Culture change in academia: Making sharing the new norm

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Current academic culture

Open Access? No.

Images: UR - openscience.com; LL - John R. McKiernan; LR - Opensourceway
Photo: Peter Reed via Flickr
Regional and national level change

Image: Heraldry via Wikimedia Commons
LA Referencia

- network of open institutional repositories in Latin America
- 100 institutions in 9 countries
- aims to share and give visibility to scientific production in the region
- 600K+ total documents
- 260K+ articles
- 260K+ Master’s theses
- ~90K PhD dissertations

lareferencia.redclara.net/rfr/
REMEDI

- network of open access repositories in Mexico
- 55 repositories from 28 institutions of higher education
- goals: integrate, disseminate, preserve and give visibility to the academic and scientific production in the country
- 190K+ documents, including articles, theses, and books

www.remeri.org.mx/portal/index.html
Redalyc

“Science that is not seen does not exist”

- created by the Autonomous University of the State of Mexico in 2003
- open portal for scientific journals from Latin America, the Caribbean, Spain, and Portugal
- generates bibliometric and usage data for evaluation
- 900+ scientific journals
- 26K+ issues
- 330K+ full text articles
- involved in creation of national open access initiative

www.redalyc.org/home.oa
Mexico’s new open access initiative

- presented by Senator Ana Lilia Herrera Anzaldo
- in consultation with researchers at Mexican institutions
- approved unanimously by Congress, signed into law by president May 2014
- discusses benefits of open access to society
- encourages all researchers receiving public funds to make work openly available
- will create a national open access repository overseen by CONACyT

Photo: via @Redalyc on Twitter

legislandoatufavor.com.mx
Institutional level change

Photo: Colin Smith via Wikimedia Commons
Mexican universities with open access mandates
But...many academics still do not have access to the literature they need
Not all scientists have access

The National Institute of Public Health is a large federal research institute in Mexico.

~300 researchers, ~700 students

Access at INSP:

- 139 journals in total accessible via institute
- 88 journals in total with electronic access
- 66 journals with electronic access via paid subscriptions
- 22 journals with free electronic access provided by publisher
- 51 print-only journals (e.g. Cell, Nature, Science)
- access to select journals through consortium (CONRiCyT)

Thanks to Edgar Aguilar Vera, INSP for info!
High costs of subscriptions are prohibitive

Researchers in the institute study Chagas’ disease, cholera, dengue, HIV, influenza, malaria, tuberculosis...

INSP does NOT have access to:

- Annual Reviews of Medicine
- Current Biology
- Nature Medicine
- Nature Immunology
- PNAS
- ...and MANY more

What is the limiting factor? COST.

Photos: Erwin Huebner (top); Jamas Gathany (middle); C. Goldsmith (bottom) via Wikimedia Commons
Individual change:
What can I do to improve access?

Photo: Erin C. McKiernan
My pledge to be open

- I will not edit, review, or work for closed access journals.
- I will blog my work and post preprints, when possible.
- I will publish only in open access journals.
- I will not publish in Cell, Nature, or Science.
- I will pull my name off a paper if coauthors refuse to be open.

If I am going to 'make it' in science, it has to be on terms I can live with.
Concerns of early-career researchers

If I publish in OA journals:

- I will be hiding my work away in less visible (low prestige) journals.
- I must relegate my work to low impact (low IF) journals.
- Peer review will be of low quality.
- I will not get a job/grant/tenure.
- It will cost too much.
Be open, get more citations

Wagner (2010), Issues in Science and Technology

Gentil-Beccot, Mele, Brooks (2009), arXiv:0906.5418

Adapted from Piwowar & Vision (2013), PeerJ 1:e175
Concerns about open data

Many researchers fear lost publications (‘scooping’) 

Should we make data open? YES. 

How do we change culture? 

• educate researchers (e.g. show them citation advantage) 
• have clear policies on citation of primary data 
• recognize data sharing in tenure and promotion 

Image: Ainsley Seago doi:10.1371/journal.pbio.1001779.g001 

Additional resources: 
Article: Roche et al. (2014). doi:10.1371/journal.pbio.1001779
Don’t worship the Impact Factor!
But if you must...

