and Software</td>
<td>HYBRID</td>
<td>ELSEVIER</td>
<td>$2,500 excluding taxes</td>
</tr>
<tr>
<td>Science of Computer Programming</td>
<td>HYBRID</td>
<td>ELSEVIER</td>
<td>$2,000 excluding taxes</td>
</tr>
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<td>Information and Software Technology</td>
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Conclusions

• The market is in the hands of few players, they incorporating smaller initiatives, becoming larger and providing a broader offer to libraries

• The publishers do not share the market, but because of the inelastic nature of the product they partition the market
  – Whatever applies to free market does not apply here

• While they are highly speculative, are part of our value-chain
What we can do?

• The trends are towards less market: we need more market, this conflicts with certification

• Mutualization of costs: prices are bumping up as if transformative agreements do not have any impact

• Support for new initiatives: high-quality community initiatives are not unfrequent, they have to be sustained and supported in terms of

  – visibility and recognizability, we need an umbrella that makes them easily identifiable, whether it be trademark, a certification or a new publisher should be assessed

  – technical platform and support, who wants to initiate a journal must count on a ready-to-go platforms conforming the standards

  – a quality model, the intrinsic quality of a journal depends also on the practices and processes
Thank you!