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2019 Northeast Institutional Repository Day

Jun 18th, 9:15 AM

Open is not enough! Sustainability, inclusiveness, and innovation in scholarly communication

Kathleen Shearer Confederation of Open Access Repositories

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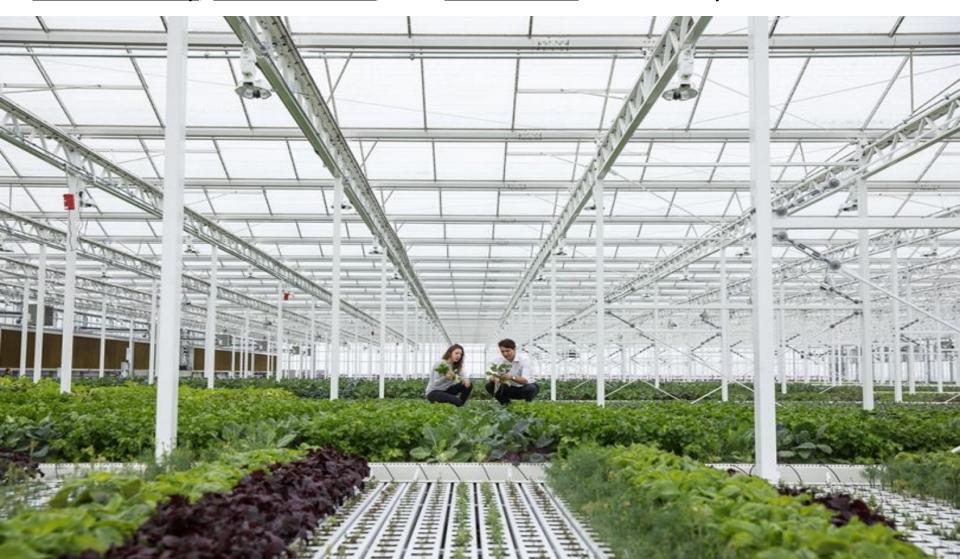


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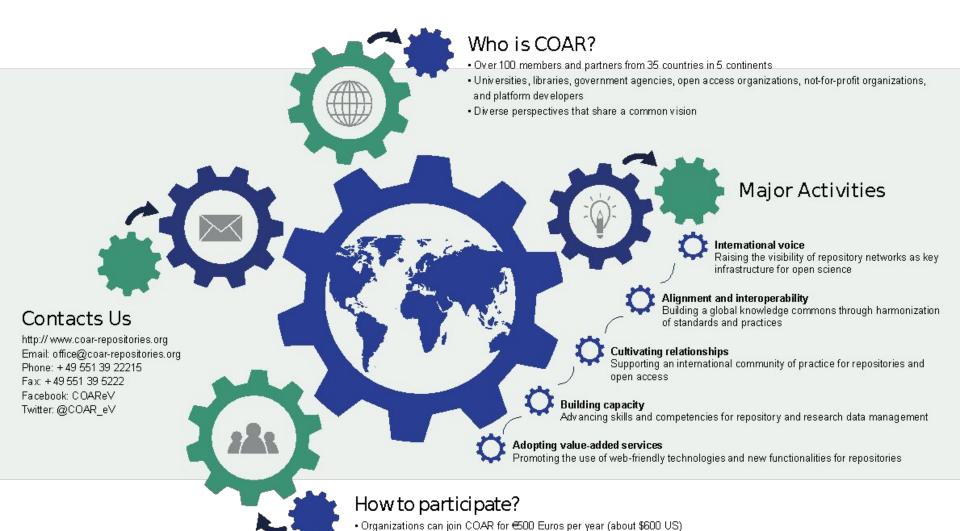
Open is not enough!

Sustainability, inclusiveness, and innovation in scholarly communication



Kathleen Shearer - Confederation of Open Access Repositories

Working for a sustainable, global knowledge commons based on a network of open access digital repositories



Join as a single, consortial, or special member or partner

Download the membership application (https://www.coar-repositories.org/about/join/become-a-member)

Scholarly communication

Sustainability
Inclusiveness / Equity
Innovation

Sustainability?

Education, research, and knowledge are critical for sustainable development







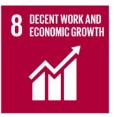
































But our system for sharing and disseminating knowledge must also be sustainable

The ridiculous \$\$\$\$ for scholarly journals

Journal Subscriptions 😕



TABLE 3: COST HISTORY FOR ONLINE TITLES IN CLARIVATE ANALYTICS
(FORMERLY ISI) INDEXES

	(F	ORMERLY	ISI) INDEX	KES		
	AVERAGE	AVERAGE	AVERAGE		AVERAGE	
	NO.	COST	COST	% OF	COST	% OF
SUBJECT	OF	PER	PER	CHANGE	PER	CHANGE
	TITLES	TITLE	TITLE	2017-18	TITLE	2017-19
	2017-19	2017	2018		2019	
Agriculture	86	\$1,076	\$1,153	7	\$1,213	5
Anthropology	41	465	505	9	536	6
Arts & Architecture	92	375	401	7	422	5
Astronomy	13	1,742	1,866	7	1,959	5
Biology	202	2,507	2,685	7	2,849	6
Botany	24	1,977	2,098	6	2,215	6
Business & Economics	381	1,625	1,751	8	1,834	5
Chemistry	73	4,588	4,744	3	4,984	5
Education	135	954	1,021	7	1,093	7
Engineering	197	2,149	2,306	7	2,433	5
Food Science	15	2,531	2,673	6	2,808	5
General Science	42	1,293	1,338	3	1,389	4
General Works	62	218	234	7	245	5
Geography	63	1,359	1,448	7	1,543	7
Geology	39	1,230	1,317	7	1,391	6