OA journals with moderate to high IFs:

- BMJ: IF 17.21
- PLOS Medicine: IF 15.25
- PLOS ONE: IF 3.73
- PLOS Biology: IF 12.69
- BMC Medicine: IF 6.68
- BMC Biology: IF 6.53
- Open Biology: IF 3.62
- Frontiers: IF 2.5 – 5.2
Myth of poor peer review

- Retraction rate is highest in high IF subscription journals
- No controlled study comparing peer review in subscription vs. OA journals
- Bohannon ‘sting’ did not look at peer review in subscription journals
- Bohannon ‘sting’ found reputable OA publishers rejected spoof paper
- Peer review is often transparent in OA journals

You can read the full peer review history – every criticism, every change.
More than 400 organizations and 10,000 individuals have signed DORA, pledging:

- **not** to consider journal-based metrics (JIF) in hiring, promotion, or funding decisions
- the content of a paper will be weighed more heavily in evaluations than the journal in which it was published
- to consider the value and impact of all research outputs

Have YOU signed yet? [am.ascb.org/dora/](http://am.ascb.org/dora/)
Institutions valuing open access, open data

“VCU Promotion and tenure committees should recognize that publication...[in open access formats] offers added value and greater public good”

www.facultysenate.vcu.edu/2010/11/17/vcu-faculty-senate-resolution-1/

“Open access to research data benefits society...Value inheres in data as a standalone research output”

openaccess.unt.edu/denton-declaration
Being open doesn’t have to break the bank

- Many OA journals do not charge authors (e.g. eLife).

- Journals like PeerJ have one-time, low-cost membership fees.

- Many journals have waivers (e.g. PLOS).

- Many institutions have publisher memberships (e.g. via BMC).

- Self-archiving costs nothing.
Want to publish in non-OA journals? GO GREEN!

- institutional repositories
- personal website

figshare
arXiv.org
bioRxiv

Most popular uploads:

- Being open as an early career researcher (presentation)
- Relating ion channel expression, bifurcation structure, and diverse firing patterns in a model of an iden...
- Open access options for publishing neuroscience research (fileset)
- Mitigating effects of vaccination given constraints in supply and daily administration capacity (fileset)
- A Brunswikian evolutionary developmental theory of preparedness and plasticity (paper)
Know your rights, don’t sign them away

Know your Author Rights

What you should know when publishing your intellectual property

NEGOTIATE
You have the right to change your publication agreement!

NATIONAL GRANTS
If you have conducted your research using a national grant, you may be REQUIRED to make it publicly accessible.

LOCAL REPOSITORIES
FAIR USE allows you to place your work in a library repository under certain restrictions.

ADDENDUM
The easiest way to alter an agreement is by attaching a standardized addendum like the one from SPARC.

CHOOSE WISELY
You can choose to publish in a journal that supports OPEN ACCESS or SELF ARCHIVING.

For More Information:

SHERPA/ROMEO
www.sherpa.ac.uk/romeo

PLOS
www.plos.org/about/open-access

SPARC
www.arl.org/sparc

AUTHOR RIGHTS

Use the SPARC Author Addendum to secure your rights as the author of a journal article

SPARC
http://www.arl.org/sparc/

Via openaccess.commons.gc.cuny.edu/2014/03/07/you-know-what-you-write-but-do-you-know-your-rights/
What it really means to publish openly

- More exposure for your work
- Practitioners can apply your findings
- Higher citation rates
- Your research can influence policy
- The public can access your findings
- Compliant with grant rules
- Taxpayers get value for money
- Researchers in developing countries can see your work

CC-BY Danny Kingsley & Sarah Brown
My advice to ECRs

- Make a list of OA journals in your field - know your options

- Discuss open access upfront with collaborators

- Discuss preprints and self-archiving upfront with collaborators

- Document your altmetrics (Impact Story)

- Blog about your science - write so those outside your field can understand

- Be active on social media to increase visibility
Discussing OA with your mentor

- Ask your mentor for a meeting to discuss publishing options
- Put together concise (15 mins max) presentation on benefits of OA
- Include data (lack of access worldwide, advancements made through open science, citation advantage)
- Explain how your work and the lab could benefit from being open
- Create a list of OA options and share this list with your mentor
- If your mentor insists on a toll access journal, discuss submitting an author addendum
- Start these discussions EARLY!!

From interview with ARCSCon at arcscon.tumblr.com/post/84942060277/advocating-for-openness
How to support ECRs in being open

- LISTEN! LISTEN! LISTEN!
- Lead by example - be open and others will see benefits
- Be receptive - answer emails, tweets, questions from ECRs about OA
- Say yes to giving tutorials, guest lectures, talks at meetings
- Do not consider where people publish in making hiring, grant, or tenure decisions
- Write open access publishing funds into your grants
- Create incentives for being open

Photo: listentomyvoice via flickr
Empower ECRs to advocate for change

More info: www.righttoresearch.org/act/opencon/
In sum...Don’t lock up your research!

Image: John R. McKiernan
Take-home messages

• There does not have to be a conflict between being open and being successful.

• Being open does not have to hurt your career - it can help it!

• At any stage of your career, you have the right to stand up for your beliefs.

• If you believe in openness, stand up for it. Make it happen.

• Opening up academia starts with you and the choices you make.

Photo: Gideon Burton via flickr
These are some of the people you will help...Thank you!

UPR Cayey

INSP México