

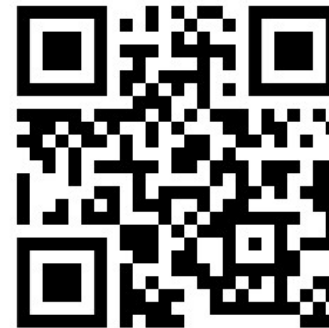
SCIENCE OUVERTE, PAR-DELÀ LA PARTIE ÉMERGÉE DE L'ACCÈS OUVERT

OAweek 2023 - Nanterre - 23 octobre 9h15-10h

Yannick Morvan

*Maitre de Conférences,
Psychologue Clinicien*

Université Paris Nanterre, UFR SPSE, UR4430 CLIPSYD
Chercheur associé INSERM U1018, CESP
Institut de Psychiatrie - CNRS GDR 3557 de Psychiatrie



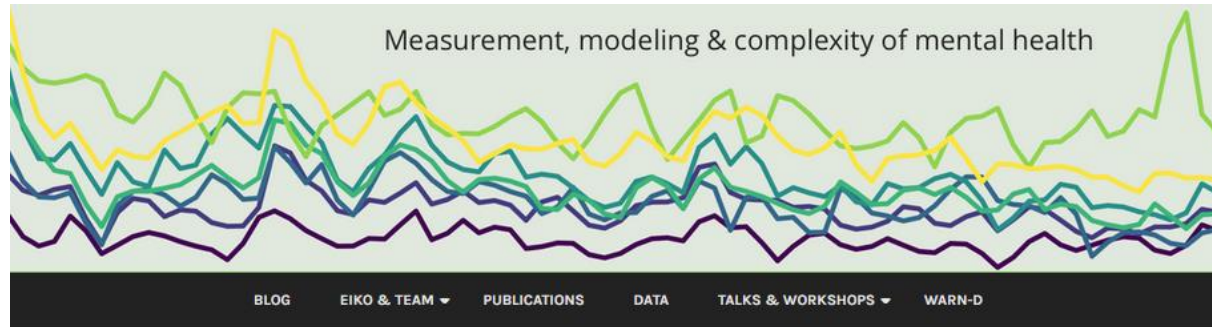
 ymorvan@parisnanterre.fr
 [@yannick_morvan](https://twitter.com/yannick_morvan)

0. OUI L'ACCÈS OUVERT
EST (TRÈS) IMPORTANT

Pourquoi l'accès ouvert est important

- Pour des raisons éthiques :
 - **Ouvrir** les résultats de la science au plus grand nombre (dont les scientifiques...)
 - **Transparence** auprès du public et des institutions
 - **Financement** des résultats de la science par les « deniers » publics

« Piégés dans l'upside-down »



Academia: trapped in the upside down of publishing

Eiko January 29, 2018 15 Comments

TL;DR: this post explains the basics of academic publishing; highlights several severe problems; discusses the recent activities of the American Psychology Association (APA) targeting psychological researchers; suggests some ways forward; and ends with an unexpected plot twist: an APA journal invited me to join their editorial board while I was writing this APA-critical blog post. Also, [Sci-Hub](#).

Friends who do not work in academia regularly expect me to throw parties when I have a good month, with multiple published papers. Why? The money I make with several publications, especially when they are published in prestigious journals, must be considerable. Right?

This is not the case, because we work in the upside down of publishing: academia.



BACKGROUND

Dr Eiko Fried (CV) is a psychologist, methodologist, and nearly photographer. He works as Associate Professor at Leiden University. He runs this website as well as [WARN-D.com](#) & [psych-networks.com](#), and if anything is broken, you should probably blame him. You can stalk him via Email, Twitter, Mastodon, Open Science Framework, & Google Scholar.