Health Sciences	568	1,699	1,810	7	1,905	į	
History	289	412	439	6	472	8	
Language & Literature	416	340	368	8	389	(
Law	89	418	445	6	468	į	
Library Science	31	594	629	6	657	4	
Math & Computer Science	104	1,518	1,603	6	1,706	(
Military & Naval Science	11	920	947	3	1,014	:	
Music	53	293	319	9	332	4	
Philosophy & Religion	195	371	395	6	418	(
Physics	107	3,564	3,756	5	3,946	į	
Political Science	91	736	792	8	852	8	
Psychology	111	892	953	7	1,022	1	
Recreation	39	731	777	6	820	(
Social Sciences	43	873	942	8	996	(
Sociology	265	838	940	12	999	(
Technology	49	2,019	2,119	5	2,310	(
Zoology	66	2,319	2,449	6	2,573	Ę	
TOTAL/AVERAGE	3,992	1,276	1,362	7	1,438		
SOURCE: / / PERIODICALS PRICE SURVEY 2019							

https://www.libraryjournal.com/?detailStory=Deal-or-No-Deal-Periodicals-Price-Survey-2019



Bid deals lock-ins

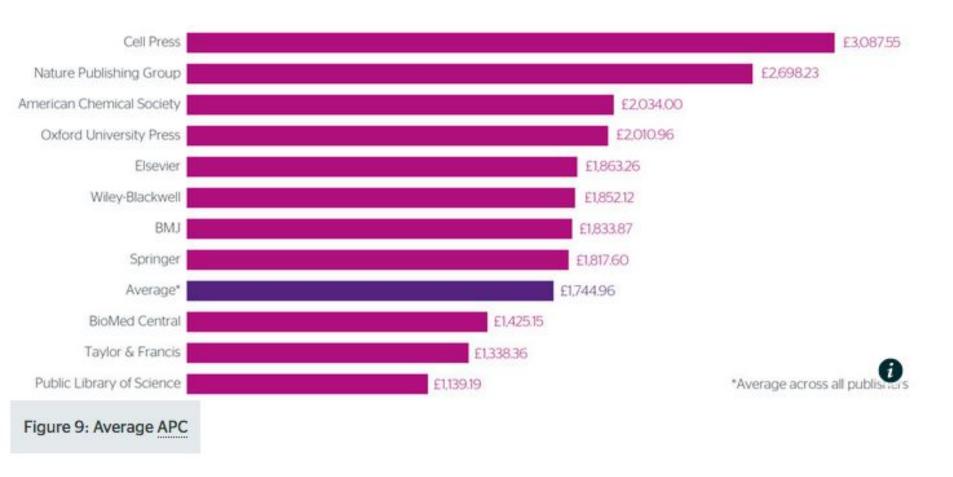
Global results of the analysis

	Out of 50,000 journals
Used journals	16,816
Cited journals	9,075
Journals mentioned by our community in the survey	8,060
subtotal	26,843 unique titles used/cited/mentioned
«essential titles» (80%)	4,852
Additional titles (from validation by departments)	1,041
subtotal	5,893 unique essential titles
2,940 titles with quantitative approach	2,953 titles from community consultation

4

Slide from Stéphanie Gagnon, Université de Montréal Libraries (and thanks to Richard Dumont)

Costs of Article Processing Charges



Jisc 2016: Average APC cost was about £1745 (~\$2400 US)

Equality and Inclusiveness?

Ensuring individuals or groups of individuals are not treated differently or less favourably...



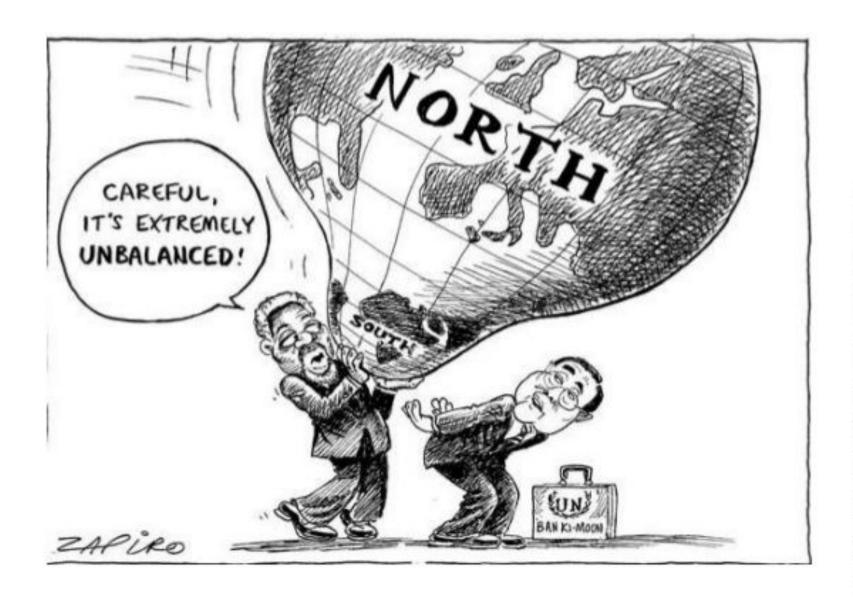
Leslie Chan

"Openness is not simply about gaining access to knowledge, but about the right to participate in the knowledge production process, driven by issues that are of local relevance, rather than research agendas set elsewhere or from the top down"

The Rise of Big Publishers in Development and What is at Stake: A Development Perspective

By: Denisse Albornoz, Research Associate at OCSDNet

This assumption also denies the lack of diversity in international research. When researchers gain access to the international scientific journals, they are not gaining access to a repository of knowledge that is representative of the plurality and diversity of knowledge and science produced around the world. Rather, they are dealt with articles that do not include Global South perspectives, giving more visibility and thus legitimacy to knowledge from the Global North. This again reaffirms the idea that the Western-centric mode of producing science is the model local research needs to follow in order to reach its potential, a rationale that has strong cultural and social implications for what researchers and the general public understand as valid and legitimate knowledge.



Science is global!







