The unique opportunity to advance Science as a Global Public Good: Open Science in a world of contrasts



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#OpenScienceUN



-2002-

BUDAPEST OPEN ACCESS INITIATIVE

"An old tradition and a new technology have converged to make possible an unprecedented public good. The old tradition is the willingness of scientists and scholars to publish the fruits of their research in scholarly journals without payment, for the sake of inquiry and knowledge. The new technology is the internet."

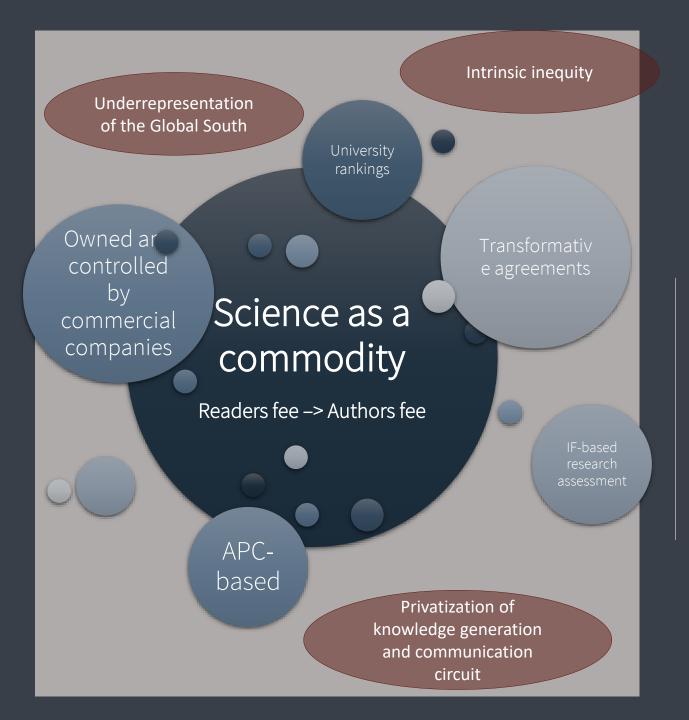
Open Science: the opportunity to achieve science as a global public good

However,

we live in a world of contrasts

Many concerns from the perspective of the commons





Increasing control of the knowledge production and communication circuit by commercial corporations.

Restrictions on the rise: restrictions on where, when or how to deposit.

Publishing transition to digital technologies is both slow and disappointing

Damaging research assessment system (the industry of prestige)

Refusal to adopt author retention rights

Consolidation of the oligopoly as a result of the European commercial flip: pay to publish instead of pay to read

Transformative agreements

are not compliant with the science as a global public good approach

"those who fail to learn from history are condemned to repeat it"

less resourced researchers and the opening and the future of or countries, academic institutions and the future of countries academic institutions and the future restrictions control beyond commercial agreements.

The ownership determines the future restrictions openness and future restrictions.

Repeating historical errors (suscription model)

Repeating Historia

Equity must be in the discussion.

But, in order to achieve equity:

- we need to respect each other
- we need to value us as equals

Waiver fees in Transformative Agreements?

They are patronizing strategies granted by the owner. (inequity)

In this approach of commodification, the results are measured only by total number of articles in OA

First adopted in Europe, the wave of TAs has now reached libraries in Asia, Africa, the Americas and Australia. With more than half a million new research articles published openly through TAs negotiated by institutions in 67 countries to date, there can be no doubt that TAs increase global access to research.

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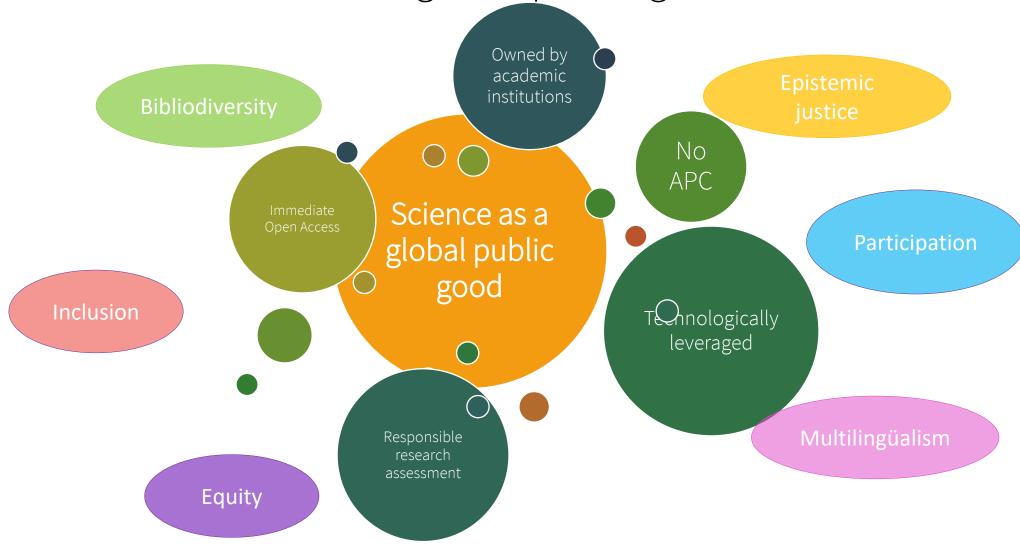
Through key "transformation drivers", characteristic of TAs, libraries, globally, are advancing toward a fully open paradigm in scholarly communication