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Is the 'default mode network' responsible for the mental health

<https://eiko-fried.com/academia-in-the-upside-down-of-publishing/>

« Piégés dans l'upside-down »



1. Un chercheur (payé par nos impôts) écrit un article
2. Le soumet à une revue (possédée par une entreprise privée)
3. L'éditeur gère l'article (travaille gratuitement pour la revue)
4. 2 chercheurs font un review (gratuitement pour la revue)
5. Après plusieurs tours de révisions le papier est accepté !
6. La revue demande 1500€ pour rendre l'article ouvert (APC)
7. Le chercheur ne peut/veux pas payer, ce n'est pas grave la revue sera accessible par ses collègues après que leurs universités auront payées un droit d'accès pour leurs membres

Combien ça coûte ? Les APC



Presse

CNRS Info

Emploi

Annuaire

Intranet

Le CNRS ▾

La Recherche ▾

Innovation ▾

International ▾



Accueil > CNRS Info

Frais de publication : « nous sommes au bord du gouffre »

22 juin 2023

RECHERCHE

« En 2020, le CNRS a payé plus de 3 millions d'euros d'APC, contre 1,8 millions d'euros en 2017. [...] le Ministère de l'Enseignement supérieur et de la Recherche indique que **la France a payé près de 30 millions d'euros d'APC en 2020** »

APC = Article processing charges (frais de publications)

<https://www.cnrs.fr/fr/cnrsinfo/frais-de-publication-nous-sommes-au-bord-du-gouffre>

Combien ça coûte ? Les abonnements

LA VOIX DU NORD

Publications scientifiques : à Lille comme ailleurs on paie le prix fort

« Trois millions d'euros. C'est le coût de l'abonnement annuel aux revues scientifiques, rien que pour l'Université de Lille. »

« It's insane ! It's academics baby... »



<https://www.youtube.com/watch?v=8F9gzQz1Pms>

1. POURQUOI LA SCIENCE OUVERTE AU DELA DE L'ACCÈS OUVERT ?

Open Access (HAL...)

Tout le reste

Open Science

Open Science...

Pas uniquement comme
une question d'accès
ouvert mais aussi
comme...

...Une pratique et une
solution à certains
« problèmes » de nos
disciplines en tant que
« Sciences »

Science Fictions

Stuart
Ritchie



**The Epidemic of
Fraud, Bias, Negligence
and Hype in Science**

HEALTH

John Oliver rips apart bad science on 'Last Week Tonight'

<https://www.statnews.com/2016/05/09/john-oliver-bad-science/>

By MEGAN THIELKING @meggophone / MAY 9, 2016

[Reprints](#)



John Oliver took on misleading media reports of scientific studies on Sunday's "Last Week Tonight."

SCREEN CAPTURE VIA YOUTUBE

<https://www.youtube.com/watch?v=0Rnq1NpHdmw>

Dans ma discipline, la Psychologie...

“Everybody Knows Psychology Is Not a
Real Science”

*Public Perceptions of Psychology and How We Can Improve Our
Relationship With Policymakers, the Scientific Community, and the
General Public*

