
COASP 2017
9th Conference on Open Access Scholarly Publishing
Lisboa 20-21 september 2017

Jean-Claude Burgelman, Head of Unit
Daniel Spichtinger, Senior Policy Officer

Open data and Science Cloud
DG RTD
Open Science = Systemic transition of science system which affects the way

- research is performed
- knowledge is shared/diffused/preserved
- research projects/results are evaluated
- research is funded
- researchers are rewarded
- future researchers are trained

Affecting the whole research cycle and all its stakeholders

A typical techno-economic paradigm shift a la Perez (tech, market and institutional change go hand in hand)

or to put it different disruptive and hence disturbing....
A systemic change

Data-intensive

Citizens science

Open code

Pre-print

Open access

Alternative Reputation systems

Impact Story

Analysis

Data gathering

Publication

Review

Conceptualisation

Open workflows

Open data

Open annotation

Scientific blogs

Collaborative bibliographies

Sci-starter.com

Runmycode.org

Sci-starter.com

Sci-starter.com

Sci-starter.com

Sci-starter.com

Sci-starter.com

Sci-starter.com

Sci-starter.com

Sci-starter.com

Sci-starter.com

Sci-starter.com

Sci-starter.com

Sci-starter.com

Sci-starter.com

Sci-starter.com

Sci-starter.com

Sci-starter.com

Sci-starter.com
2016 - Holistic Policy Agenda: scope & ambitions

- ... 4 with regard to the use & management of research results and data
  - **Open Data**: FAIR data sharing is the default for funding scientific research
  - **Science cloud**: All EU researchers are able to deposit, access and analyse European scientific data through the open science cloud, without leaving their desk
  - **Altmetrics**: Alternative metrics to complement conventional indicators for research quality and impact (e.g. Journal Impact Factors and citations)
  - **Future of scholarly communication**: All peer reviewed scientific publications are freely accessible
... 4 with regard to relations with **research actors** (researchers, institutions and funders)

- **Rewards**: The European research career evaluation system fully acknowledges Open Science activities
- **Research Integrity**: All publicly funded research in the EU adheres to commonly agreed Open Science Standards of Research Integrity
- **Education and skills**: All young scientists in Europe have the necessary skills and support to apply Open Science research routines and practices
- **Citizen Science**: CS significantly contribute and are recognised as valid knowledge producers of European science
Open Access (OA): a key component of open science

Traditionally, two main OA models (for publications)

- **Self-archiving**: deposit of manuscripts & immediate/delayed OA provided by author ("Green OA")
- **OA publishing**: immediate OA provided by publisher ("Gold OA"), e.g. 'author-pay' model (APC)

**What OA is NOT**

- Not an obligation to publish
- Not at odds with patenting
- OA publications go through same peer review process as non OA publications
From FP7 to H2020: OA to publications

- Obligation to provide OA, either through the Green or Gold way in all areas (deposition mandatory either way)

- Allowed embargoes: 6/12m

- Gold open access costs eligible for reimbursement as part of the project budget while the project runs & post-grant support being piloted through OpenAIRE

- Authors encouraged to retain copyright and grant licences instead
Then and now

2008
FP7
OA Green or Gold+Green Pilot

2014
H2020
OA Green or Gold+Green obligation & ORD Pilot

From 2017
H2020
OA Green or Gold+Green obligation & ORD by default
OA publications – uptake 2016

UPTAKE

61-69% of scientific publications funded through Horizon 2020 are currently open access.

EARLY STATISTICS INDICATE ENCOURAGING RESULTS

...BUT MORE MUST BE DONE!

The EU's open access objective.

100% average article processing charge per publication in Horizon 2020 (gold open access).

3:1 green to gold open access ratio.

11 months average embargo but about 1 out of 3 publications have no embargo at all.

Based on an early analysis of Horizon 2020 publications.
May 2016 Competitiveness Council Conclusions: full open access to scientific publications by 2020 – commitment of the EU for all Member States!

Amsterdam Call for Action on Open Science advocates for "full open access for all scientific publications",

The Commission wants to lead by example in Horizon 2020:
- Currently 60-68% of scientific publications produced are open access
  → further measures needed to achieve target
Challenges to be solved & available tools

- **Open access to publications**
  
  Increasing uptake to 100% - reinforced monitoring and incentives

- **Open access to research data**
  
  Mainstreaming FAIR data across Horizon 2020 & FP9 – requires a change in scientific culture

- **Tools to further develop policy**
  
  Open Science Policy Platform

  Commission Expert Groups on FAIR data & on Future of scholarly communication

  *continuing dialogue & cooperation with Member States (RWP, ERAC, NPR, MLE) and stakeholders (Open Science Policy Platform)*
New models are now emerging that could optimise existing arrangements and put forward new ones e.g.

- Public and institutionnal approaches (e.g. research library services)
- Alternative models (e.g. F1000, Frontiers etc.)
- New deals with publishers (e.g. LingOA etc.)

Testing waters through the EU funded projects and expert groups

- H2020 project **OpenUp** (*OPENing UP new methods, indicators and tools for peer review, dissemination of research results, and impact measurement*)
- Expert group on the Future of Scientific Publishing (in the process of being set up)

EC, EU Member States and Research Funding Organisations to work together...

Empower scientific communities and support innovative business solutions
No deal, no review

NO TO ELSEVIER’S UNFAIR DEALS

Since November 2016, more than 2700 members of the academic community in Finland have signed tiedonhinta.fi online petition which called for fair pricing for academic journal subscriptions and increased open access in the ongoing negotiation with international publishers. More than two thirds of those who signed the petition were prepared to abstain from editorial and reviewer duties in journals whose publishers are unwilling to meet the demands of the Finnish negotiators. It’s time to stand by that commitment: no deal, no editing and reviews.

