

Research assessment as a lever to improve scientific practices

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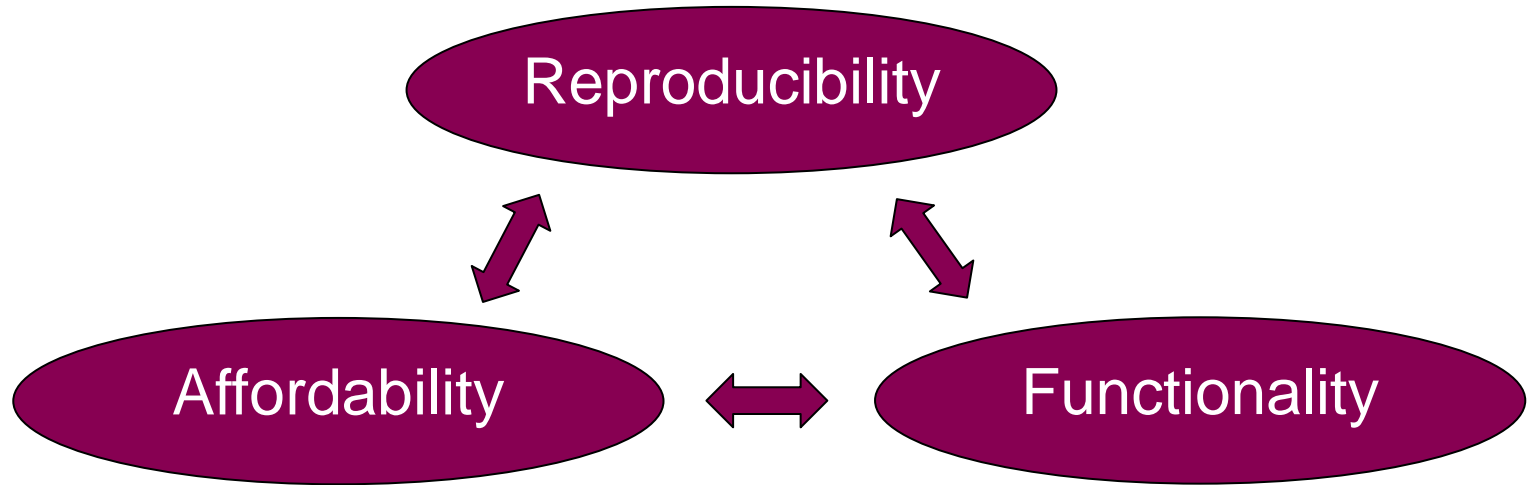
2023-09-08