Colleen Campbell, Ádám Dér, Kai Geschuhn and Ana Valente (2022). How are transformative agreements transforming libraries? IFLA, WLIC, Dublin

Is there also investment in non-commercial publishing? In the creation or strenghtning of non APC journals? Or the "market" will empower only the same players?

Definitely, there are better ways to achieve a "true" Open Science, where everyone has the same opportunity to be part (publish and read).

Science as a global public good



Lessons learned from Latin America

12 country-level networks of institutional repositories





.460

Natural Open Access redalyc.org





Institutional journal portals

and repositories

>3.000 OJS installations

Academic journal publishing

~12.000 online journals

~2.700 quality-certified journals

63 OA mandates

4 national mandates (AR, MX, BR, PE)

Distributed investment Universal benefit

No fees neither for authors nor for readers

Owned by academic sector

Nonprofit

Nonprofit platforms and infrastructures for capacity building and sustainability

Lessons learned from the comercial sector in the Global North

The academic sector lost control of scientific publishing

Commercial publishers took control

Readership paywalls

Citation indexes are used to define what "mainstream" science is.

Digital transition of publishing inherited the subscription-based business model.

Owned by the private sector

Journal subscription crisis.

Open Access Initiatives.

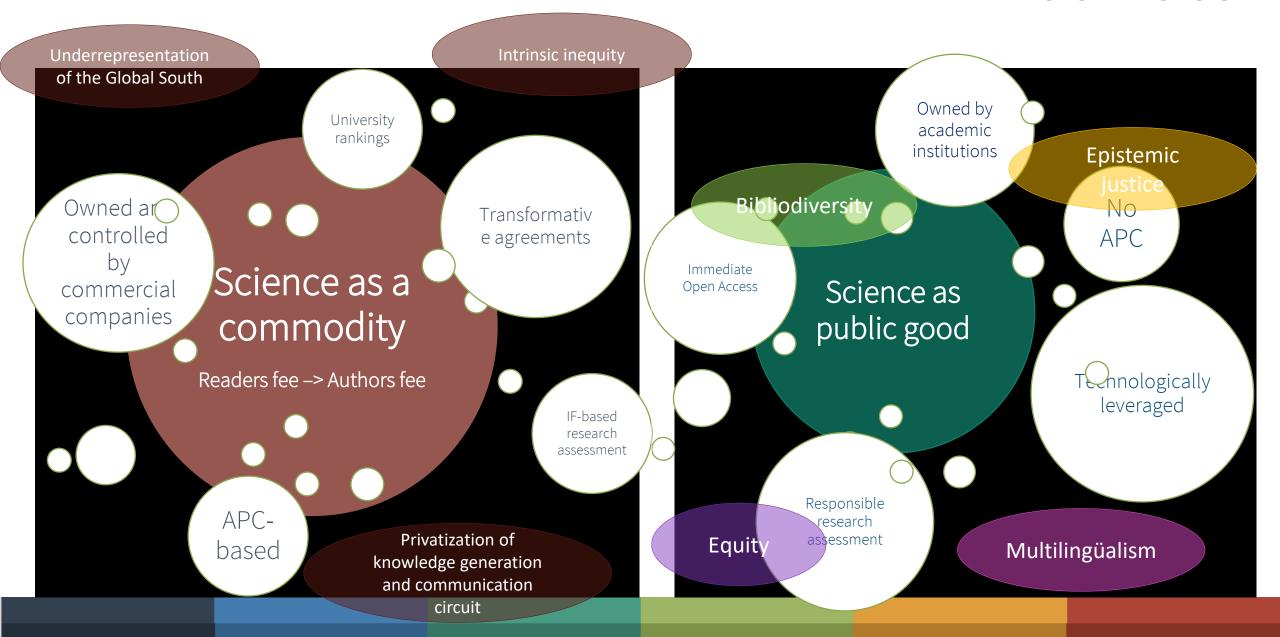
Authorship paywalls

Appearance of commercial OA based on author fees (APC).