Climate change: "Between 2008 and 2014, more than 25 million people per year were uprooted because of rapid-onset disasters such as floods and storms." (International Displacement Monitoring Center)



Science in local: e.g. Nepal

Nepalese research outputs - with Major Clusters

Number of publications: **3,011** Years: 2004-2013

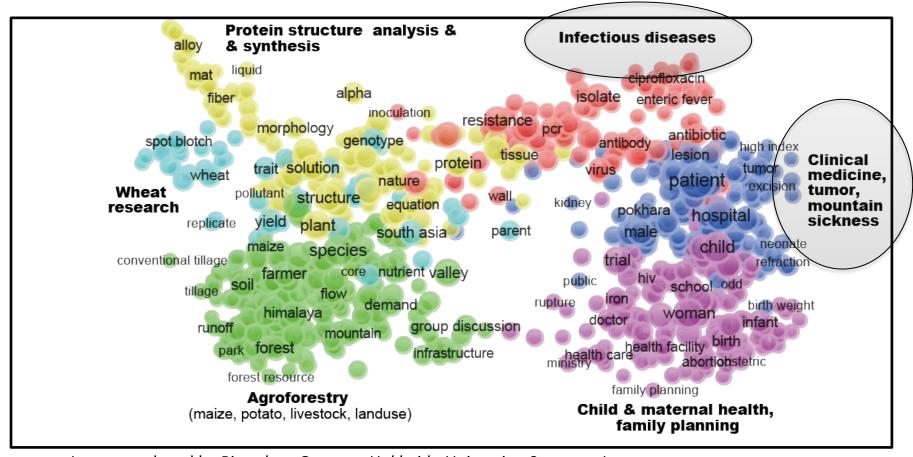
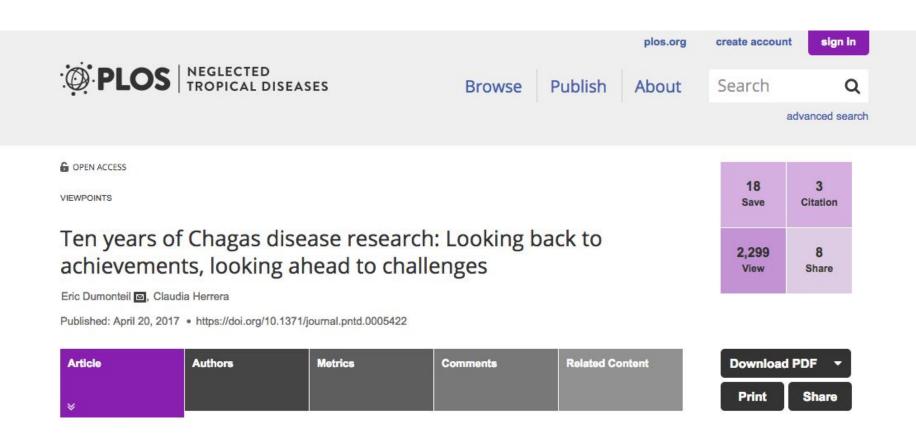


Image produced by Pitambar Gautam, *Hokkaido University, Sapporo, Japan*Word maps created using VosViewer, a *free software* (Leiden University), Vaby Eck & Waltman (2010)

Science is local: e.g. Chagas Disease



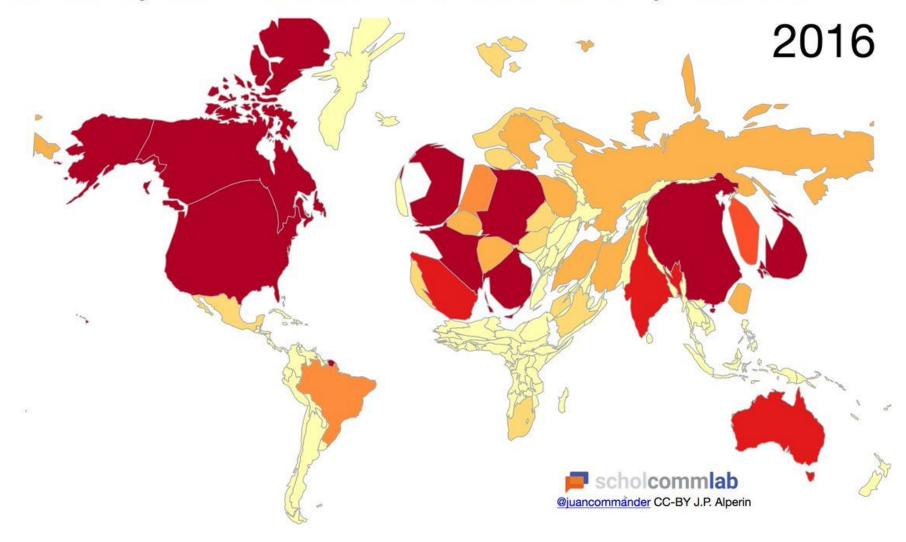
Canadian Journal Of Native Studies

The Canadian Journal of Native Studies is a highly recognized journal in the field of Native Studies. It began as a publication of the Society for the Advancement of Native Studies which is no longer in operation and whose founder; Sam Corrigan; was the Chief Editor from 1981-2008. it comes out on a bi-annual basis, and publishes original research which is refereed by peer review.



As a general focus, the journal publishes anthropological, historical, sociological, political, legal, education and cultural issues affecting First Nations people. Although the majority of articles deal with Indigenous peoples in Canada, it also publishes articles dealing with Indigenous peoples world-wide.

World scaled by number of documents with authors from each country in Web of Science

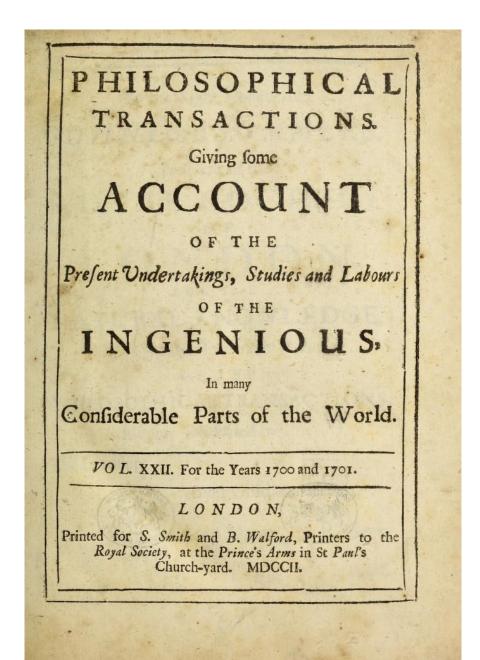


Juan Pablo Alperin: http://jalperin.github.io/d3-cartogram/

Innovation?

