



SPARC\*  
Europe

# 10 Key Interviews

INSIGHTS INTO THE SUSTAINABILITY OF  
OPEN INFRASTRUCTURE SERVICES

01

An Invest in Open Infrastructure project  
*More info: [www.sparceurope.org/ioiinterviews](http://www.sparceurope.org/ioiinterviews)*



# ABOUT THE PROJECT

## Gleaning Insights

Research and scholarship is underpinned by a variety of tools, technologies and services ranging from for-profit commercial solutions and offerings from vendors to community-owned, open technologies and infrastructure. We often hear about the challenges for open infrastructure tools and services to scale, maintain, and compete in the broader market.

The 10 interviews comprised in this project highlight some of the key decision-making points, funding mechanisms and models, and other learnings from a series of commonly used services and technologies used to support research and scholarship. These include both for-profit and not-for-profit services, highlighting perspectives on sustainability across the sector.

This work is supported by Open Society Foundations and SPARC Europe, in collaboration with Invest in Open Infrastructure.

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# WHO WAS INTERVIEWED?

## Overview

arXiv  
Code Ocean  
Dryad  
EDP Sciences  
F1000 Research  
Figshare  
Our Research  
Mendeley  
**Redalyc** – Featured in this document.  
4TU.Research.Data



## Interview: REDALYC, Mexico

**"The academic community must shape new forms of scholarly communication and sustain them"**

Arianna Becerril-García, Executive Director, Redalyc

# REDALYC

Arianna Becerril-García,  
Executive Director



## At a Glance

### Type of activities:

OA journal index, OA journal hosting platform, journal quality assessment, editorial training and journal production services

### Life-cycle stage:

Founded in 2003, now an ever-growing network with more stakeholders involved, adding services and expanding into more countries (currently 1,300 OA journals, 31 countries, 672 publisher institutions, 720,000 full-text articles)

### Current legal structure and funding model:

Research department at the Autonomous University of the State of Mexico, university cooperation (no separate legal entity), with staff employed by universities and additional grants and (project) funding, allowing the services to be offered for free

### Technology:

Proprietary

## Sustainability

'University network/collaboration: APC-free, non-commercial Open Access (OA), with technology helping us to democratise access to the content and also to lower the cost of publishing'

## Piece of Advice

*"As a researcher, I would speak to the responsibility we have to participate in shaping new ways for scholarly communication. I really believe that many illnesses and big problems of society today could be solved with a more democratic way of accessing scientific information. This is not only about Open Access. This is about inclusion; this is about equity; this is about diversity. Some Open Access business models are not supporting these.*

*With Redalyc, we've also been working indirectly in transferring knowledge to new generations. If you leave these tasks only in the hands of corporations, you lose the opportunity to involve the next generation in continuing to learn and develop innovative solutions for the future.'*

# REDALYC

Redalyc is a Latin American university cooperation for the common good that was founded in 2003 and provides free services, such as Open Access (OA) journal indexing, an OA journal hosting platform, journal quality assessment, editorial training, and journal production services.

## Original vision

Redalyc was founded in the early 2000s with the twofold vision of improving the visibility and the quality of Latin American journals, as publishing went from print to electronic formats. Redalyc's Executive Director Arianna Becerril-García explains: 'Visibility was lacking because the Latin American journals weren't indexed in the prevalent databases at the time (Web of Science, Scopus), and the rest of the world didn't know of their existence or the Latin American scientific output'.

Moreover, while journals from North America and Europe were considered mainstream, Latin American journals – often run on an Open Access, non-commercial basis – were considered peripheral or of lower quality. 'We aimed to show the world that journals from this region are of quality. We also believed that if Redalyc would provide assessment or evaluation criteria, Latin American journals could improve their quality.'

'So the Redalyc vision at the time was: increase the visibility and the quality of Latin American journals by developing an index with evaluation criteria and a repository for full text (whether as first host, or as mirror site).'