Consolidation of commercial OA through transformative agreements.

Inflationary APC market.

IT'S UP TO US



2022



BUDAPEST OPEN ACCESS INITIATIVE

Open access is not an end in itself, but a means to further ends. Above all, it is a means to the equity, quality, usability, and sustainability of research.

Our four high-level recommendations address systemic problems that obstruct progress toward these ends.

- 1. Host OA research on open infrastructure.
- 2. Reform research assessment and rewards to improve incentives.
- 3. Favor inclusive publishing and distribution channels that never exclude authors on economic grounds.
- 4. When we spend money to publish OA research, remember the goals to which OA is the means.

In the Unesco Recommendation on Open Science:

Open Science is defined as an inclusive construct





Deconstruction needed

See what it is not seen

Understand hidden and damaging assumptions so to think on Science as a global and equal dialogue

OA is not an end in itself, but a means to other ends, above all to the equity, quality, usability, and sustainability of research... (BOAI20)

Go back to the essence and values of science as a global enterprise

"Mainstream" vs "peripheral" science

We should value science beyond the industry of prestige

Then the problems with APC are not: price, inflation, transparency...

The root of the problem is the commodification, ownership and control.

Latin America is the living example of publishing infrastructure sustained collectively by the academic system.

Publishing owned and led by the academic sector. The future of openness in its hands.

Open Access have an unprecedented legal constitutional support in Mexico

Reform on article 3rd of the National Constitution to introduce Open Access as a right



CONSTITUCIÓN POLÍTICA DE LOS ESTADOS UNIDOS MEXICANOS

ublicada en el Diario Oficial de la Federación el 5 de febrero de 1917

TEXTO VIGENTE

Además de impartir la educación preescolar, primaria, secundaria y media superior, señaladas en el primer párrafo, el Estado promoverá y atenderá todos los tipos y modalidades educativos incluyendo la educación inicial y a la educación superior- necesarios para el desarrollo de la nación, apoyará la investigación científica y tecnológica, y alentará el fortalecimiento y difusión de nuestra cultura:

Fracción reformada DOF 12-11-2002, 09-02-2012

http://documentos.congresogroo.gob.mx/marco juridico/CPEUM 270818.pdf

ÁMARA DE DIPUTADOS DEL H. CONGRESO DE LA UNIÓN

CONSTITUCIÓN POLÍTICA DE LOS ESTADOS UNIDOS MEXICANOS

publicada en el Diario Oficial de la Federación el 5 de febrero de 1917

Última reforma publicada DOF 20-12-2019

berá proveer recursos y estímulos suficientes, conforme a las bases de coordinación, nculación y participación que establezcan las leyes en la materia; además alentará el rtalecimiento y difusión de nuestra cultura;

Toda persona tiene derecho a gozar de los beneficios del desarrollo de la ciencia y la innovación tecnológica. El Estado apoyará la investigación e innovación científica, humanística y cnológica, y garantizará el acceso abierto a la información que derive de ella, para lo cual

Fracción reformada DOF 12-11-2002, 09-02-2012, 15-05-2019





underline

The go-to virtual conference venue around the world.

The introduction commodification EDUCATION of science in Latin

America

ELSEVIER

Discover which Elsevier journals are participating in

Read and publish agreement with the Colombia Consortium lack of policies on author retention rights, perpetuity of exclusion through training of researchers and companies involved in policies definition, loss of current infrastructure due to lack of resources and recognition in research assessment



Avisos Alma Contreras Q Jueves 23 Junio 2022 @ 145 Hits @ 0 Comentario

Siete acuerdos para publicar en acceso abierto

La UNAM ha firmado "acuerdos transformativos" (conocidos también como Read and Publish) con siete editoriales científicas International Water Association, Microbiology Society, John Wiley & Sons y Association for Computing Machinery, qu para tener derecho al acceso de los contenidos (lectura), a una suscripción que incluye, además, el pago para la publicación er de prestigio.

El costo de publicación se refiere a la tarifa que cobran las editoriales para la publicación en acceso abierto, conocida com revistas "híbridas" son aquellas que incluyen artículos para cuyo acceso se requiere el pago de una suscripción y artículos de a

Springer Nature continues open access drive in Latin America

SPRINGER NATURE

Publisher agrees its first TA in Mexico with Universidad Nacional Autónoma de México (UNAM) signaling increasing momentum and support for OA across the Americas