CONFIRM/JOIN THE BOYCOTT

STATEMENT
Towards a EC Horizon 2020 Open Research Publishing Platform
What is ORE

• An online platform allowing rapid, OA publication of

(i) H 2020 related peer reviewed articles; and
(ii) H 2020 related pre-prints which meet basic criteria on authorship, non-plagiarism and ethical conduct

• contains mechanisms for open/collaborate/public peer review and a suit of innovative ('alternative') metrics
• is not a repository, it provides a fast, cost efficient and high quality service to publish in the 21st century
• is intended for Horizon 2020 beneficiaries as a free, complementary service and is thus not compulsory.
• contributes to fulfilling the goal of 100% open access by 2020

• offers a "third way" for our beneficiaries to fulfil their open access obligation in Horizon 2020 (additionally to "gold" and "green") addressing criticism of our current policy where in case of gold OA grant money has to be used to pay for OA during the grant

• operationalises Commissioner Moedas' priority of open science in Horizon 2020 by establishing a link between open access, open peer review and alternative metrics, all of which will be addressed through the platform.

• part of a growing body of similar actions of private funders (Wellcome, Gates, Zuckerberg) but extends and further develops them.
How to implement it

- the success of the platform depends on the *quality* of the scientific publication service provided.
- Although it has an office for publications, the Commission itself is not a *scientific* publisher (e.g. no experience with peer review, no reputation in the community)
- a service on par with the highest quality standards of scientific publishing can only be provided by outsourcing the implementation of the platform through a fully transparent public procurement process.
March 2017 – CssR Moedas informally discussed the idea with the Open Science Policy Platform (stakeholders)

May 2017 - CssR Moedas introduced the idea in the Compet Council

Ongoing - Implementation of ORE through a call for a public procurement in the WP 2018:
   Call for tender open in November 2017
   Applications until early 2018
   Contract signature during 2018
• Due to the power of cyber science tools, it is quite realistically to assume that we will evolve from peer reviewed open access publications to peer reviewed open access research workflows (1-5-2017, Naure, tech blog Ttitus Brown...) 

• Implying that scientific publishers become open science platforms in which an article is 1 of the many products (and not even per se)
Profound changes ahead indeed

User-centered Publishing delivers Precision Information

The Machine is the New Reader

Science as a Social Machine

Data Privacy requires a Web of Trust

Big Data meets Artificial Intelligence
A 4th paradigm of data-intensive science?

- Data explosion only starting (internet of everything)
- Due to data abundance: Greater role for inductive, not only hypothesis driven science: “Here’s the evidence, now what is the hypothesis?”

<table>
<thead>
<tr>
<th></th>
<th>Manual</th>
<th>Computational</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deductive</td>
<td>2\textsuperscript{nd} paradigm: theoretical (Newton)</td>
<td>3\textsuperscript{rd} paradigm: computational (Von Neumann)</td>
</tr>
<tr>
<td>Inductive</td>
<td>1\textsuperscript{st} paradigm: empirical (Bacon)</td>
<td>4\textsuperscript{th} paradigm: data-intensive (Venter, DNA sequencing)</td>
</tr>
</tbody>
</table>
To conclude

OA is here to stay, because

*If you want to go fast, go alone.*
*If you want to go far, go together*

(African saying)

}
You will never be out of business

Independent QUALITY assurance will always be at the core of science

The Journal of Alternative Facts

We Have All the Best Climates, Really, They’re Great

Iwas A. Scientistonce *

* and now I have all my research approved by a public relations office

Abstract

The research presented in this paper is really the best research that you will ever see. We have methods, the best methods, and we used them to study climate. As you may already know, the Earth, led by America, has all the best climates. In this paper we refute prior work by out-of-touch scientists who insist that the climate is changing – why would it change, when it’s so great already? It is not getting warmer. In fact, our findings show that you were cold at least one day last year. Our (really fantastic) data also reveals that America has all the best CO2 levels, really great levels. In our discussion, we reveal that there is no reason to believe a bunch of scientists who spent all their time learning and studying “facts” instead of being out in the real world making jobs. Our alternative facts definitively prove that scientists are losers. Finally, we had peer reviews, by all the best people, our people, because politicians know the most about science, the very best things about science.

Keywords: climate, “data”, “facts”, #makeclimategreatagain, “science”
Contact information

Mail: RTD-open-access@ec.europa.eu

Web: http://ec.europa.eu/research/openscience/index.cfm

Twitter: @OpenAccessEC
Open Science Monitor

http://ec.europa.eu/research/openscience/monitor/
Open science represents an approach to research that is collaborative, transparent and accessible. Open science occurs across the research process and there are many different activities that can be considered part of this evolution in science. The open science monitor tracks trends in areas that have consistent and reliable data.

* These indicators are for both open access and open scholarly communication.
Rate of green open access publications compared to journal publications

This visualisation shows the rate of green open access publications in institutional repositories (from OpenAIRE) compared to the total number of publications (from Web of Science).

Focus on one or more countries by selecting them on the bar chart below. The CTRL key can be used to select multiple countries.

To reset, use the reset button in the bar below.

Country: MALTA, SPAIN, PORTUGAL, LITHUANIA, LUXEMBOURG, IRELAND, NETHERLANDS, LATVIA, BELGIUM, FRANCE, AUSTRIA, SLOVENIA, POLAND, UNITED KINGDOM, SWEDEN, GERMANY, DENMARK, CYPRUS, BULGARIA, HUNGARY, FINLAND

Rate

Publication year

© OpenStreetMap contributors