Open Science and Research Data Management

Academic copyright: from the Republic of Science to the Empire of Intellectual Monopolies (Part II)

Università di Pisa

2024

Roberto Caso
Part I

1. The Republic of Science and the Academic Copyright

2. The Empire of Intellectual Monopolies

3. A New Hope: Open Science as Public and Democratic Science
Part II

1. The Empire Strikes Back

2. Return of the Jedi?

3. Conclusions
A Law & Political Economy approach

• «Building on the energy of the emerging law and political economy movement, the LPE Project aims to reconnect conversations about the economy to questions of dignity, belonging, and power. The Project aims to transform legal scholarship and pedagogy by centering issues of economic power, racial and gender subordination, and meaningful democratic inclusion. It aims to move beyond postwar models of the liberal welfare state in order to develop new policy solutions, intellectual approaches, and political strategies adequate to the crises of our time»

Today. Outline

1. The Empire Strikes Back

2. Return of the Jedi?

3. Conclusions
The empire strikes back

«While public institutions hesitantly deliberate, commercial providers act»
1. Scientific databases
1. A vicious circle

- Social Norms
- Platform capitalism
- Intellectual Property
- Pseudo-IP
- Monopoly
- Oligopoly
- Privatization of knowledge
- Bibliometric evaluation
- Research Assessment
1. Pseudo-Intellectual Property

- Contract

- Database sui generis right (e.g. EU dir. 96/9)

- Technological Protection Measures

- De facto power
1. Exercise (max 10 min): read and highlight


• Read terms and conditions  

• Highlight the most «worrying» words for the user
1. Contract: terms & conditions

• «By accessing or using any of the Services, you agree to be bound by these Terms and Conditions. These Terms and Conditions expressly incorporate by reference and include the Service's Privacy Policy […]»
1. Contract + Intellectual Property

• «Unless otherwise set out herein, content […] is owned by Elsevier, its licensors or its content providers and is protected by copyright, trademark and other intellectual property and unfair competition laws». 
1. Contract + Intellectual Property

- «You may not copy, display, distribute, modify, publish, reproduce, store, transmit, post, translate or create other derivative works (including resulting from the use of artificial intelligence tools) from, or sell, rent or license all or any part of the Content, or products or services obtained from the Services, in any medium to anyone, except as otherwise expressly permitted under these Terms and Conditions, or any relevant license or subscription agreement or authorization by us». 
1. Contract + Technological Protection Measures

- «You may not reverse engineer, disassemble, decompile or translate any software in the Content, or otherwise attempt to derive the source code of such software, except to the extent expressly permitted under applicable law, without our prior written permission. You may not engage in the systematic retrieval of Content from the Services to create or compile, directly or indirectly, a collection, compilation, database or directory without our prior written permission». 
1. Contract + Technological Protection Measures

• «You may not probe, scan or test the vulnerability of the Services or any network connected to the Services or breach or attempt to breach the security or authentication measures on the Services or any network connected to the Services». 
1. Contract: terms & conditions

- «By accessing or using any of the Services, you agree to be bound by these Terms and Conditions. These Terms and Conditions expressly incorporate by reference and include the Service's Privacy Policy [...]»
1. When your journal reads you!

Bold ideas and critical thoughts on science.

When your journal reads you

1. Predators
1. Brembs on predators (2019)

- «Predatory journals and publishers are entities that prioritize self-interest at the expense of scholarship and are characterized by false or misleading information, deviation from best editorial and publication practices, a lack of transparency, and/or the use of aggressive and indiscriminate solicitation practices»

- [https://bjoern.brembs.net/2019/12/elsevier-now-officially-a-predatory-publisher/](https://bjoern.brembs.net/2019/12/elsevier-now-officially-a-predatory-publisher/)
1. The global scholarly publishing market
1. The oligopoly’s shift to open access

• «We aim to estimate the total amount of article processing charges (APCs) paid to publish open access (OA) in journals controlled by the five large commercial publishers (Elsevier, Sage, Springer Nature, Taylor & Francis, and Wiley) between 2015 and 2018». 
1. The oligopoly’s shift to open access