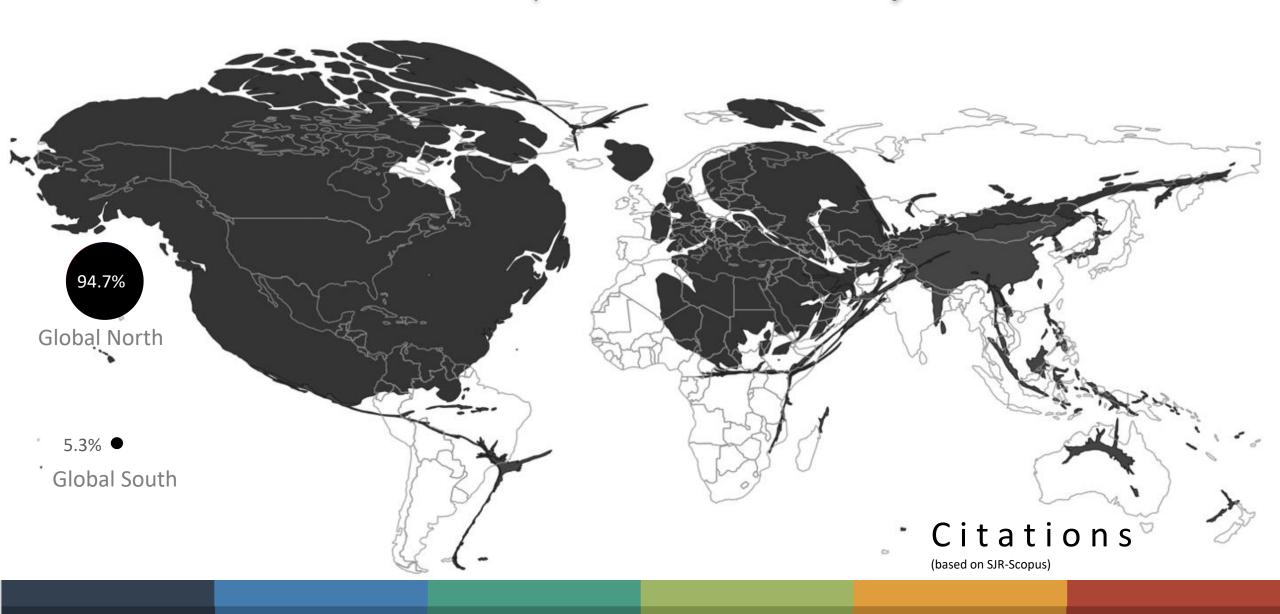
Springer Nature has today agreed its first transformative agreement (TA) in Mexico with partner Universidad Nacional Autónoma de México (UNAM), in Mexico. The TA is also the first and largest institutional TA for Latin America, showing

commitment across all Americas to OA and increase the reach and impact for their research outputs.

WILEY anuncia acuerdo transformativo Read-&-Publish con la UNAM

Wiley y la Universidad Nacional Autónoma de México (UNAM) firman un acuerdo de acceso abierte

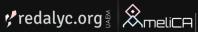
The map is not the territory



The map is not the territory

Diamond OA should regain its place in research assessment The contribution of Diamond OA to universities and countries in the dissemination of science must not be ignored

Map of co-authorship in diamond OA journals (1.9 million author records)
Source: Redalyc 2022



The Global Village of Knowledge

We live in a world of connectivity. It is possible to connect published knowledge for the universal benefit. It is happennig...

GREEN OA + DIAMOND OA COMPLEMENTARITY



Articles published in non-APC journals



Content available in repositories





SCIENCE COMMONS

Open Science Ecosystem



THE FEDERATED NETWORK OF INSTITUTIONAL

REPOSITORIES OF SCIENTIFIC PUBLICATIONS

LA Referencia is a Latin American network of open access repositories.

It supports national Open Access strategies in Latin America through a platform with interoperability standards, sharing and giving visibility to the scientific production generated in institutions of higher education and scientific research.

> 12 countries form LA Referencia: Argentina, Brazil, Chile, Costa Rica, Colombia, Ecuador, El Salvador, Spain, Mexico, Panama, Peru and Uruguay.



OPEN INFRASTRUCTURE FOR ADVANCING DIAMOND

OPEN ACCESS PUBLISHING

Open Access journal index and article-hosting platform for Diamond OA publishing. It begun in 2002.