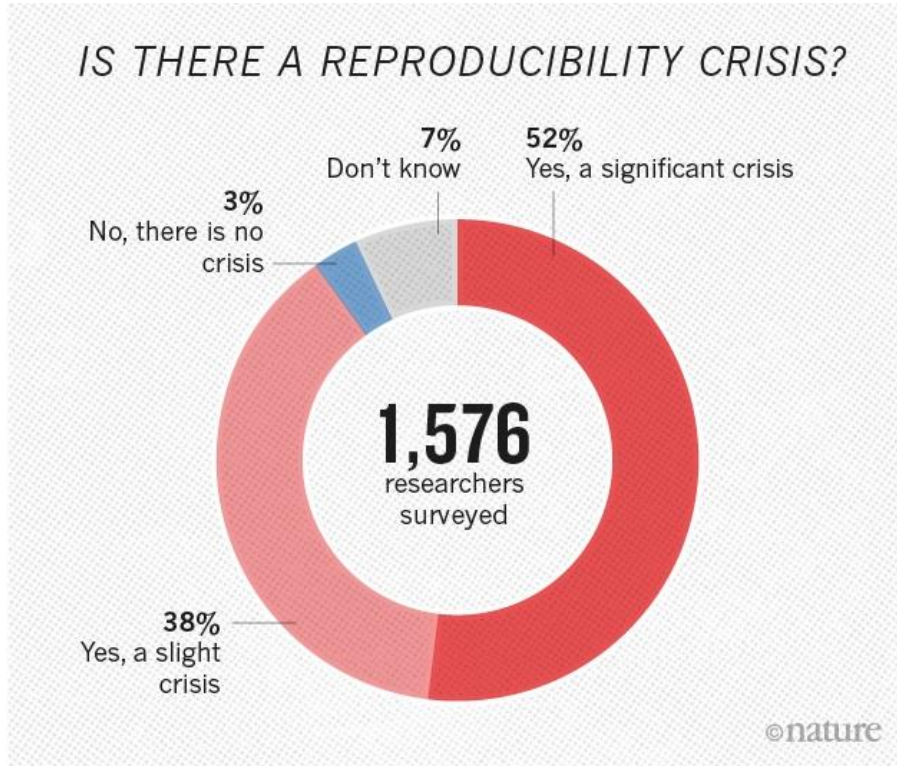
@GustavNilssonne



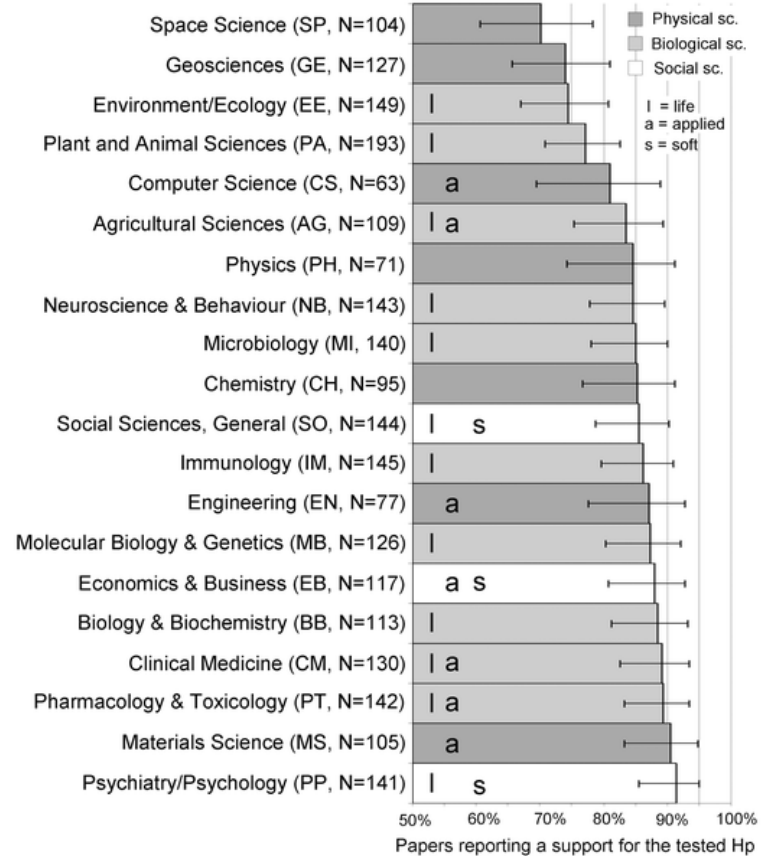
A triple crisis in academic research and publishing



IS THERE A REPRODUCIBILITY CRISIS?



[Baker, 2016](#)



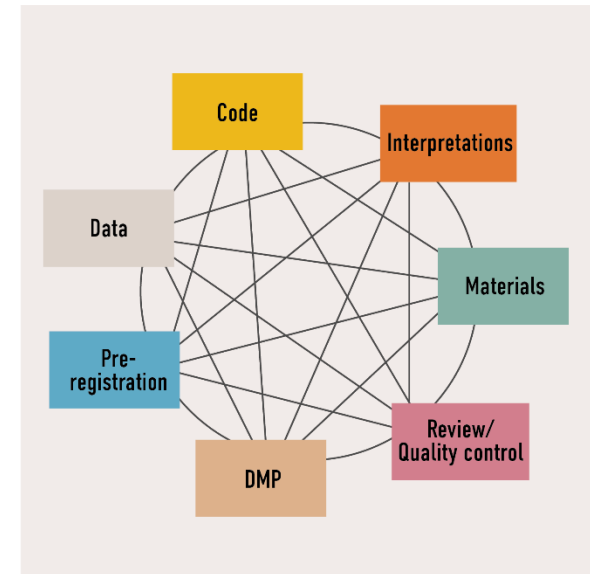
[Fanelli, 2010](#)