The application of better solutions that meet new requirements, unarticulated needs, or existing gaps

(Celebrating?) 350 years of the academic journal!



PHILOSOPHICAL TRANSACTIONS
OF THE ROYAL SOCIETY A

MATHEMATICAL, PHYSICAL AND ENGINEERING SCIENCES

The promises of gravitational-wave astronomy
Discussion meeting issue organised and edited by Iain Martin, Nils Andersson, Carole Mundell and James Hough



350 years of the journal, despite...

Does peer review do more harm than good?

Peer review may be a central tenet of academic life, but Luc Rinaldi explains why it's being compromised by profit-driven predators

Luc Rinaldi



MAY 22 2013 **5 COMMENTS**

ALTMETRICS, DATA

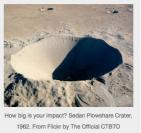
PUBLICATION

BY CDITIC3

IMPACT FACTORS: A BROKEN SYSTEM

If you are a researcher, you are very familiar with the concept of a journal's Impact Factor (IF). Basically, it's a way to grade journal quality. From Wikipedia:

> The impact factor (IF) of an academic journal is a measure reflecting the average number of citations to recent articles published in the journal. It is frequently used as proxy for the relative importance of a journal within its field with journals with



Should I publish negative results or does this ruin my career in science?

by sven | Dec 13, 2016





Publication and reporting biases and how they impact publication of research

By Velany Rodrigues | October 29, 2013 Under Publication Buzzwords | 21,620 Views





In a desert prison, an older prisoner befriends a new arrival. prisoner talks constantly about escape, spinning plan after months, he makes a break. He's gone a week; then the guards drag I half dead, crazy with hunger and thirs the wails how awful it was oner: endless stretches of sand, no oasis, failure at every turn. The o for a while, then says, "Yep. I know. I tried those escape plans mysel The young prisoner says, "You did? Why didn't you tell me?" The o shrugs: "So who publishes negative results?"



Young scientists often produce negative results. All experiments were done correctly - but there was no difference between test and control. They get conflicting advice from supervisors and ethicists. Some say that publishing negative results is a waste of resources and ruins their careers. Others say that 'not publishing negative results is unethical' and promotes the reproducibility crisis. What should young scientists do in such a situation?

Do you want this article as a PDF file? Click here.



Retraction Watch

Tracking retractions as a window into the scientific process

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Can journals get hijacked? Apparently, yes

without comments

Did you recently log onto your favorite journal's website and see this? (For anyone who doesn't want to bother clicking, it's the video from Rick Astley's "Never Gonna Give You Up.") If so, your favorite journal was hijacked.

In today's issue of Science, John Bohannon (who recently published a bogus study about the benefits of chocolate) explains how easy it is to take over a journal's website - so easy, in fact, that he did it himself. And he's not the only one, he reports: Read the rest of this entry



How you can support Retraction Watch

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Meet the Retraction Watch

About Adam Marcus About Ivan Oransky

The Center For Scientific Integrity **Board of Directors**



Written by Alison McCook

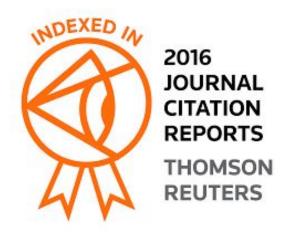
f Facebook (1) I Twitter (1)

Posted in AAAS,computer science,science (journal)



YES!

Timothy Gowers "perverse incentives"







REVIEW ARTICLE

How to publish a scientific manuscript in a high-impact journal



Emad M. El-Omar*

10 simple strategies to increase the impact factor of your publication

by sven | Mar 5, 2015 | |

Impact factors are heavily criticized as measures of scientific quality. However, they still dominate every discussion about scientific excellence. They are still used to select candidates for positions as PhD student, postdoc and academic staff, to promote professors and to select grant proposals for funding. As a consequence, researchers tend to adapt their publication strategy to avoid negative impact on their careers. Until alternative methods to measure excellence are established, young researchers have to learn the "rules of the game".



The way we assess research contributions is too heavily dependent on publishing in the international journals



http://www.shanghairanking.com/

ARWU is an influential ranking list of world universities compiled by Shanghai Jiao Tong University (SJTU).

Each year, the top 500 universities in the world are ranked based on a set of criteria:

Criteria	Indicator	Weight
Quality of Education	Alumni of an institution winning Nobel Prizes and Fields Medals	10%
Quality of Faculty	Staff of an institution winning Nobel Prizes and Fields Medals Highly cited researchers in 21 broad subject categories	20%
Research Output	Papers published in Nature and Science (not for institutions specialized in humanities and social sciences) Papers indexed in Science Citation Index-expanded and Social Science Citation Index	20%
Per Capita Performance	Per capita academic performance of an institution	10%
Total	-	100%

From ARWU website: http://www.shanghairanking.com/ARWU-Methodology-2017.html



Peer review and scientific publishing

Nobel winner declares boycott of top science journals

Randy Schekman says his lab will no longer send papers to Nature, Cell and Science as they distort scientific process





Monday 9 December 2013 19.42 GMT



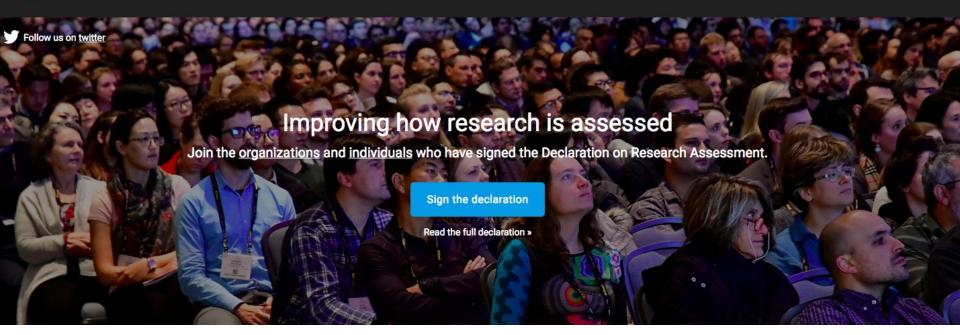




"The pressure to publish in "luxury" journals encourages researchers to cut corners and pursue trendy fields of science instead of doing more important work."

