



Open Access Publishing

The Good, the Bad, and the Ugly

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Open Access vs. Open Science

A large, light blue oval background contains a blue outline of an umbrella. The umbrella has a curved top edge and a vertical handle with a small hook at the bottom. The text 'Open Science' is centered within the canopy of the umbrella.

Open Science

A large, light blue umbrella-shaped graphic that serves as a container for the text. The umbrella's canopy is at the top, and its handle extends downwards from the center. The text is arranged within the canopy and handle area.

Open Science

Open Access

Open Data

Open Source
(software /
programming)

Open Science

Foundational
elements
of OS

Open Access

Open Data

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Open Science

Foundational
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Open Access

Open Data

Open Source

(software /
programming)

Open Educational Resources

Citizen Science

Licenses + PIDs

Research Evaluation

and more...

Open Science

Open Access

- Can refer to any kind of digital content
- Here: *Open Access Publishing*



The Good, the Bad, and the Ugly

GOOD

BAD

UGLY



GOOD

BAD

UGLY



Open Access Motivation

- OA movement since the 1990s
- Publishing landscape dominated by large commercial publishers
- OA advocates promoted idea for decades

Two main motivations for OA:

- Make publicly funded research available to all —> **knowledge exchange**
- Reduce ever-growing expenditure for journal subscriptions and journal packages (“Big Deals”) —> **cost containment**

GOOD

BAD

UGLY



Knowledge exchange
Cost containment

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knowledge exchange
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cost containment

GOOD

Knowledge exchange
Cost containment

Free, immediate online availability
Usage rights (licenses)
Copyright → authors

BAD

UGLY



Definition

Big conventions held, leading to declarations
(Berlin, Budapest)

- Open Access is the **free, immediate, online availability** of research articles coupled with the **rights to use** these articles fully in the digital environment.
- Also: **copyright resides with authors** or their institutions, not with publishers.

GOOD

Knowledge exchange
Cost containment

Free, immediate online availability
Usage rights (licenses)
Copyright → authors

BAD

UGLY



Important drivers

- Funders, in particular ERC (European Research Council) Plan S / cOAlition S

Benefits of OA

- More exposure for authors' work
- Higher citation rates
- All researchers as well as practitioners can see the work
- Compliant with grant funders' rules.

Example:

- 85% of COVID-19 pubs OA, while 70% of all science articles locked behind paywalls (Source: UNESCO)

GOOD

Knowledge exchange
Cost containment

Free, immediate online availability
Usage rights (licenses)
Copyright → authors

BAD

Disruptive for authors

UGLY



Unintended Side Effects (1)

- publishers changed from “**readers pay**” (subscriptions) to “**authors pay**” (article fees, APCs)
- **disruptive for authors** (those not known to page charges)

GOOD

Knowledge exchange
Cost containment

Free, immediate online availability
Usage rights (licenses)
Copyright → authors

BAD

Disruptive for authors

UGLY

Access barrier shifted

Extremely high APCs



Unintended Side Effects (2+3)

- in comparison with subscription model: **access barrier has simply been shifted**
- some publishers set **outrageously high APCs**

GOOD

Knowledge exchange
Cost containment

Free, immediate online availability
Usage rights (licenses)
Copyright → authors

BAD

Disruptive for authors

Waivers are patronizing

UGLY

Access barrier shifted

Extremely high APCs



Unintended Side Effects (4)

- publishers' **waiver policies are patronizing** because they require authors to ask / apply

GOOD

Knowledge exchange
Cost containment

Free, immediate online availability
Usage rights (licenses)
Copyright → authors

BAD

Disruptive for authors

Waivers are patronizing

New infrastructure
needed

UGLY

Access barrier shifted

Extremely high APCs

Unintended Side Effects (5)

- new (or increased) budgets outside of libraries
- **new infrastructure needed** for budgets and administration, e.g., distribution of available funds (first come, first serve??)

GOOD

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Cost containment

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BAD

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Extremely high APCs

New dependency on large
commercial publishers, *Big Deals*

Unintended Side Effects (6)

- Large publishers' deals combine costs for reading and publishing (Transformative agreements, Read & Publish agreements)
- New "Big Deals", **new dependency on commercial publishers**

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UGLY

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Increased read / publishing costs



Unintended Side Effects (7)

- As a result, very often organizations confronted with increased overall read/publish costs

GOOD

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Cost containment

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Increased read / publishing costs

Predatory publishers,
no quality control

Unintended Side Effects (8)

“Predatory” publishers / journals:

- no proper peer review
- limitless article acceptance (authors pay)
- perceived or real **lack of quality control**
(the worst that can happen to science)
- bad reputation of OA

GOOD

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Paper mills

Unintended Side Effects (9)

- Fake papers produced by “paper mills” inundate journals
- Need to be withdrawn
- Erode trust in science



Mitigating Unintended Side Effects

GOOD

Knowledge exchange
Cost containment

Free, immediate online availability
Usage rights (licenses)
Copyright → authors

BAD

UGLY



In Response to Unintended Side Effects:

Revised funder guidelines, e.g.,

- no hybrid journals (subs + APCs for indiv. articles)
- reasonable APCs
- focus on fair publishing models with low or no author-facing costs.