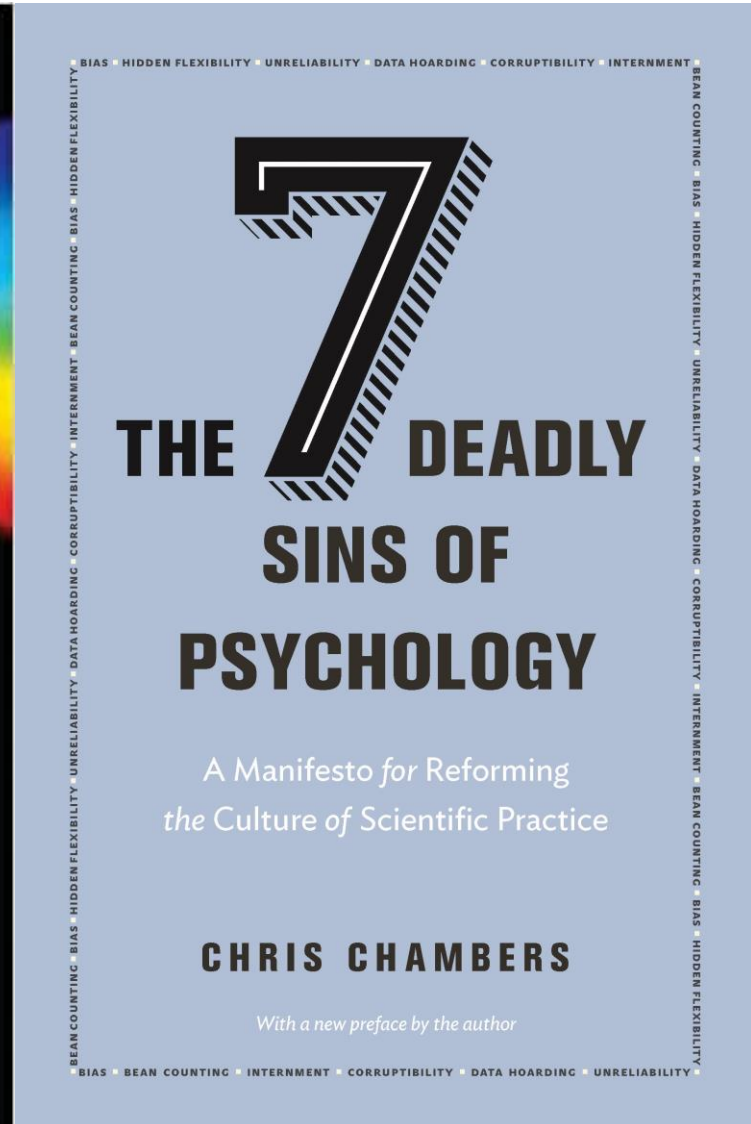
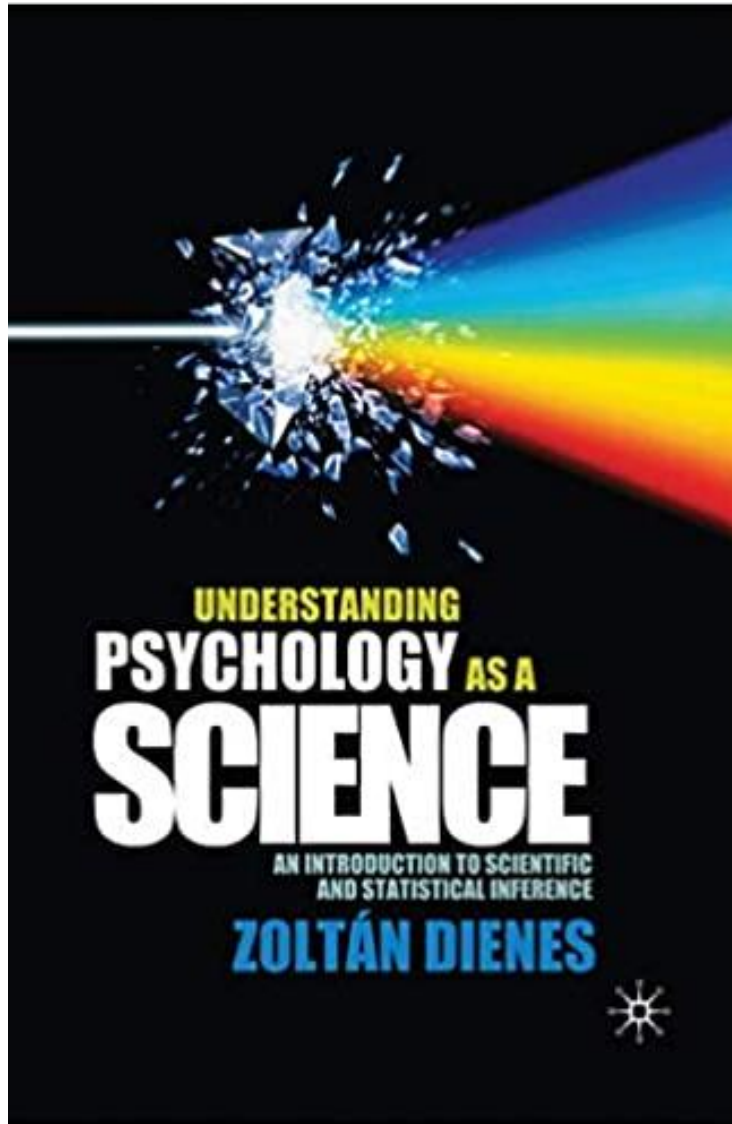
Christopher J. Ferguson
Stetson University