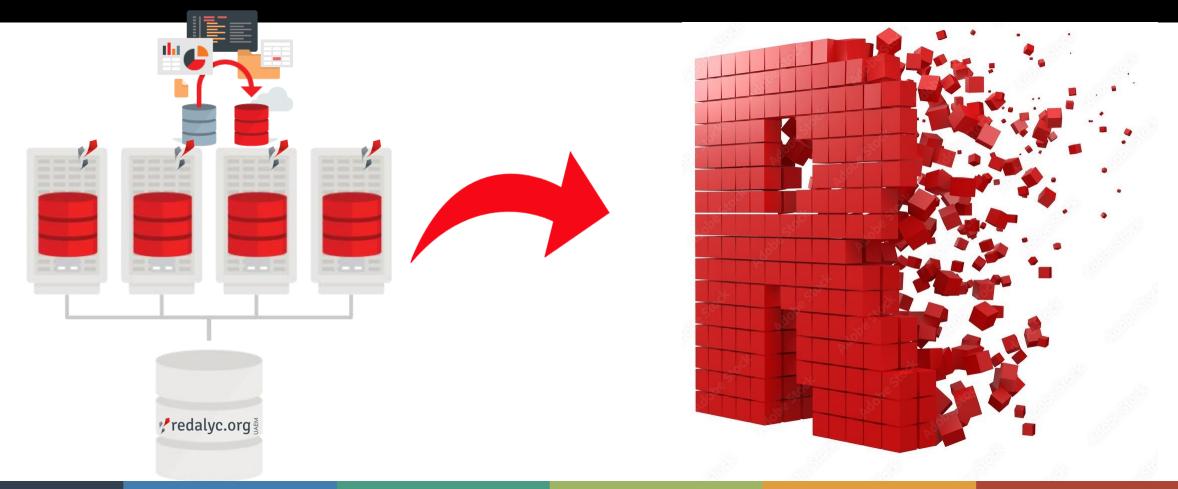
Includes journal quality assessment processes, full-text articles' hosting, automatic editorial workflow technology, metrics, and author-level services.

1,460 Open Access peer-reviewed journals published by **706** institutions from **31** countries

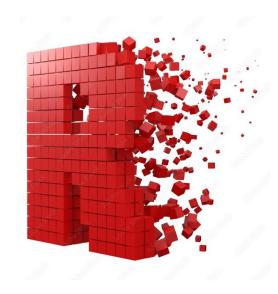
>750,000 full-text articles in several different languages authored by 1.8 million authors from 150 countries.

From a construction of a database system for Diamond OA journal articles

... to a deconstruction of data fragments by institutions and countries



Diamond OA journal articles data from Redalyc to repositories



The Redalyc data, at institutional and country levels, is openly available

OAI-PMH data provider (base URL) per institution (more than 10 thousand data providers)

OAI-PMH data provider (base URL) per country node











Aggregators

Diamond OA journal articles data from Redalyc to repositories



OAI-PMH data provider (base URL) per institution (more than 10 thousand data providers)

OAI-PMH data provider (base URL) per country node



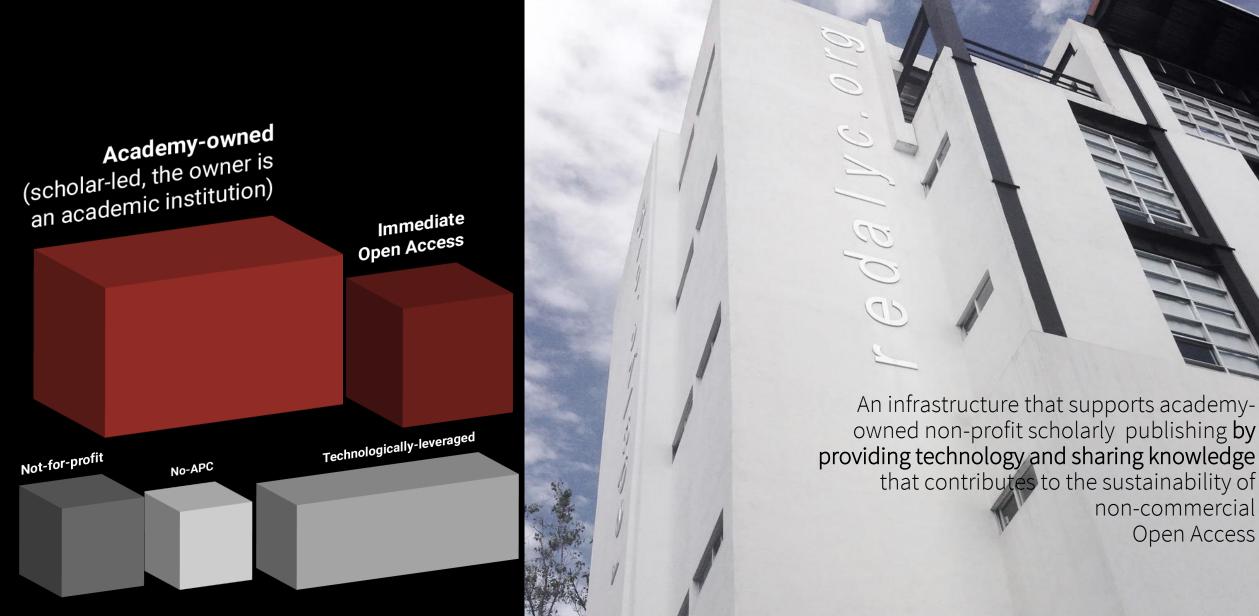
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FECYT PARA LA CIENCIA PARA LA CIENCIA PLA TECNOLOGÍA