(Randy Schekman, University of California, Berkeley)



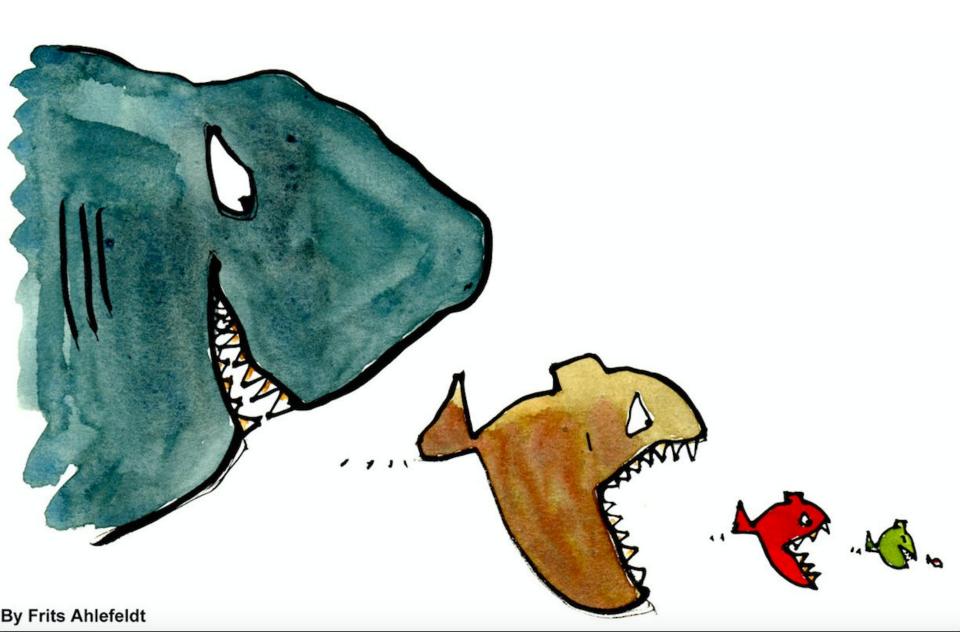


Declaration on Research Assessment (DORA)

General Recommendation

1. Do not use journal-based metrics, such as Journal Impact Factors, as a surrogate measure of the quality of individual research articles, to assess an individual scientist's contributions, or in hiring, promotion, or funding decisions.

Increasing horizontal and vertical integration



Increasing publisher integration of the research lifecycle



By Jeroen Bosman and Bianca Kramer - <u>101 Innovations in Scholarly Communication</u> https://101innovations.wordpress.com/workflows/

Scholarly communications



But... can we change the system from within?

TODAY'S SCHOLARLY JOURNALS OPEN, RE-USABLE, SUSTAINABLE

VISION

OA2020 is a global alliance committed to accelerating the transition to open access.

MISSION

We collaborate to transform the current publishing system, replacing the subscription business model with new models that ensure outputs are open and re-usable and that the costs behind their dissemination are transparent and economically sustainable.



Plan S immediate open access by 2020 2021 with no embargoes

cOAlition S :0 Making **Open Access** a reality by 2020 http://scieur.org/coalition-s

"By 2020 scientific publications that result from research funded by public grants provided by participating national and European research councils and funding bodies, must be published in compliant Open Access Journals or on compliant Open Access Platforms."

Plan S Signatories

- Austrian Science Fund
- Academy of Finland
- French National Research Agency
- Science Foundation Ireland
- National Institute for Nuclear Physics (Italy)
- National Research Fund (Luxembourg)
- Netherlands Organisation for Scientific Research
- Research Council of Norway
- National Science Centre Poland
- Slovenian Research Agency
- Swedish Research Council for Health, Working Life and Welfare
- Swedish Research Council for Sustainable Development
- UK Research and Innovation UKRI
- European Commission

The flip? California, Germany and Sweden

Sweden stands up for open access – cancels agreement with Elsevier



Large science publisher Elsevier does not meet the requirements of Swedish universities and research institutes.



UC terminates subscriptions with world's largest scientific publisher in push for open access to publicly funded research

UC Office of the President Thursday, February 28, 2019

As a leader in the global movement toward open access to publicly funded research, the University of California is taking a firm stand by deciding not to renew its subscriptions with Elsevier. Despite months of contract negotiations, Elsevier was unwilling to meet UC's key goal: securing universal open access to UC research while containing the rapidly escalating costs associated with for-profit journals.

https://www.universityofcalifornia.edu/press-room/uc-terminat es-subscriptions-worlds-largest-scientific-publisher-push-ope n-access-publicly

CALIFORNIA

Published on May 9, 2016



Joint COAR-UNESCO Statement on Open Access

Open access is a global trend, with policies and practices rapidly being adopted around the world. As the world enters a new era of sustainable development, openness and inclusiveness in scientific research will become increasingly critical. While most governments agree on the underlying principles of open access, there is significant diversity in the way countries have approached its implementation. These differences reflect a range of perspectives, values, and priorities of the different regions. Clearly, there is no "one-size-fits-all" solution to implementing open access.

Defining the Future of Scholarly Communication in Latin America



written by Alberto Cabezas and Kathleen Shearer

There is no "one size fits all" solution for open access. In Latin America, which has a very strong tradition of open access, the favoured approach has been the use of publicly-funded, non-commercial services. To raise awareness of this perspective both inside and beyond the region, LA Referencia has recently published a report, "Scholarly Communication and Open Access: Actions for a Public Policy in Latin America".

LA Referencia is a network of ten Latin American countries that provides a discovery service for open access content in the region. The council of LA Referencia is governed by representatives from the science and technology departments of the participating governments.