• «Among the five publishers, Springer Nature made the most revenue from OA ($589.7 million), followed by Elsevier ($221.4 million), Wiley ($114.3 million), Taylor & Francis ($76.8 million), and Sage ($31.6 million). With Elsevier and Wiley making most of their APC revenue from hybrid fees and others focusing on gold, different OA strategies could be observed between publishers.». 
1. The oligopoly of open access publishing

• «Open access (OA) publishing is often viewed as a promising solution for the future of scholarly publishing, as it has the potential to reduce global inequalities in access to scientific literature by removing paywalls. However, the adoption of OA publishing may not necessarily lead to a decrease in the overall cost of knowledge dissemination, as Article Processing Charges (APCs) can create an additional financial burden for scholars, particularly those from developing countries». 
1. The oligopoly of open access publishing

• «Despite being intended as a way to disrupt the scholarly publishing oligopoly, OA publishing has faced challenges in achieving this goal. These challenges were revealed through a comprehensive analysis of OA publishing from 2008 to 2020, as detailed in this study». 
### 1. Top Publishers by Open Access Articles 2023

<table>
<thead>
<tr>
<th>Rank</th>
<th>Publishers</th>
<th>Articles</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>MDPI AG</td>
<td>285,138</td>
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<tr>
<td>2</td>
<td>Elsevier BV</td>
<td>241,297</td>
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<tr>
<td>3</td>
<td>Springer Science and Business Media LLC</td>
<td>190,147</td>
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<tr>
<td>4</td>
<td>Frontiers Media SA</td>
<td>91,031</td>
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<tr>
<td>5</td>
<td>Wiley</td>
<td>90,711</td>
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# 1. Top Publishers by Open Access Journals 2023

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<th>Rank</th>
<th>Publishers</th>
<th>Journals</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Elsevier BV</td>
<td>708</td>
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<tr>
<td>2</td>
<td>Springer Science and Business Media LLC</td>
<td>674</td>
</tr>
<tr>
<td>3</td>
<td>MDPI AG</td>
<td>424</td>
</tr>
<tr>
<td>4</td>
<td>Walter de Gruyter GmbH</td>
<td>363</td>
</tr>
<tr>
<td>5</td>
<td>Informa UK Limited</td>
<td>291</td>
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1. Top Publishers by Preprints 2023

<table>
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<tr>
<th>Rank</th>
<th>Publishers</th>
<th>Preprints</th>
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<tbody>
<tr>
<td>1</td>
<td>ArXiv</td>
<td>177,950</td>
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<tr>
<td>2</td>
<td>Elsevier BV</td>
<td>143,451</td>
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<td>3</td>
<td>Research Square Platform LLC</td>
<td>80,560</td>
</tr>
<tr>
<td>4</td>
<td>Cold Spring Harbor Laboratory</td>
<td>48,970</td>
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<tr>
<td>5</td>
<td>Center for Open Science</td>
<td>25,870</td>
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<tr>
<td>6</td>
<td>Copernicus GmbH</td>
<td>23,670</td>
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<tr>
<td>7</td>
<td>MDPI AG</td>
<td>20,698</td>
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<tr>
<td>8</td>
<td>HAL</td>
<td>18,728</td>
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<tr>
<td>9</td>
<td>Authorea, Inc.</td>
<td>12,482</td>
</tr>
<tr>
<td>10</td>
<td>RePEc</td>
<td>12,398</td>
</tr>
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</table>
1. Transformers
1. Transformative agreements

• «Transformative agreements (TAs) are negotiated between institutions or consortia and publishers. Importantly, “transformative agreements” are an umbrella term that encompass a range of different kinds of contracts that may include traditional subscription licenses and APC discounts or waivers that may cover a certain number of articles that may be published in hybrid or fully open journals»
1. Transformative agreements

• «The consortium cOAlition S that is sponsored by the European Commission and the European Research Council has announced the end of its support for transformative agreements beyond 2024. This decision has been taken out of concern that sustained support would risk making these agreements a permanent fixture in the economic landscape of scholarly publishing.»

