



# Early Career Researcher's view on Open Science

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 @InquisitiveVi



MAX-PLANCK-GESELLSCHAFT

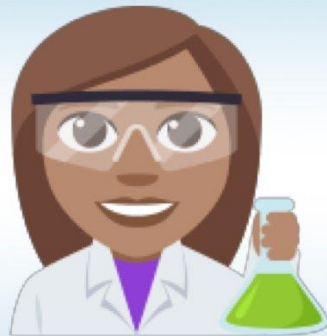


Max Planck Institute for  
Biophysical Chemistry

# What do Early Career Researchers Want ?

- Do great research.
- A good environment to do science/research.
- Possibilities of realistic career progression.
- Research funding to realize research goals.

# Open practices accelerate discoveries

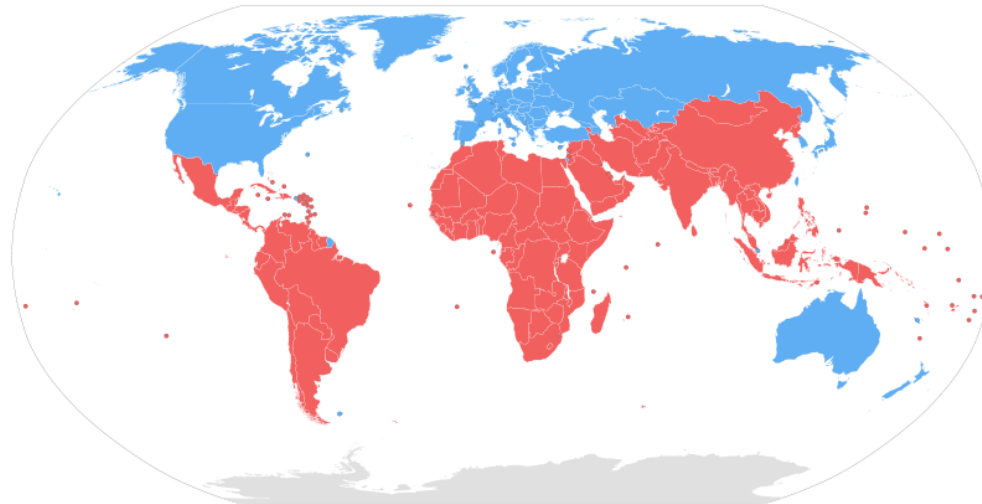


# Open practices support inclusivity



*Cartoonsmix.com*

## Geographical skew of knowledge

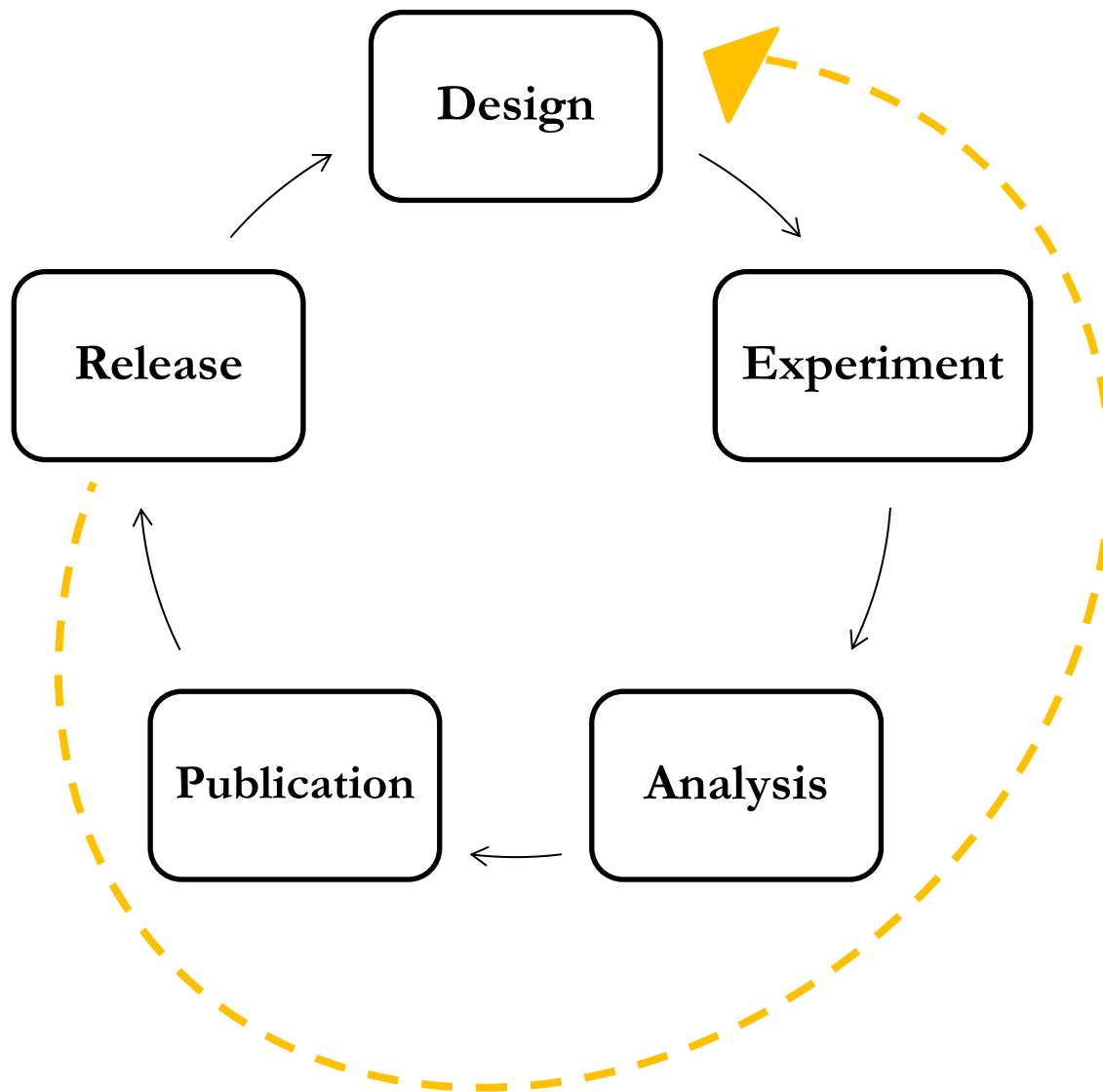


*Wikimedia Commons*

# Open Science is a trait for Good Science



# Open all stages of Research Cycle



Change the typical lifecycle

Publish earlier and release more

Papers + Data + Methods + Code...