Jussieu Call for Open science and bibliodiversity

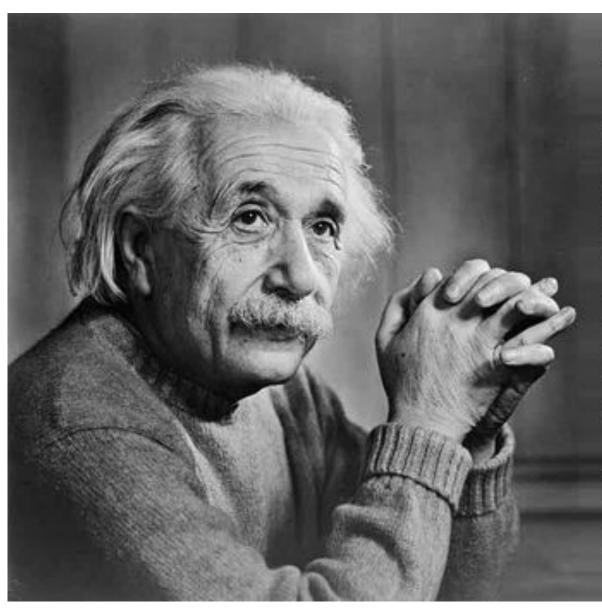
As asserted in the Amsterdam Call released in 2016, Open Access to scientific publishing is at a crossroads. After several years of an exacting struggle aiming at persuading somewhat skeptical stakeholders, Open Access has now won strong support and a rapid shift of the scientific communication system to an Open Access publishing model can be expected. "The time for talking about open access is now past".

The means to achieve the goal of Open Access are yet to be discussed. We believe that the issue of business models has to be refocused in the broader perspective of the editorial processes and methods upon which research and innovation will rely in the future and that they may only develop for the benefit of a very broad bibliodiversity.

We find it necessary to foster an Open Access model that is not restricted to a single approach based on the transfer of subscriptions towards APCs (publication fees charged to authors to allow free access to their articles). Such an approach would hamper innovation and otherwise would slow if not check the advent of bibliodiversity. Therefore, we adhere to the Joint Statement of UNESCO and the Confederation of Open Access Repositories (COAR) on Open Access which highlights all the difficulties caused by this single model.

Our goal is thus to develop and implement alternative models matching the aims of open science by asserting the need of supporting innovation for a thorough renewal of publishing functions as proclaimed by the Association of European Research

Libraries (LIBER) and the International Council for Science (ICSU).



"You cannot solve a problem from the same consciousness that created it. You must learn to see the world anew."

COAR's Vision

Build a global knowledge commons

COAR's Vision



"...position repositories as the foundation for a distributed, globally networked infrastructure for scholarly communication, on top of which layers of value added services will be deployed, thereby transforming the system, making it more research-centric, open to and supportive of innovation, while also collectively managed by the scholarly community."

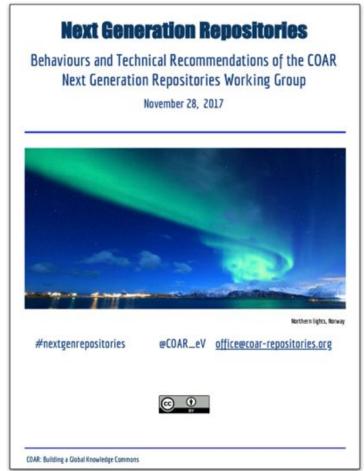
Next generation repositories: http://ngr.coar-repositories.org/

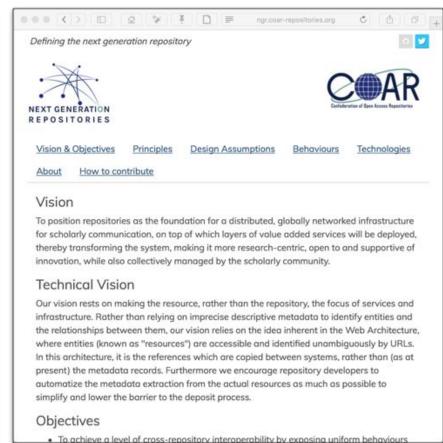
MIT Future of Libraries Report (2017)





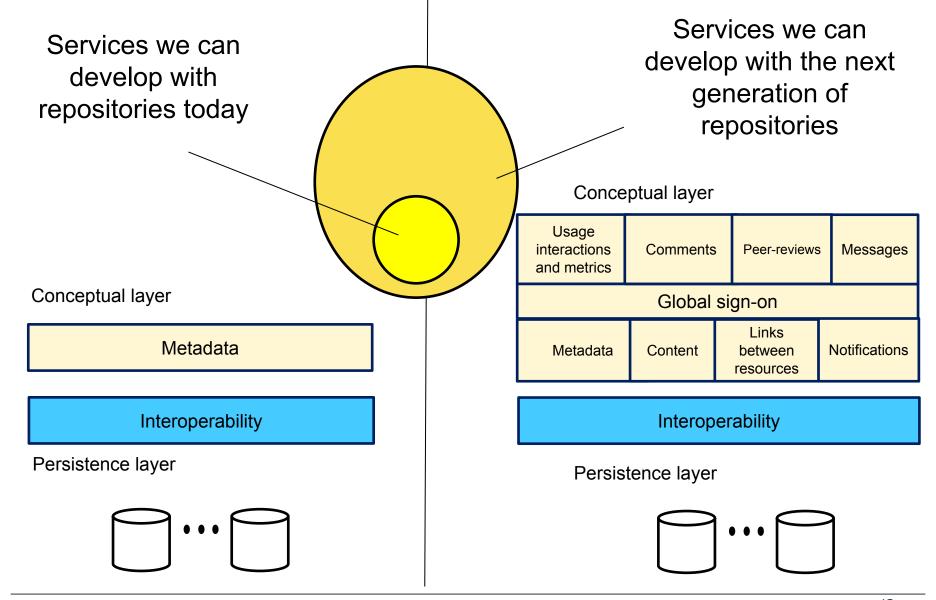
"... The MIT Libraries must operate as an open, trusted, durable, interdisciplinary, interoperable content platform that provides a foundation for the entire life cycle of information for collaborative global research and education."





