



Universalisation of OA scientific dissemination

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Definitions – you said universalisation?

u·ni·ver·sal (yoo'nə-vûr'səl)

adj.

1. Of, relating to, or affecting the entire universe: *the universal laws of physics*.

2. Including, relating to, or affecting all members of the class or group under consideration; applicable in all cases: *universal vaccination; universal suffrage.* See Synonyms at **general**.

3. Done, produced, or shared by all members of the class or group under consideration: *a discovery that met with universal acclaim.*

4. Adapted or adjustable to many sizes, uses, or devices: *a universal remote control.*

5. *Logic* Encompassing all of the members of a class or group. Used of a proposition.

https://www.thefreedictionary.com/universal

Universalisation is just one of the required norms for an improved research system

We need to embrace the Mertonian norms

- communalism: all scientists should have common ownership of scientific goods (intellectual property) to promote collective collaboration; secrecy is the opposite of this norm
- universalism: scientific validity is independent of the sociopolitical status/personal attributes of its participants
- disinterestedness: scientific institutions act for the benefit of a common scientific enterprise, rather than for the personal gain of individuals within them
- organized scepticism: scientific claims should be exposed to <u>critical scrutiny</u> before being accepted: both in methodology and institutional codes of conduct

https://en.wikipedia.org/wiki/Mertonian_norms

1science because research is global

- Q: We publish a journal specialised in Indo-Malaysian philology, is this something that you are ready to index?
 - A: Sure, you're welcome
- Q: Our journal does not have metadata available in English, can you index it?
 - A: Sure, you're welcome
- Q: We publish a journal in our biology department, we're doing a good job of controlling quality and checking articles for accuracy, would you be interested in indexing it?
 - A: Sure, you're welcome

Budapest Open Access Initiative (2002)

"The literature that should be freely accessible online is that which scholars give to the world without expectation of payment. Primarily, this category encompasses their peer-reviewed journal articles, but it also includes any <u>unreviewed preprints</u> that they might wish to put online for comment or to alert colleagues to important research findings. There are many degrees and kinds of wider and easier access to this literature. By "open access" to this literature, we mean its free availability on the public internet, permitting any users to read, download, copy, distribute, print, search, or link to the full texts of these articles, <u>crawl</u> them for indexing, <u>pass them</u> as data to software, or use them for any other lawful purpose, without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. The only constraint on reproduction and distribution, and the only role for copyright in this domain, should be to give authors control over the integrity of their work and the right to be properly acknowledged and cited."

Peter Suber: Libre vs. Gratis OA

"I've decided to use the term "gratis OA" for the removal of price barriers alone and "libre OA" for the removal of price and at least some permission barriers. The new terms allow us to speak unambiguously about these two species of free online access." http://sparcopen.org/our-work/gratis-and-libre-open-access/

Libre OA - Similar to BOAI, free of rights

Gratis OA - Similar to a subscription to scholarly journals = right to download & read

Gold OA

- The main idea behind gold is that publishers make papers available (and often retain some rights)
- IMPORTANTLY: The papers can be made <u>directly</u> available on the publisher's website (direct gold OA) or through a <u>designated</u> <u>intermediator</u> (intermediated gold OA) (e.g. NIH PubMedCentral, SciELO, institutional repositories in the case of university presses)
- There are gold journals ("born gold", fully & instantly OA), <u>delayed</u> gold OA journals and gold papers published in subscription-based journals (a.k.a. "hybrid journals")

► Gold OA can be free or paid for (Article Processing Charge – APC)

- The main idea behind green is that parties other than publishers make papers available
- Often seen as synonymous with <u>self-archiving</u>, but [scholarly communication] librarians & institutional technical services also important actors in archiving papers
- Green has nothing to do with the version of the paper a pre-print, a post-print or a version of record could all be <u>legally</u> archived by parties other than the publishers, <u>subject to licensing</u> <u>rights</u>
- [And in some cases publishers can make pre-prints of articles available, and these would still be gold]

Green OA

Blue, yellow, white, platinum, bronze, diamond: there is no end to confusing colours that conflate complex dimensions

Qualifiers should be used to represent dimensions that should not be conflated with who provides availability:

Time: IOA – Instant OA (born gold, preprint archiving) DOA - Delayed OA (embargoes, moving paywalls) D₆OA – 6 months delayed OA (Embargoes, moving paywalls) D₁₂OA – 12 months delayed OA (Embargoes, moving paywalls)

Preservation issues: TOA - Transient OA

. . .