GOOD

Knowledge exchange
Cost containment

Free, immediate online availability
Usage rights (licenses)
Copyright —> authors

More equity in scholarly publishing

BAD

UGLY



In Response to Unintended Side Effects (1)

Revised funder guidelines, e.g.,

- no hybrid journals (subs + APCs for indiv. articles)
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Publishing models w/o author-facing costs (APCs)

- Aim: **more equity in scholarly publishing**

GOOD

Knowledge exchange
Cost containment

Free, immediate online availability
Usage rights (licenses)
Copyright —> authors

More equity in scholarly publishing

Collaborative publishing models
Cost transparency

BAD

UGLY



In Response to Unintended Side Effects (2)

Community-based scholarly communication

- Move towards collaborative publishing models
- Increased cost transparency of publishing models

GOOD

Knowledge exchange
Cost containment

Free, immediate online availability
Usage rights (licenses)
Copyright → authors

More equity in scholarly publishing

Collaborative publishing models
Cost transparency

Authors decide
Full range of research output credited

BAD

UGLY



In Response to Unintended Side Effects (2)

Community-based scholarly communication

- Move towards **collaborative publishing models**
- Increased **cost transparency** of publishing models

Focus on authors / researchers

- Moving away from the power of journals/publishers
→ **Authors decide**, not 3rd party suppliers
- **Full range of research output** constitutes scholarly record (not only final paper)

GOOD

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Disruptive for authors

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Increased workload
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UGLY

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Increased read / publishing costs

Predatory publishers,
no quality control

Risks

- Increased workload for authors — can they cope?

GOOD

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Sustainable?

UGLY

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commercial publishers, *Big Deals*

Increased read / publishing costs

Predatory publishers,
no quality control

Risks

- Increased workload for authors — can they cope?
- Future has become more unpredictable — will OA models be sustainable in the long run?



Another Essential Factor

GOOD

Knowledge exchange
Cost containment

Free, immediate online availability
Usage rights (licenses)
Copyright —> authors

More equity in scholarly publishing

Collaborative publishing models
Cost transparency

Authors decide
Full range of research output credited

Changed research assessment

BAD

UGLY



The Larger Picture

- Publishing (and the dominance of commercial publishers) will not change unless also **research assessment is changed**
- Initiatives like DORA and CoARA aim at recognizing the diversity of contributions to research
- Aim: research assessment based primarily on **qualitative, not quantitative, indicators**
- Long overdue in some subject areas

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Alternative Publishing Models



Publication Business Models

<https://doi.org/10.18727/docs/15>

Work	Publishing Model	Notes and examples	Established publishers involved?	READING Immediate global read-access to OA content?	PUBLISHING Global OA publishing w/o fees per article (APCs)? Reduces risks of quantity-driven publishing, e.g., lower standards to publish more.	RE-USE OA content governed by open licenses (e.g., CC-BY)?
Published article (Version of Record, VOR)	Closed access	Traditional subscription Hybrid journals: see APCs	Yes	No	No	No
	APCs	Article Processing Charges (APCs) Author-facing costs per article ("Gold OA")	Yes	Yes	No	Yes
	Read & Publish Agreements	Read-and-Publish (RAP) / Publish-and-Read (PAR) Contracts based on institution's subscriptions and estimated OA publishing. Often OA only for limited no. of articles ("capped") in selected journals. Typically originating from Transformative Agreements.	Yes	Yes	No	Yes
	Community-driven OA	Overlay journals Deploying eprint servers + a refereeing system Community-led publishing services e.g., SciELO (Scientific Electronic Library Online)	No	Yes	Mostly (typically no fees) Yes	Yes
	Collaborative OA	Conditional models , e.g. Subscribe to Open (S2O), Crowdfunding. OA only if requirements are met. SCOAP3 CERN-led partnership in High Energy Physics	Yes	Yes	Yes	Yes
	Membership	Membership / flat fee e.g., institutional, consortial, library, individual membership	Both possible	Yes	No	Yes
Refereed manuscript	Rights Retention	Author-Accepted Manuscript (AAM , i.e., refereed manuscript) self-archived in trusted repository with CC-BY license . Article Version of Record (VOR) can be published closed (with publisher consent) or Open Access.	No	Yes	Yes	Yes

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Uta Grothkopf & Silvia Meakins
ESO LDIS dept., May 2024

Data Classification: ESO PUBLIC



Focus on:

Work	Publishing Model	Notes and examples	Established publishers involved?	READING	PUBLISHING	RE-USE
				Immediate global read-access to OA content?	Global OA publishing w/o fees per article (APCs)? Reduces risks of quantity-driven publishing, e.g., lower standards to publish more.	OA content governed by open licenses (e.g., CC-BY)?