Support reproducibility

# Epistemic Caveat

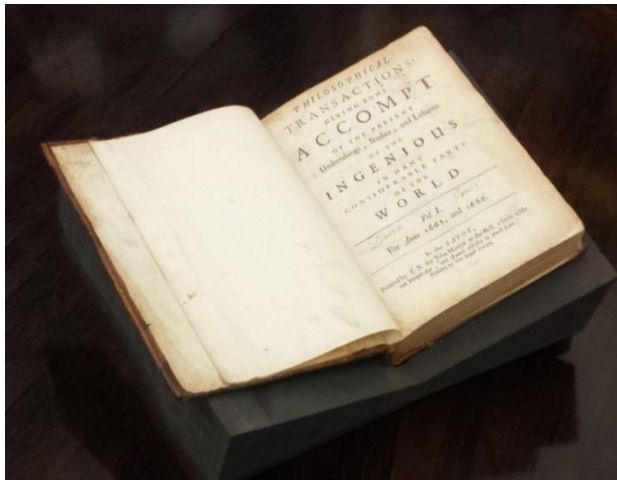
Doing 21<sup>st</sup> century science



Documenting with 20<sup>th</sup> century tools



Communicating the 17<sup>th</sup> century way



*Force11.org*

Evaluating in a primitive fashion



*whyopenresearch.org*

# Know your rights as an author

## 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:**

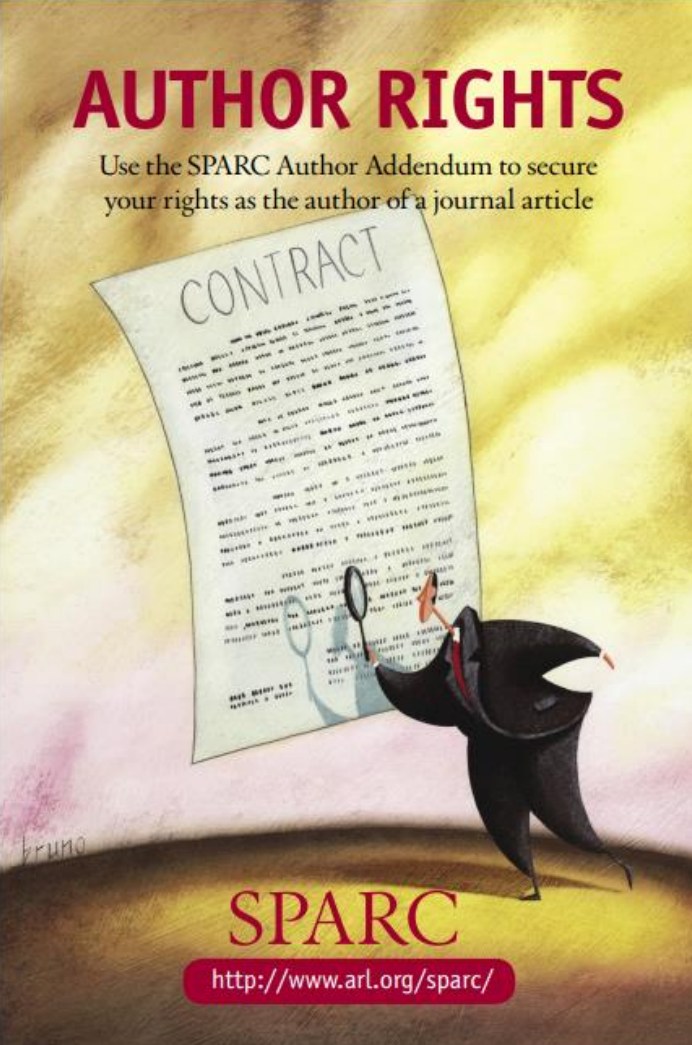
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