Transformation: a system of interoperable digital research objects

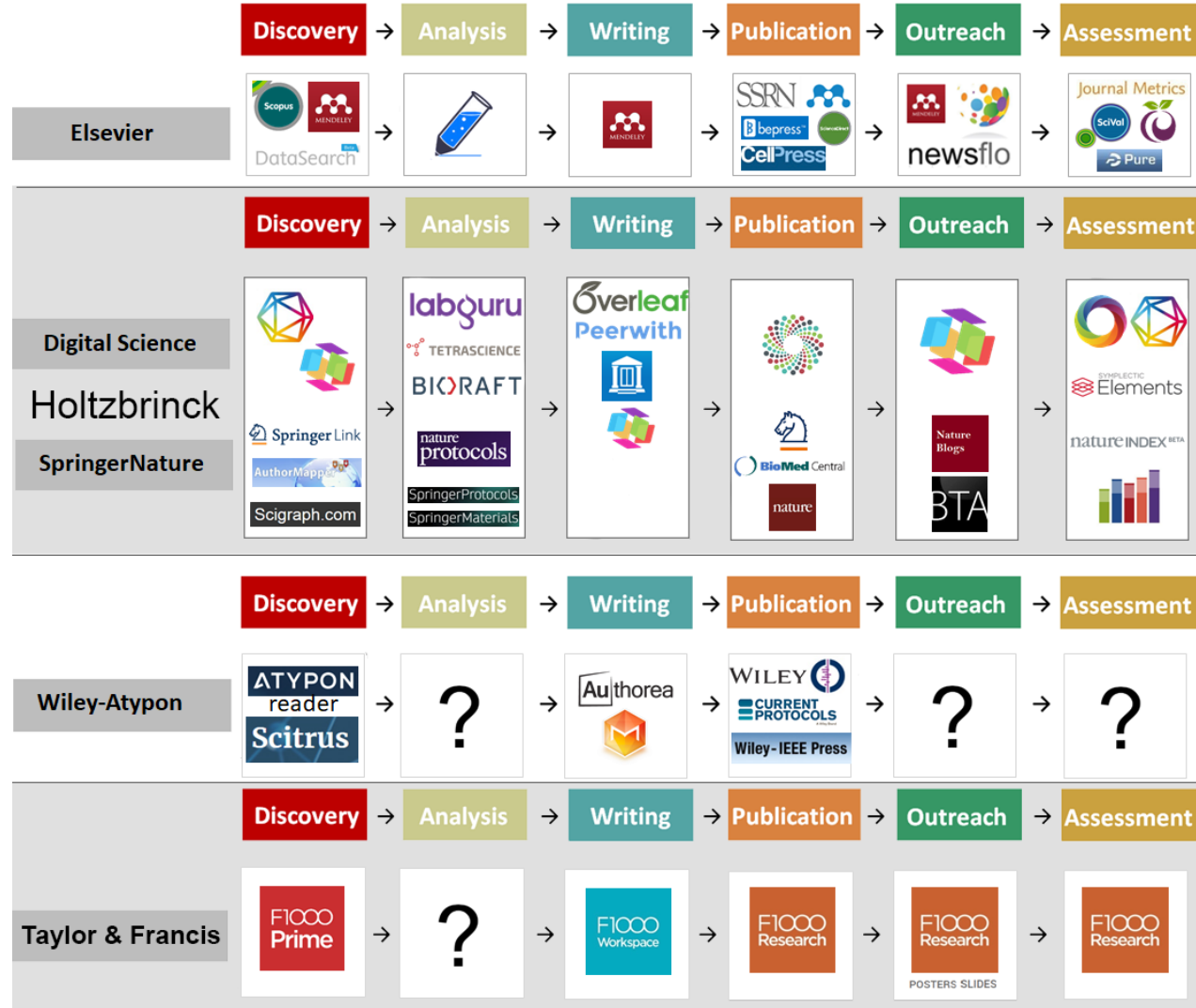
Journal article as artefact



Interoperable digital research objects



<https://doi.org/10.53962/hbfx-kmg3>

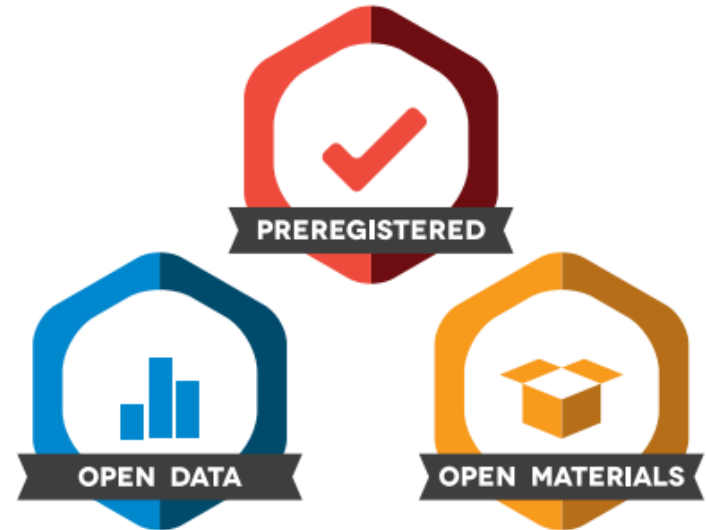


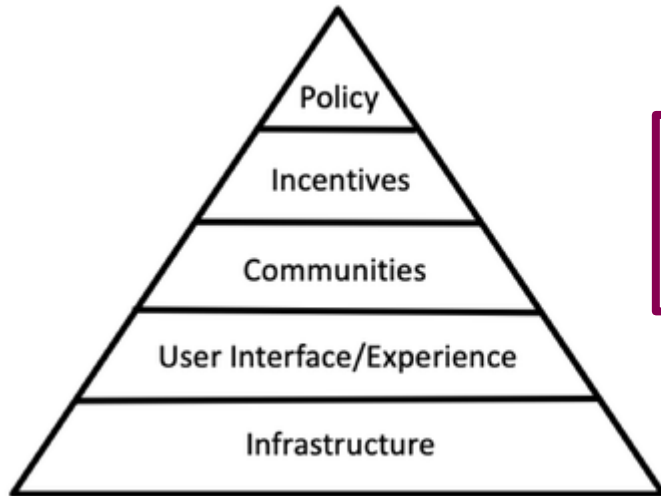
A long and winding road to open science



Research practices for increased transparency and reproducibility

- Preregistration
- Open digital research objects: papers, data, materials, code
- Reporting multiple analytical strategies
- Replication research





Make it required

Make it rewarding

Make it normative

Make it easy

Make it possible

[Nosek, 2019](#)

Need for improved assessment methods better aligned with quality

- Take back control over assessment
