



Definition

- ★ Open Access is the **free, immediate, online availability** of research articles coupled with the **rights to use** these articles fully in the digital environment.

Background

- ★ OA movement has been around since the 1990s (internet-era)

Motivation

- ★ publicly funded research should be available to everybody —> **knowledge exchange**
- ★ reduce expenditure for journal subscriptions —> **cost transparency**

Milestones

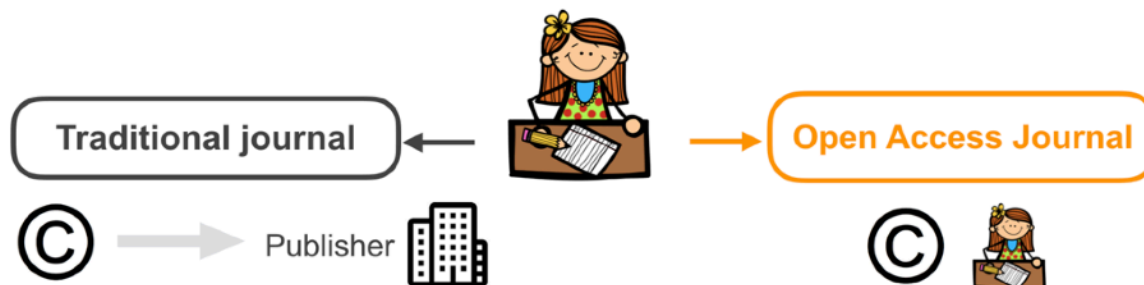
- ★ 2002 Budapest Open Access Initiative: (a) **Self-archiving (green)** (b) **Open access journals (gold)**
- ★ 2003 Berlin Declaration on Open Access: OA paradigm as a mechanism for making scientific knowledge accessible worldwide


Effects

- ★ trying, encouraging, advocating among researchers, organisations, funders
- ★ Astronomy / HEP: **arXiv / astro-ph** (founded by Paul Ginsparg in 1991), **“free to read”**
- ★ publishers: from **“readers pay” (subscriptions)** to **“authors pay” business model (article fees)**
- ★ “predatory” journals / publishers: lack of quality control


AUTHORS / READERS


Changes in **access to / re-use of / payment for** scholarly articles




-  **No reliable access** w/o subscription
- Delayed / temp. OA (if at all)
- Usage **rights governed by publisher**

- **Hybrid Journals:**
Subscriptions + **Gold OA** articles for a fee
 —> **“double-dipping”**

-  **Green OA** (typically only “free to read”, not version of record)

-  **Immediate, permanent OA**
- **Free to read, use, copy, index, distribute, text-mine**

-  **Green OA** (typically only “free to read”, not version of record)



Aim

- Announced Sept. 2018 by Robert-Jan Smits (OA Envoy of the European Commission)
- Plan **S** = solution, shock, shift....
- Mandatory OA: *“Making full and immediate Open Access a reality”*

Strategy:

- align research funders (c**O**alition S); initiators: 15 national funding org., EC, ERC
- 10 Plan S Principles (e.g., Authors retain copyright, Quality of OA, No hybrid publ.)
- effective 2021 (originally 2020)

Desired effects

- shift towards new models in academic publishing
- more transparent, efficient, and fair system

Real effects (so far, more to come...)

- increased discussion about OA (if not disruption of publishing landscape)
- publishers' temporary solutions to be “Plans S compliant”

From “readers pay” to “authors pay” model?

- **APCs (Article Processing Charges)**

No infrastructure, unfair distribution of funds, excessive costs

Authors: \$\$\$

- **Transformative Agreements (max. 3 years)**

Publish-and-Read (PAR) / Read-and-Publish (RAP) agreements between research org./consortia/countries + publishers; costs: #published articles

Authors: n/a Consortia: \$\$\$\$

(DEAL consortium / Nature: EUR 9,500 / article, 20 Oct 2020)

- **Collaborative Agreements**

Use existing infrastructure (publishers, libraries, etc.); aiming at transparent models w/o direct costs to readers or authors (“diamond” / “platinum” OA)

Example: Subscribe to Open (S2O)

Authors: n/a Former subscribers: \$\$

“Overlay journals” (building on e-print infrastructure)

e.g., *Open Journal of Astrophysics*

- **APCs (Article Processing Charges)**

Authors: \$

DIY infrastructure, not enough recognition (yet)

New business model
for OA-era needed



Impact

- costs shifting from journal-level to article-level
- urgently needed: **evaluation** shifting to **article-level metrics**

Research assessment / evaluation

- ★ no more *Journal Impact Factor* to judge researchers' output
- ★ active **support of open science activities** (publishing in, reviewing for, quality OA journals)
- ★ evaluation process should be transparent, reproducible, robust, and diverse
(see DORA - Declaration of Research Assessment, <https://sfdora.org>)
- ★ paradigm shift needed

Should we rely exclusively on eprints?

- how about peer-review / quality control?
- publishing / posting volume so high that we need pre-selection by editors?

OA PUBLISHING IN ASTRONOMY

- ✓ **Core journals:** governed by Learned Societies (AAS, RAS, ESO)
- ✓ **Read access:** 90+ % via astro-ph
- ✓ **Other areas:** data sharing, code sharing, etc.

Why further OA regulations?

- ▶ Read-only access is not Open Access (FAIR principles!)
- ▶ Open Access is here to stay
- ▶ Funders increasingly demand research from their grants to be OA
- ▶ OA is good science practice, astronomy is not (should not be) outside of “industry standards”

Some thoughts from key players:

- **Publishers:** flip to OA must be long-lasting ([sustainable](#)) with reliable partners
- **Libraries:** are behind [OA concept](#); [cannot afford](#) ever rising subscription (or APC) costs
- **Readers:** prefer access to as many articles as possible ([multi-disciplinary research](#))
- **Authors:** want the move to OA to be seamless and [non-disruptive](#) (“diamond OA”)

What do you think?