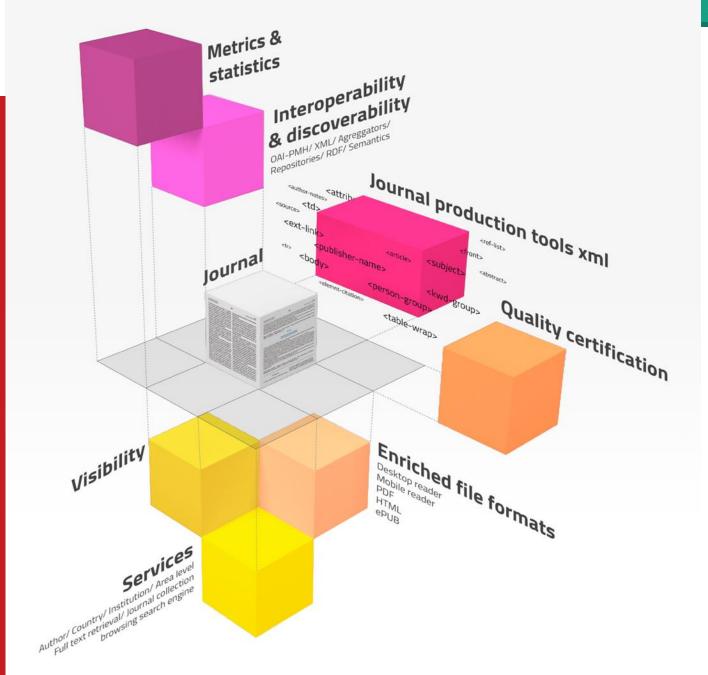




non-commercial

Open Access

redalyc.or



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Transparency

Accountability

Inclusivity

Responsability

Community & Collaboration

Visibility

Rigour

Equality

Public good

Reproducibility

Findability

Accessibility

Re-usability

Interoperability

Innovation

Principles of Open Scholarship

Redalyc.org

1,569 indexed journals

31 countries

747

Publisher institutions

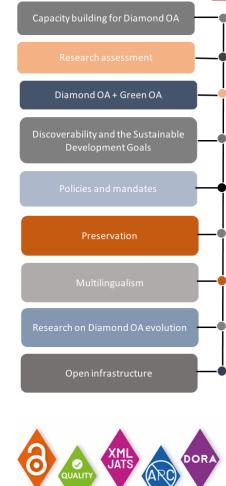
0.8 Million

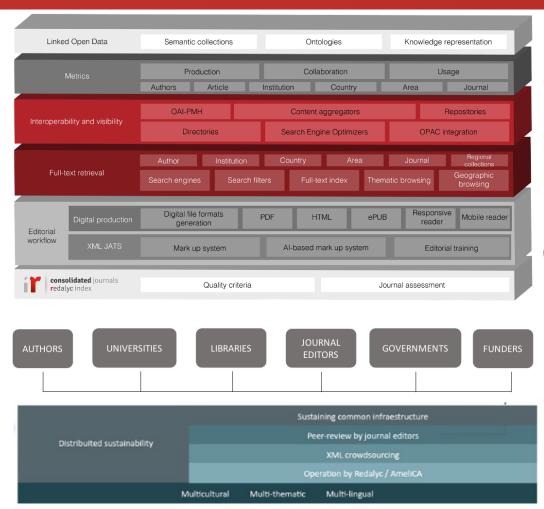
Full-text articles

12 million article downloads per month

> 1.7 million authors from 10.000 institutions

> > 75.000 Redalyc daily users







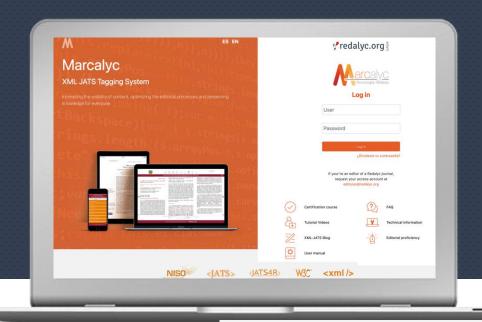
Technology for editorial workflow and discoverability

Artificial Intelligence (AI) for lowering the cost of journal production and increase the capacity of text to be connected

Open Data

Replicability

necessary condition in science











<xml/>

Mathematical expressions tagging with MathML

XML tagging of tables and data

XML tagging of annexes and supplementary material

How much would this collaborative work cost in the commercial market? (just in the edition phase)

- Redalyc/AmeliCA –with Marcalyccontributes to journal production workflow by developing technology.
- Since Marcalyc was launched about 10,000 issues have been processed that would cost in the market more tan USD\$ 10 Million
- Important to highlight that editorial teams are trained on journal publishing, so the tradition keeps alive.