## Growth and sustainability challenges

Redalyc is run inside the Autonomous University of the State of Mexico (UAEM) and was started by Eduardo Aguado-López and his research group, which works on scholarly communication. This model ensured that everyone was employed by and paid through the university and research grants. 'We are not involved with any commercial or private corporation. We are totally academic, and we are still working as a research group.' Redalyc is a department within the university, and not a separate legal entity. The group's building was financed six years ago by government grants through the Mexican Ministry of Education.

'Today, the team has grown, and in addition to

five researchers and some assistant researchers, who have teaching obligations as well, there are now 60 full-time staff members who work on Redalyc. I was the first software developer. About a half are hired by the university. We have a multidisciplinary team composed of 23 software developers and engineers in different categories, from junior to senior, various sociologists, literary specialists, communication professionals and historians. The rest are students with scholarships, who work on various tasks (data quality, data processing, etc.) and a couple with administrative roles.'

'There are complexities, however, because parallel agendas need to be managed. For example, one university could have additional priorities to the cooperative nature of Redalyc.'

'Today, not-for-profit initiatives like Redalyc face important sustainability challenges for meeting growing user demand. Investment is needed to allow them to keep providing

# "UNIVERSITY NETWORK/COLLABORATION IS HELPING US DEMOCRATISE ACCESS TO CONTENT AND TO LOWER THE COST OF PUBLISHING"

services and to enable them to continue to innovate in scholarly communications; one that is consistent with the benefit they bring to society. Redalyc provides service to 72.000 unique users per day with 12 million article downloads per month.'

## **Opportunities, considerations and choices**

Over the years, Redalyc has rejected several commercial sponsorship offers because, as Becerril-García explains, 'We believe the academic-run nature is to be preserved. The value of Redalyc is actually that the platform can't be sold and is the property of a university, and therefore the researchers running it are free to make decisions'.

She believes that Redalyc's independence from private money, 'which usually comes with conditions attached', and its reliance on public grants and donations has allowed it to develop a cooperative structure that can sustain itself through the shared resources of a university network. 'We've built on the collaborative nature of research projects and built a cooperative model for Redalyc to have less

difficulties in sustaining our initiative. As researchers in academia and universities, we work in collaborative networks and also provide students, labour and software. We've always tried to involve and engage other universities, to take advantage of available resources.

'This approach fits very well with the Latin American culture, and is almost a "cooperative", where there is in-kind collaboration and no money exchange.' Work is distributed among universities, and new forms of collaboration are developed when they are needed. 'We continuously find ways to collaborate, to find peers, and to set up projects that bring value to Redalyc. For example, we collaborate with universities in Venezuela and Panama who do, for instance, the XML mark-up with Redalyc technology and training. We are also looking for ways to increase our computer power, as we are running out of computer capabilities to deal with the increased user demand of our services. We are looking to install mirror servers at other universities.'

'Redalyc collaborates with universities where faculty run journals with their own resources, and then turn to Redalyc for certain added-value services, like visibility, metrics and discoverability services, and more recently technology to produce journals electronically. We provide these services, as well as training, for free. This helps to keep the cost of running the journals low, and no author publication charges are needed.'

APCs go against the very ideology of Redalyc: 'We believe APCs are really damaging for our ecosystem, especially in Latin America, as we are not used to publishing in commercial concepts or market rules. I believe the implementation of APCs in our region could be very damaging. To counter this, Redalyc is developing technology to create networks and transfer knowledge to journal editors to continue to be out of the mainstream market. Our approach is more of a science of commons, or common good.'

'With the central team of developers and their technology, Redalyc helps to sustain APC-free, non-commercial Open Access journals in the

region, like Diamond OA. Technology democratises access to content and lowers the cost of publishing. Our artificial intelligence solutions for journal production reduce a lot of the manual work, automatically creating PDF, ePub and HTML from XML, and then connecting it all in linked open data. Machine learning techniques not only provide added-value services, but they also significantly lower cost. We can now realise 80% cost savings on producing electronic journals. This not only keeps the journal publishing cost low, it also enables journal editors to focus on quality content issues rather than technology. Redalyc is providing these tools to complement the rest of the processes, so that non-commercial Open Access can be sustained. And because the work is distributed across multiple stakeholders, journals can be sustained.'