Current repositories

Next generation repositories



Behaviours and technologies

"Behaviours"

- Exposing Identifiers
- Declaring Licenses at the Resource Level
- Discovery Through Navigation
- Interacting with Resources (Annotation, Commentary, and Review)
- Resource Transfer
- Batch Discovery
- Collecting and Exposing Activities
- Identification of Users
- Authentication of Users
- Exposing Standardized Usage Metrics
- Preserving Resources

Technologies

- Activity Streams 2.0
- COUNTER
- Creative Commons Licenses
- ETag
- HTTP Signatures
- IPFS
- IIIF
- Linked Data Notifications
- ORCID
- OpenID Connect
- ResourceSync
- SUSHI

- SWORD
- Signposting
- Sitemaps
- Social Network Identities
- Web Annotation Model and Protocol
- WebID
- WebID/TLS
- WebSub
- Webmention

Beyond the journal: All valuable research contributions should be available and recognized





The NGR report defined four major functionalitional areas for repositories:

- Discovery
- 2. Social network
- Research assessment / peer review
- 4. Preservation

+ Researcher workflows

Unbundling the scholarly journal

5 functions of scholarly publishing:

- 1. Registration
- 2. Certification
- 3. Awareness
- 4. Archiving
- 5. Rewarding



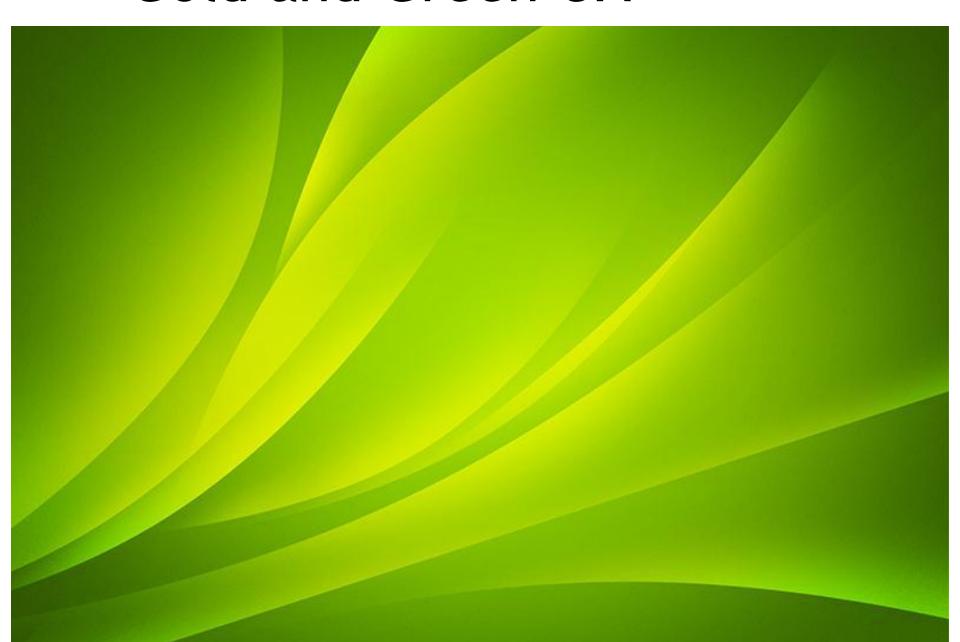
Two Critical Elements of the NGR Vision

Common
Behaviours of
Repositories
(Interoperability)

Value Added
Services on
top of
resources in
repositories

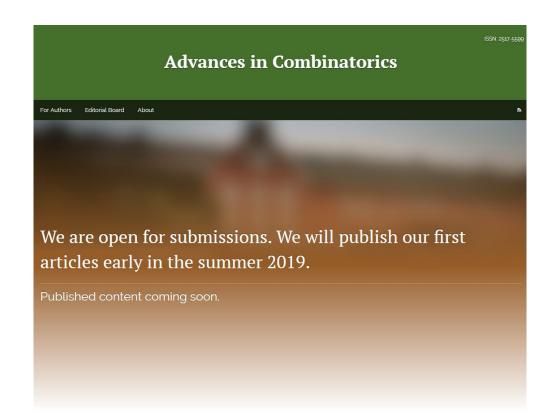


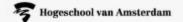
Gold and Green OA



Advances in Combinatorics

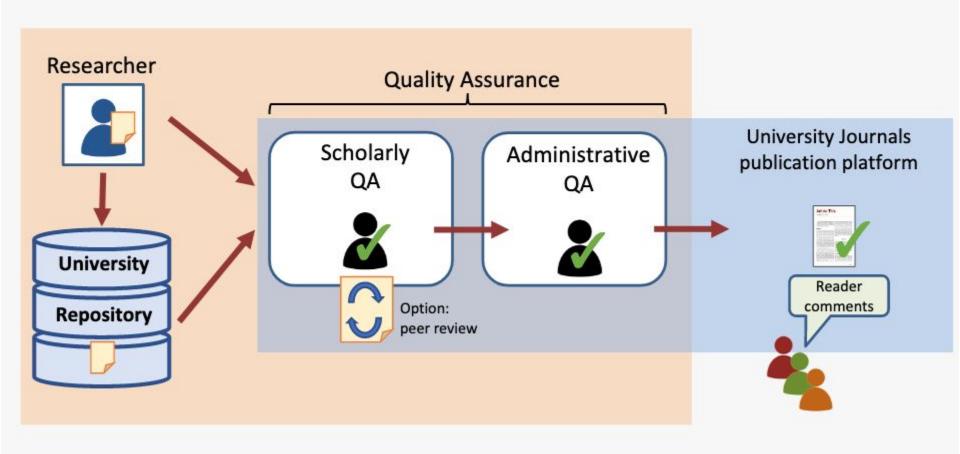
- Announced June 2018
- Articles are being submitted and vetted
- To be launched in early Summer 2019