Cost per journal issue (USD)	
XML markup	300
PDF	300
ePUB	300
HTML	300
Article reader	360
Total per issue	1.560

Framework of collaboration for the consolidation of a Regional Open Science Ecosystem with the aim of generating regional public goods

Interoperability of the green and diamond routes that will improve visibility and contribute to new forms of scientific evaluation.

Diamond Open Access content available in **Institutional Repositories,** in national nodes and in LA Referencia, as well as in evaluation systems and CRIS platforms.



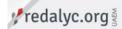




Development of open software that improves the quality of metadata, compliance with international guidelines, preservation and retrieval

Non-commercial Open Science in Linked Open Data for the SDG





About Principles and values

Digital publishing technology (XML JATS)

Journals indexing Services Open Science

Scientific Information System Redalyc

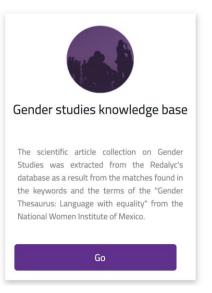
Diamond Open Access scientific journal network Non-commercial global infrastructure owned by academia



Linked Open Data









Workspace para la colaboración y fortalecimiento del Acceso Abierto Diamante

por Redalyc y AmeliCA

WorkspaceDOA por Redalyc y AmeliCA 2022-2024

Sostenibilidad del modelo

Evitar la adopción de APC / Dejar el APC para convertirse en una revista no-APC

- Tecnología de fluio editorial para bajar los costos de

Fortalecimiento de las capacidades

Alcance, visibilidad v preservación

- Canal RSS para revistas



Revistas de Acceso Abierto

Diamante como vehículo del





Calidad

Evaluar la calidad y proveer retroalimentación iterativamente hasta que los niveles sean

- Revisión por pares (transparencia del proceso.

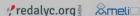
Mostrar la contribución del Acceso Abierto Diamante para la evaluación de la investigación

El Acceso Abierto Diamante en la recuperación

- de su lugar en la evaluación de la investigación

- Una revista editada en algún país africano

Contact: workspace@redalyc.org





WorkspaceDOA for Diamond OA publishing

- Transform APC journals to non-APC
- Support vulnerable journals
- Capacity building
- Digital Identifiers
- Metrics
- Digital Preservation
- Leverage Diamond OA for research assessment







OPEN ACCESS AS A COMMON GOOD IN ANGOLA: A ROADMAP FOR A NATIONAL LAW

















Open Science as a way to achieve science as a global public good



Prevent APC adoption



Design Open Science policies centered on the paradigm of science as a global public good
Investment in library/institutional/n



Reform on research assessment



Strengthen noncommercial Openness





Non-commercial Open Science towards science as a global public good

It prevents science publishing to be commodified

It allows the research community to own, control and lead scholarly communications

It doesn't imply resistance to eliminate author rights retention

No current and future hidden restrictions (embargoes, deposit, data mining, text mining, etc)

It ensures long term openness

Full-text and data processability allows to advance technologies for knowledge discovery, optimization of editorial workflows, innovation for research assessment, linked data and open data

On what data is the industry of prestige founded?

Which regions, countries, science fields, journals, institutions or authors are privileged by current strategies? Which ones are excluded?