- Find new and better ways to assess and reward a variety of scientific outputs
- Find new and better ways to reward open science practices as an aspect of quality
- Experiment with policies and practices; conduct meta-research to find out what works

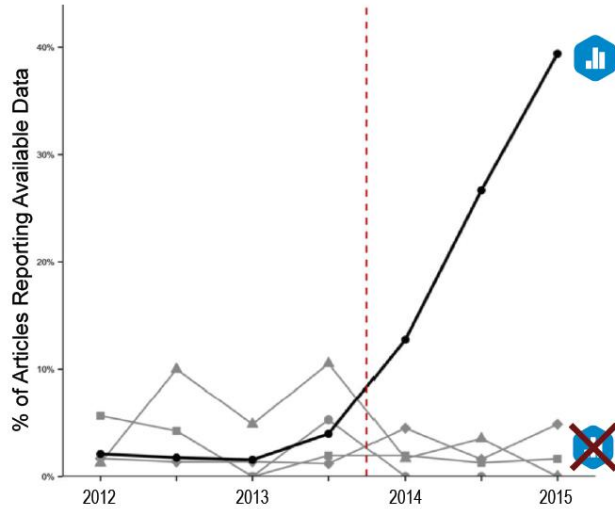
Systematic quality checking of scientific outputs already exists in different contexts

- Systematic reviews and meta-analyses
- Health Technology Assessment (HTA)
- Data audits
- Verification of computational reproducibility

A case study: the open data badge



2016: observational study



[Kidwell et al. 2016](#)

2020: randomised study

	control		intervention	
	<i>n</i>	%	<i>n</i>	%
awarded a badge				
yes	2	4	2	4
no	52	96	55	96
all	54	100	57	100

[Rowhani-Farid et al. 2020](#)