Roberto Caso - Academic copyright 2 - Università di Pisa 2024
1. Artificial Intelligence kills authors and reviewers

ChatGPT listed as author on research papers: many scientists disapprove

At least four articles credit the AI tool as a co-author, as publishers scramble to regulate its use.

Chris Stokel-Walker
1. ChatGPT ed Elsevier

In summary, the management of bilateral iatrogenic liver injury was successful. The patient was observed for 24 hours and discharged home without sequelae.

The phrase "Certainly! Here is..." is a typical prologue produced by the chatbot ChatGPT when generating text according to a user's question/prompt.
1. The Empire of Intellectual Monopolies
2. UNESCO Open Science 2021

2. Open Science (UNESCO 2021)

• **UNESCO (2021)** defines it as «an inclusive construct that combines various movements and practices aiming to make multilingual scientific knowledge openly available, accessible and reusable for everyone, to increase scientific collaborations and sharing of information for the benefits of science and society, and to open the processes of scientific knowledge creation, evaluation and communication to societal actors beyond the traditional scientific community». 
2. Open Science (UNESCO 2021)

• «It comprises all scientific disciplines and aspects of scholarly practices, including basic and applied sciences, natural and social sciences and the humanities, and it builds on the following key pillars: open scientific knowledge, open science infrastructures, science communication, open engagement of societal actors and open dialogue with other knowledge systems». 
2. Towards an OS ecosystem?

• A) Reforming IP and copyright law; Reforming data law

• B) Creating open and interoperable public digital infrastructures

• C) Reforming ex ante and ex post evaluation system
2. A) Reforming copyright law. E.g., Second Publication Right (SPR)

- The **right to re-publish in Open Access a scientific text** (e.g.: a scientific article) previously or at the same time published in a closed access venue (e.g.: a closed access scientific journal with strong copyright restrictions)

- Example: a pre-print o post-print (after the peer review process) published in a OA archive (e.g. Zenodo) with a Creative Commons License
2. A) For example...

Academic Copyright, Open Access and the “Moral” Second Publication Right

Roberto Caso
Giulia Dore

Academic purposes; Authors’ rights; Copyright; EU law; Moral rights; Publication; Publishers

Abstract

The Green route to Open Access (OA), meaning the re-publication in OA venues of previously published works, can essentially be executed by contract and by copyright law. In theory, rights retention and contracts may allow authors to re-publish and communicate their works to the public, by means of licence to publish agreements or specific addenda to copyright transfer agreements. But as a matter of fact, because authors lack bargaining power, they usually transfer all economic copyrights to publishers. Legislation, which overcomes

provocatively suggests that it has a “moral” nature that even makes it a shield for academic freedom as well as a major step forward in the overall development of OA.

Introduction

The implementation of Open Access (OA) to scientific publications follows two roads: Gold or Green. The Gold Road to OA consists in publishing ab initio with open licences (such as Creative Commons licences) on OA publishing venues (e.g. OA journals). The Green Road consists in re-publishing (and communicating to the public via the internet) in OA venues (e.g. self-archiving OA repositories) works previously published in non-OA or closed venues. The Green OA route is made possible through two legal strategies: the first is contractual, whereas the second is legislative.

The contractual retention of the rights of re-publication and communication to the public allows authors to negotiate with the publisher to retain the right to re-publish and communicate to the public an OA version of the work, through transfer agreements (e.g. licence to publish), or additional contractual amendments to standard publishing contracts (addenda). With reference to research texts, this could be the first draft (pre-print), the modified version following peer review (post-print or Author Accepted Manuscript) or, in some limited cases, the final edited version published by the publisher (publisher’s version or Version of Record). This
2. A) Toward an European harmonization?