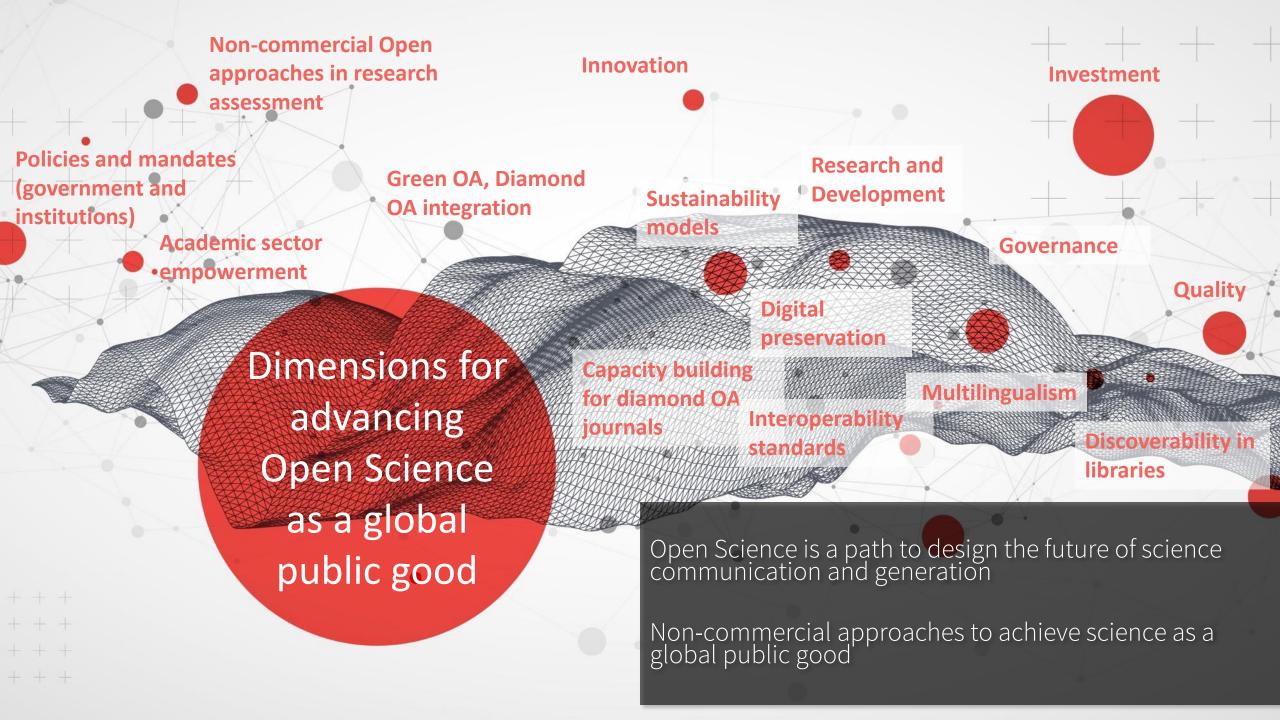
Which inequalities the current system will continue to perpetuate?

Is openness structural and sustainable?

Who owns and control the knowledge? The research community interests prevail?

The future restrictions on knowledge generation depend on the ownership.

How to achieve <u>systematic</u> participation in science (not patronizing strategies) that enables a global conversation?



There is a sustainability model on non-commercial Open Science

Academic / scientific sector + Model as a global public good

Policies must consider

Non-commercial open access towards science as a global public good

Sustainability

Is the openness structural and sustainable in longterm?

Equity

Who is being excluded by current policies?
Who is favored by current policies?

Ownership

Who owns science? Who controls the future of science? Whose interests prevail?

Open Access as a human right

Everybody with the opportunity to read but to contribute to the scientific conversation

Roles of stakeholders in Diamond OA



Libraries

Diamond supporters and ambassadors

Increase the outreach of Diamond OA to the research community

Include Diamond OA sources into their discovery services

Recalculate their budgets for fairly distribution of resources (according to the

Get involved in journal publishing



Institutions

Recognition of Diamond OA in institutional policies for research and journal assessment, as well in hiring, tenure, and promotion decisions

Support Diamond OA journals published by its faculty

Strengthen editorial teams within the university



Governments

Diamond driving force

Recognition of Diamond OA in public policies for research and journal assessment

National consortia of libraries should recalculate their budgets for fairly distribution of resources (according to the use)

i.e. Mexican consortia expenditure in comercial solutions ≈ 74 Million FUR



Funders

Diamond driving Recognition of Diamond OA in funding decisions

Recognize that Diamond OA is more sustainable and it has a better return of investment

Support the sustainability of Diamond OA



Open infrastructures

Engine for collective action for Diamond OA

- Quality assurance
 - Help funders to identify quality journals
- Capacity building
- Complementary component in Diamond OA ecosystem to add value to journals.



Research community /authors

Diamond OA researcher

Make them part of sustainability (production)

Raise awareness around Diamond OΑ





The main takeaway: Why not to address the root problem?

- It is possible to have quality publishing on a not-for-profit basis (non-APC)
- In a collective approach for the benefit of all.
- The transformation to Open also present an opportunity to reimagine scholarly communications
- To return to the essence of science that favours epistemic justice, methodological, linguistic, geographic and content diversity; to rectify some of the existing biases and inequalities in the system
- A future where Diamond OA and Green OA have much to contribute

Thank you

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- It used to be a free highway (no fee) which was built thanks to the contribution of neighbors
- During Neoliberalism in Mexico was expropriated by a commercial corporation
- Now they offer exemptions to the past donors.
- But what about the universal benefit?