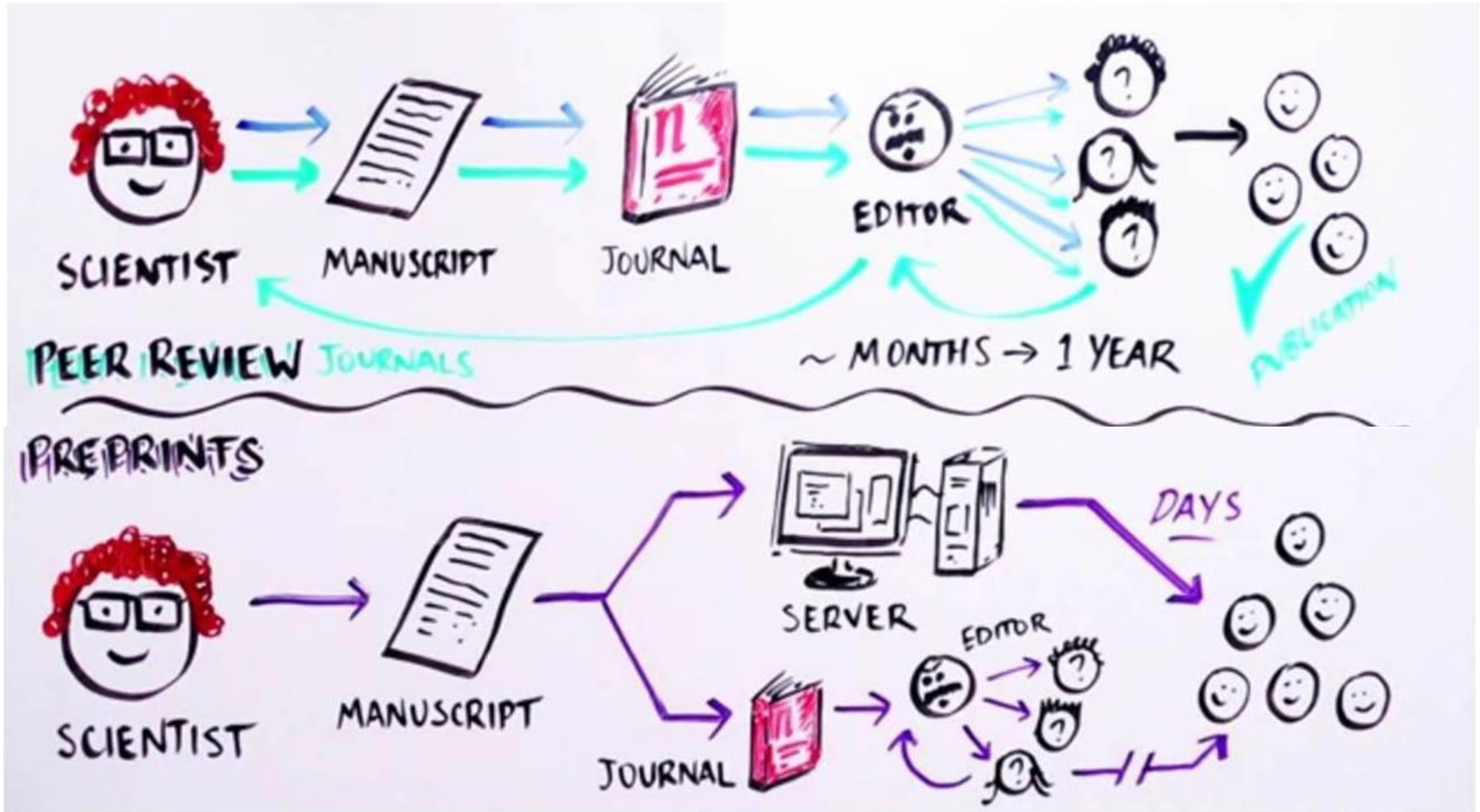
**SPARC**  
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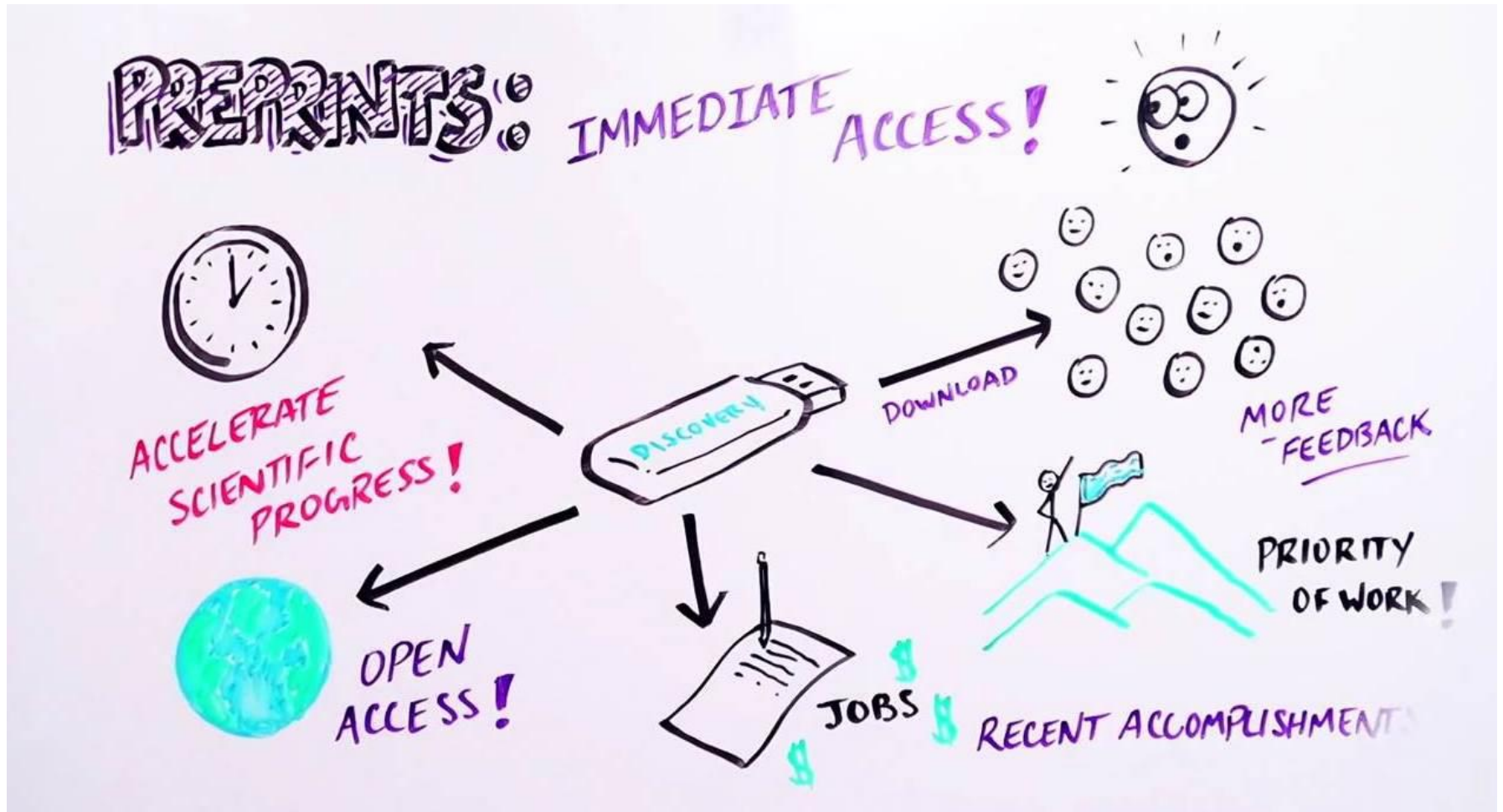
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# Peer review and Preprints