### **Consequences of current funding model**

Since Redalyc is funded via UAEM and a university network and collaboration, its sustainability in the long run is better guaranteed. 'Our funding model secures the sustainability of our initiative: it provides a set of strategies that allows us to continue working and providing the services to strengthen non-commercial Open Access.' This also means that APCs are not necessary and, as we've seen, actually run counter to Redalyc's vision.

Moreover, under the current funding model, publishing knowledge remains within universities and is transferred to the next generation through training: 'If you leave these tasks only in the hands of corporations, you lose the opportunity to involve the next generation in continuing to learn and develop innovative solutions for the future. So I feel it is very important to engage the next generation in these tasks and these discussions. And that is what Redalyc is very used to. The majority of the Redalyc team is younger than 30.'

However, Becerril-García is wary of the challenges Redalyc faces from commercial Open Access providers entering the Latin American market. 'Not being part of the mainstream market is impacting us, as the big commercial corporations move into our regions, to ambitiously provide Open Access but with different commercial models. Since the Latin American publishing and indexing initiatives are not included in the mainstream databases and assessment approaches, they may be degraded. We've already seen examples in Latin American countries where journals got more money or points from their funders to be in, for example, Web of Science than to be in Redalyc, e.g. Colombia. We are witnessing the impact and degradation of our regional system.'

### **Future vision for sustainability**

Given the threat of commercial open access providers moving into the Latin American region, Redalyc decided to focus its efforts on strengthening non-commercial publishing no matter the region. 'We realised that our approach could be valuable to diamond journals from other regions. One year ago, we decided we needed to go beyond the geographical boundaries of Latin America and focus our strategies on non-commercial Open Access. We are now open to other regions, as long as they meet certain criteria, including journals from India and Africa, where UNESCO is supporting us along with AmelICA.'

Our vision is very clear: we have the goal to provide services, including new journal production services, to around 2,000 journals worldwide in the near future, all of them not-for-profit OA journals, without author or reader fees. We expect to remain funded in the same way: university cooperation for the common good, with additional grants and (project) funding, while growing the number of universities from other regions participating.'

Whether this will be enough to save the model remains to be seen. 'We do see journals being acquired by commercial corporations, and this is not a good sign. We also sometimes feel funders are prioritising initiatives that are considered more visible or more international.'

# "...THIS IS NOT ONLY ABOUT OPEN ACCESS. THIS IS ABOUT INCLUSION; THIS IS ABOUT EQUITY; THIS IS ABOUT DIVERSITY."

That worries us, like for instance with Plan S, where there at least initially was a focus on Transformative Agreements that often involve changing a fee for access into a fee for publishing. That leaves behind other not-for-profit initiatives and journals that are of quality, and often more inclusive, that deserve to be sustained.'

To sustain Redalyc's 'diamond model', more visibility and improved perception is needed, Becerril-García concludes. Organisations like IOI and SCOSS can help with this by showcasing good examples to funders: 'These are very good initiatives, and we are totally with them in spirit and in principle. We really believe there has to be a lot of investment in infrastructure worldwide. They can be our

intermediaries to get in touch with funders and let them know that these types of initiatives, and the not-for-profit sector, are more sustainable and allow for more participatory scholarly communication. Look at our recent experiences around COVID in this sense. They can help raise awareness that there are other models that are feasible, like our science of the commons.'

## **Advice for peers**

Becerril-García urges her peers to participate in shaping new ways of scholarly communication. 'I really believe that many illnesses and big problems of society today could be solved with a more democratic way of accessing scientific information. This is not only about Open Access. This is about

inclusion; this is about equity; this is about diversity. Technology is bringing us into a very different arena, providing us with more opportunities. If university-run journals are well informed, they can make the difference.'

'But we have to be more open, intelligent and creative, rather than assuming we know how things work, what it costs and what quality is. That also applies to institutional and national policies and strategies. Only then we can improve scholarly communications. This is a challenge for society in general. Everyone, whether a researcher, a funder, an initiative (like Plan S or Redalyc) can have an impact on creating a better future – we all have that responsibility.'