• Some Member States have a SPR finalized to practice Open Access (Germany, Austria, Netherland, Belgium, France)

• It is not an exception or limitation; it is a right composed by economic and moral rights finalized to practice Open Access (e.g. through Creative Commons Licences) (e.g. Caso, Dore)

• It is an unavailable and inalienable right; it is not overridable by contract (e.g. Caso, Dore)
2. A) EU Commission (2021, 2024)

European Research Area Policy Agenda

Overview of actions for the period 2022-2024

Improving access to and reuse of research results, publications and data for scientific purposes

Study to evaluate the effects of the EU copyright framework on research and the effects of potential interventions and to identify and present relevant provisions for research in EU data and digital legislation, with a focus on rights and obligations
2. A) Reforming data law
Karen Maex 8.1.2021

• “[….] And so private companies continue to enlarge their role while the public character of our independent knowledge system is further eroded.

• [….] What applies to the future of democracy applies equally to the future of universities and of independent education and research as vital building blocks for the organisation of knowledge. We cannot simply leave the future of knowledge to the corporate boardrooms”.

Roberto Caso - Academic copyright 2 - Università di Pisa- 2024
2. A) Reforming data law
UoA: Preserving digital sovereignty of universities and researchers

2. B) Brembs et al. Plan I (2021)

• «Research and scholarship are crucially dependent on an information infrastructure that treats all scholarly output, text, data and code, equally and that is based on open standards and open markets. With concerted action it is possible to realize such an infrastructure without additional costs to the scientific community. The benefit to society, due to the increase in efficiency and reliability of science, would be enormous. Researchers, decision-makers and civic society must work cooperatively and quickly towards such a solution».

- https://zenodo.org/
2. B) E.g. ORE. https://open-research-europe.ec.europa.eu/
2. C) Open Science (UNESCO 2021)

• «[...] and to open the processes of scientific knowledge creation, evaluation and communication to societal actors beyond the traditional scientific community». 
2. C) Open Science (UNESCO 2021)

- «Promoting, as appropriate, **open peer review** evaluation practices including
- possible **disclosure of the identity of the reviewers**,
- **publicly available reviews**
- and the possibility for a **broader community to provide comments and participate in the assessment process».
2. C) COARA

• [https://coara.eu/](https://coara.eu/)
2. C) COARA – 10 principles (1-5)

• 1. Recognise the diversity of contributions to, and careers in, research in accordance with the needs and nature of the research

• 2. Base research assessment primarily on qualitative evaluation for which peer review is central, supported by responsible use of quantitative indicators

• 3. Abandon inappropriate uses in research assessment of journal- and publication-based metrics, in particular inappropriate uses of Journal Impact Factor (JIF) and h-index

• 4. Avoid the use of rankings of research organisations in research assessment

• Commit resources to reforming research assessment as is needed to achieve the organisational changes committed to
2. C) COARA – 10 principles (6-10)

- 6. Review and develop research assessment criteria, tools and processes
- 7. Raise awareness of research assessment reform and provide transparent communication, guidance, and training on assessment criteria and processes as well as their use
- 8. Exchange practices and experiences to enable mutual learning within and beyond the Coalition
- 9. Communicate progress made on adherence to the Principles and implementation of the Commitments
- 10. Evaluate practices, criteria and tools based on solid evidence and the state-of-the-art in research on research, and make data openly available for evidence gathering and research
3. Conclusions: some suggestions

• **Get informed** and make an informed decision
• **Negotiate if possible** with the publisher and remember that, if you have not transferred your copyright, you remain free to republish (even in Open Access)
• **Scientific social networks** (e.g. Academia.edu, ResearchGate etc.) are not benefactors
• If you publish in Open Access, pay attention to the choice of license
• **Practice redundancy**
• When citing, **prefer OA sources**
• If you can, **experiment**
• **Use multiple sources of information**
“So what jobs do leave a real legacy? […]

But one good source of them is trying to do things that change the system instead of following it. For example, the university system encourages people to become professors who do research in certain areas (and thus many people do this); it discourages people from trying to change the nature of the university itself.

Naturally, doing things like changing the university are much harder than simply becoming yet another professor. But for those who genuinely care about their legacies, it doesn’t seem like there’s much choice”.

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