# Advantages of Preprints



*iBiology, 13 February 2016*

# Stars are aligning for Preprints

arXiv

bioRxiv  
beta  
THE PREPRINT SERVER FOR BIOLOGY

PeerJ  
Preprints

SciELO  
Scientific Electronic Library Online

CO<sup>OS</sup>  
— CENTER FOR —  
OPEN SCIENCE

AgriXiv

PaleorXiv

PsyArXiv

SocArxiv

energXiv

LawArxiv

MedArXiv

ChemRxiv™

Au|thorea

# Change in the culture of Peer-review



<https://prereview.org/>

# JIF are religious !



*Illustration by John R. McKiernan, CC-BY [whyopenresearch.org/gallery](http://whyopenresearch.org/gallery)*

# A variety of descriptive metrics



Article level metrics



Researcher level metrics



H-index  
Google Scholar i10-index

# Is Research evaluation objective ?



<http://www.ascb.org/dora/>

## For Research Institutions

- When hiring and promoting, state that scientific content of a paper, not the JIF of the journal where it was published, is what matters
- Consider value from all outputs and outcomes generated by research


## For Researchers

- Focus on content
- Cite primary literature
- Use a range of metrics to show the impact of your work
- Change the culture!

# Science without Open is an anecdote

COMMENT | OPEN ACCESS

## When will 'open science' become simply 'science'?

Mick Watson 

*Genome Biology* 2015 16:101 | <https://doi.org/10.1186/s13059-015-0669-2> |

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Published: 19 May 2015



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