- Infringing copyright, copyleft: ROA Rogue OA, Robin Hood OA
- Licensing: copyrighted; public domain; creative common licensing (CC BY); licensed to...; other licence types...
- Versioning: Pre-print [& pre-peer-review]; post-print [or post-peer-reviewed author manuscript]; version of record [or publisher's version]
 - -- largely antiquated terms from the pre-digital age, in need of updating
- Refereeing & peer-review bypass: POA Predatory OA a concept that needs a more neutral label "Allegedly questionable" is the one we propose for now

1findr,1861-2016

(June 2018 pipeline run)



1findr – suggests accelerating acceleration

1findr, 1890-2015 (September pipeline run)



Journal articles indexing in 4 databases, 1900-2018







Percentage—OA articles/indexed articles

Articles indexed from scientific journals 1findr, Dimensions, Core + ESCI WoS, and Scopus, 1975–2018



Percentage—OA articles/indexed articles

Percentage of OA articles in scientific journals

1findr, Dimensions, Core + ESCI WoS, and Scopus, 1975–2018



Journal articles indexing WoS, Scopus, 1findr, per domain (1)



Percentage of OA science and technology articles in scientific journals 1findr and SCI-E, 1975–2018



Journal articles indexing WoS, Scopus, 1findr, per domain (2)



Number of records – social sciences

Social sciences articles from academic journals 1findr and SSCI, 1975–2018



Percentage of OA – social sciences

Percentage of OA social sciences articles 1findr and SSCI, 1975–2018

60% Percentage of records that are OA articles • % of OA social sciences in 1findr 0 **50%** ••• % OA SSCI 40% \bigcirc \bigcirc 30% \bigcirc ••••••••••••••• 20% 10% 0% 1970 1980 2000 2010 2020 1990 Year

Denominator—indexed articles—arts & humanities

Number of arts & humanities articles indexed from academic journals 1findr & AHCI, 1975–2018



Number of records

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Numerator—OA articles—arts & humanities

OA arts & humanities articles indexed from academic journals 1findr and AHCI, 1975–2018



Percentage—OA articles/indexed articles—social sciences

Percentage of OA arts & humanities articles in academic journals 1findr & AHCI, 1975–2018



Diversification of the publishing market



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Diversification of the publishing market

Share of scientific papers published worldwide by the big five publishers, 1findr database, 1990-2015



Unfinalised data – do not draw conclusions too fast

Number of journals in the CABI database

United Nations classification of countries by type

Type of country	Subscription journals	OA journals	Per cent OA
Developed	3,819	1,781	32%
Transition & Developping	755	1,685	69%

Type of country	Subscription journals	OA journals	Per cent OA
High-income	3,879	1,751	31%
Lower-Income	695	1,717	71%

SciELO needs to embrace the Mertonian norms

Number of Brazilian journals indexed per database



Despite what was reported earlier (e.g. Archambault, 2014), newer evidence based on 1findr data suggests there aren't huge differences in OA availability between domains

- OA in arts and humanities reaches 42% in 1findr
- OA in social sciences reaches 52%
- OA in science & technology reaches 45%
 - Including delayed green & gold open access (i.e. max always 18 to 24 in the past)

Measuring OA in traditional databases is fraught with danger

- Coverage of SSH is insufficiently deep
- Focus on established journals means emerging OA journals less likely to be indexed
- Focus on Western countries, English language & established journals means that emerging scientific powers are not adequately covered
- Over-reliance on DOI & CrossRef creates biases as not used as much in SSH, outside West, older articles & OA articles

DOIs are recent, and not universally adopted

Scientific journal articles <u>cannot, and</u> <u>should not, be reduced to</u> Crossref, Medline & DOAJ

Deep data cave & open sky mining of articles in excluded countries, languages & fields is <u>essential</u>

Long life to the SciELOs and Érudits of this world and to OJS – one of the key actors in the universalisation of the scientific publishing market