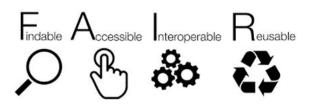
The University Journals Project

How it works: QA



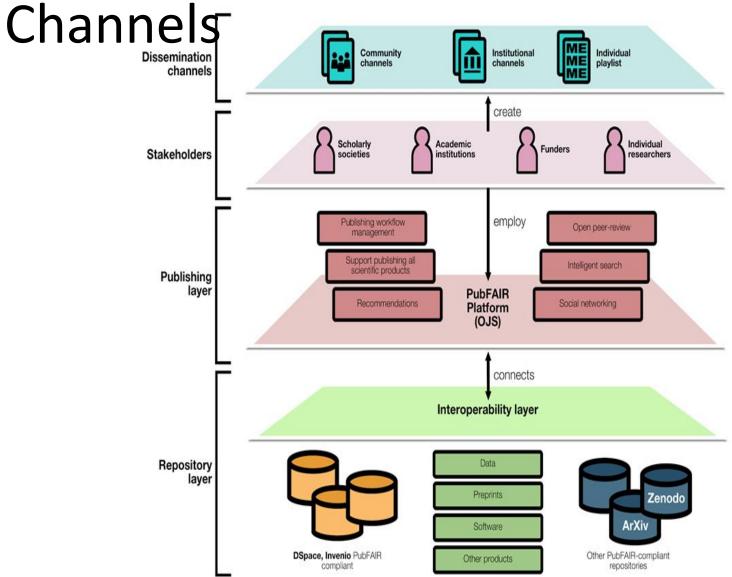
PubFAIR

 An open publishing services framework, which aims to enrich repositories with a layer of services for the quality assurance, dissemination and discovery of a range of research outputs (including preprints, data and software).

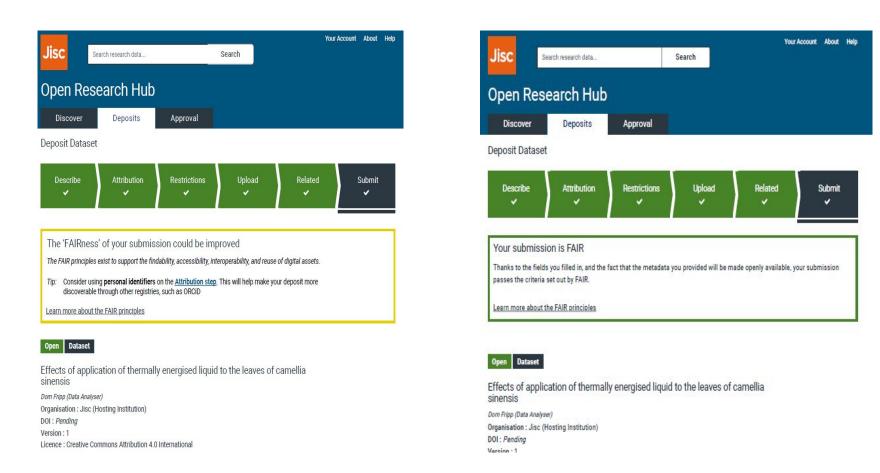




PubFAIR Architecture - Dissemination



FAIR metrics on repository workflow



D. Fripp, T. Davey (2019) A proposal to add a FAIR metric to the Jisc Open Research Hub https://doi.org/10.5281/zenodo.2619356



What are we doing?

Working with universities and national/regional organizations to adopt NGR technologies in repository platforms, build value added services to demonstrate the functionalities, and defining the principles to govern the knowledge commons

























Good Practice Principles for Scholarly Communication Services

COAR and SPARC have developed seven good practice principles to ensure that scholarly communication services are transparent, open, and support the aims of scholarship. These principles can be used by users to make decisions about which services they will contract with, and by service providers to improve their practices and governance



GOOD GOVERNANCE

The service has strategic governance that allows community input on the direction of the service and operational governance with community representation and decision making power.



OPEN STANDARDS

The service uses open APIs to enable interoperability, and adheres to open standards. Ideally, the platform is based on open-source software, but in cases where it is not, user-owned content is managed according to well-established, international standards.



FAIR DATA COLLECTION

Only data necessary for the service's provision are collected from users and the type of the data collected and how they are used is clearly and publicly articulated.

These principles are informed by Principles for Open Scholarly Infrastructure-v1 by Bilder G, Lin J, Neylon C (2015) © 2019 COAR and SPARC, subject to a Creative Commons Attribution 4.0 International License



TRANSPARENT PRICING AND CONTRACTS

The service's contract conditions and pricing are transparent and equitable, with no non-disclosure agreements included.



EASY MIGRATION

User-owned or generated content can be easily migrated to another platform or service upon termination of contract, without any additional fee from the service provider.



SUCCESSION PLANNING

If the service is a nonprofit, the organization's bylaws state the conditions and terms governing how the organization may be transferred or wound down. If the service is provided by a for-profit entity, the contract/agreement should not be assignable to another entity without the client's express permission.



OPEN CONTENT

Content, metadata and usage data are immediately, openly and freely available in machine-readable format via open standards, and using licenses (like CC0 or similar) which facilitate reuse.



What Do We Mean by Open Infrastructure?

- 1. Open
- 2. Interoperable
- 3. Community-based
- 4. Sustainable
- 5. Smart

John Willinsky, Public Knowledge Project. May 2019 https://zenodo.org/record/3228777#.XQip-XuKdN0



So, when you invest in open...

Invest in Open Infrastructure

An effort to enable durable, scalable, and long lasting open scientific and scholarly infrastructure to emerge, thrive, and deliver its benefits on a global scale.

Our Statement

Our Supporters

Join the Census

Leadership

Blog

Events

Media Coverage

Our Statement

We imagine a world in which communities of researchers, scholars, and knowledge workers across the globe are fully enabled to share, discover, and work together. It is clear that the needs of today's diverse scholarly communities are not being met by the existing largely uncoordinated scholarly infrastructure, which is dominated by vendor products that take ownership of the scholarly process and data. We intend to create a new open infrastructure system that will enable us to work in a more integrated, collaborative and strategic way. It will support global connections and consistency where it is appropriate, and local and contextual requirements where that is needed. Read more >

Sign Our Statement

See who's supporting IOI and add yourself and/or your organization as a supporter.

Sign the statement >

Join the Census

The Census of Scholarly
Communication
Infrastructure is now open.
We invite projects and
programs, for profit and
nonprofit corporations, and
hosted initiatives of all kinds
to contribute to this growing
body of information.

Complete the census >

Invest also in sustainable, inclusive and innovative!

Invest in repositories!

Thank you and questions