Published article (Version of Record, VOR)	Closed access
	APCs
	Read & Publish Agreements
	Community-driven OA
	Collaborative OA
Referred manuscript	Membership
	Rights Retention

**Community driven OA:
Overlay journals**

**Collaborative OA:
Conditional model S20**

**Rights Retention:
Author Approved Manuscripts**

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Community-driven OA: Overlay Journals

Concept overview

- APC-based OA, but low or no publishing costs
- Existing eprint infrastructure (e.g., arXiv) plus refereeing system
- Initiatives run by volunteers (researchers), based on grants (e.g., from foundations)
- Example:

*The Open Journal of
Astrophysics*

(<https://astro.theoj.org>)



Costs

- Low, if any (few or no in-house services, e.g., copy-editing)

Librarian's View

- Long-term **sustainability?**
- Danger of **losing publishers' expertise**
- Unknown titles **lack recognition**
- Requires **shift in research evaluation** towards Open Science

Collaborative Model: Subscribe to Open (S2O)

Concept overview

- Continued library subscriptions to achieve global Open Access
- Participating libraries have previously shown interest in content
- “Free riders” problem: OA achieved only if all subscribers participate
- Examples:
 - Annual Reviews
 - EDP Sciences



Costs

- As before (subscription)
- Possible discounts (e.g., “Early Bird Renewals”)
- Decreasing fees if additional subscribers participate

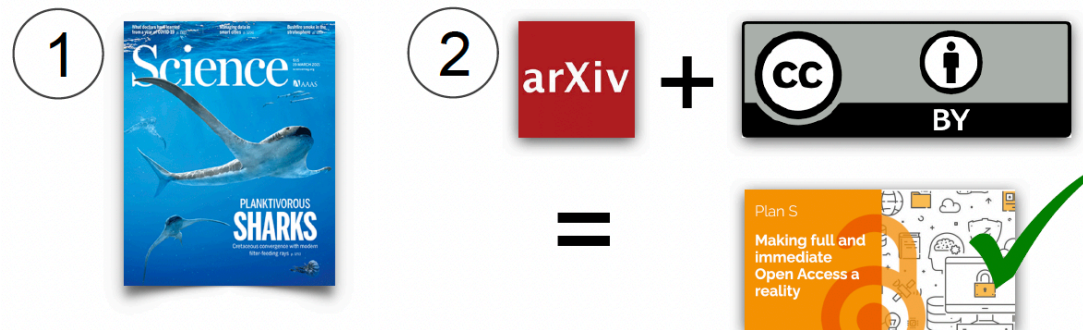
Librarian’s View

- Uses **existing infrastructure** (budget handling), can be **implemented fast**
- Is **predictable** and **equitable**
- Reflects **specific information needs** of specialised research community
- Workflow unchanged, OA achieved —> **high acceptance expected**

(Subscription +) Rights Retention

Concept overview

- Publication in closed (subscription) journal
- Funders' requirement: use of open license (e.g., CC-BY)
- Peer-reviewed manuscripts (Author-Accepted Manuscripts, AAM) with CC-BY sent to repository
- Example: *Science*



Costs

- As before (subscription)

Librarian's View

- Very promising alternative
- Results in two parallel versions of papers (Version of Record + AAM)
- Feasible only for journals with extensive content besides research articles?
- Changes the "FAIRness" of manuscripts, not of journals (no changes to traditional publishing)



Conclusions

Outlook and Conclusions





Outlook and Conclusions

Varied OA landscape

- Large **mix of models** during coming years
- Authors should know pros and cons of options
- **Librarians play an important role** in helping them decide where to publish

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OA goal: Reduce / stabilise costs

- Stabilising costs: **main driver of OA** movement!
- Move to OA must be **cost neutral**; already (too) much money in the publishing system
- **Avoid dependancy** on (high-price commercial) publishers (no more Big Deals!)

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Open Access is a paradigm shift. We must get it right!

- Already **too many unintended side-effects** (e.g., continued injustice of favouring authors from the Global North)
- **Better OA models** than APCs are available, but need more attention
- Librarians make **strategic choices** when enabling OA
- Let's strive for **collaborative, equitable, transparent, sustainable models**

Outlook and Conclusions

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