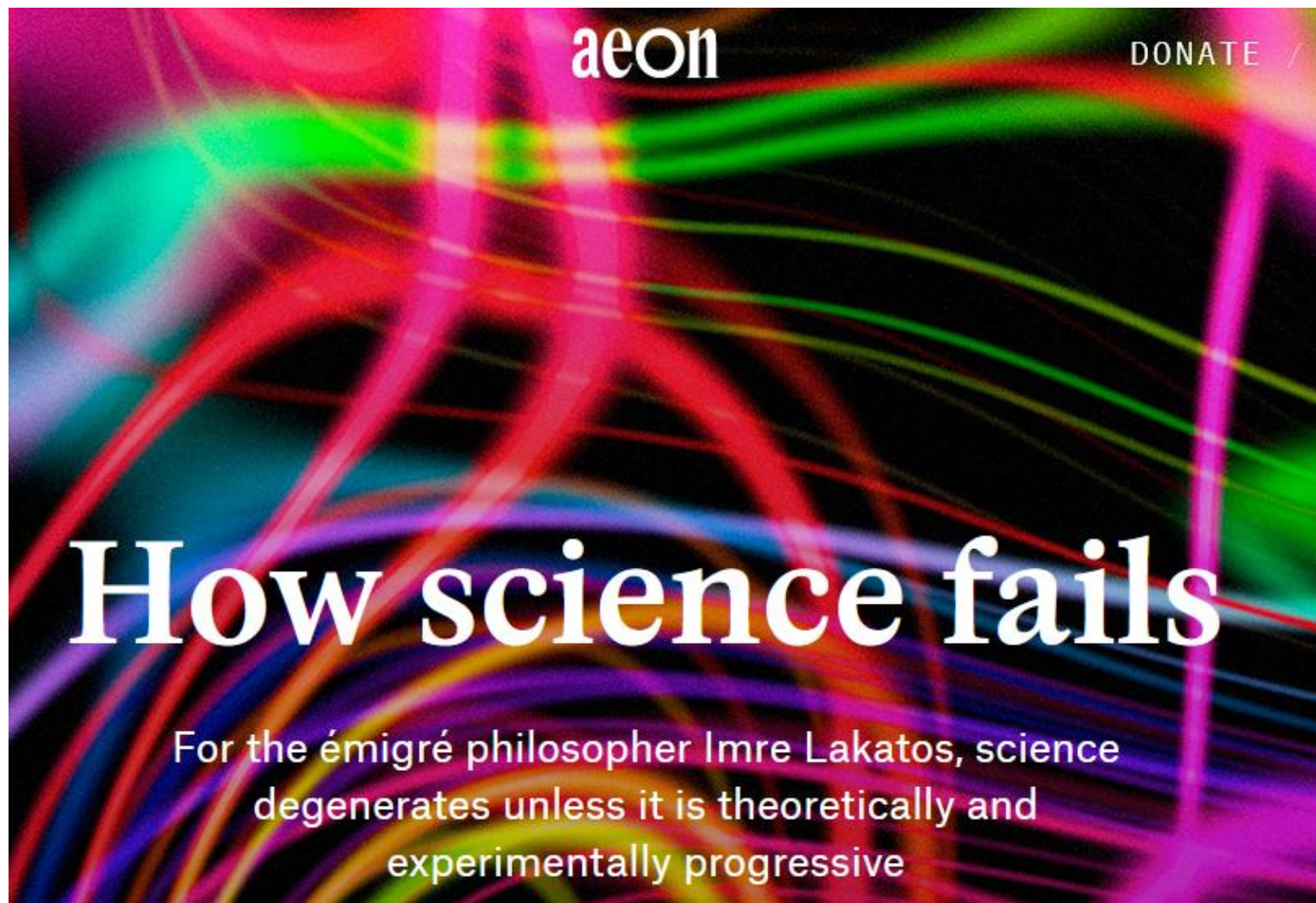
September 2015 • American Psychologist

© 2015 American Psychological Association 0003-066X/15/\$12.00
Vol. 70, No. 6, 527-542 <http://dx.doi.org/10.1037/a0039405>

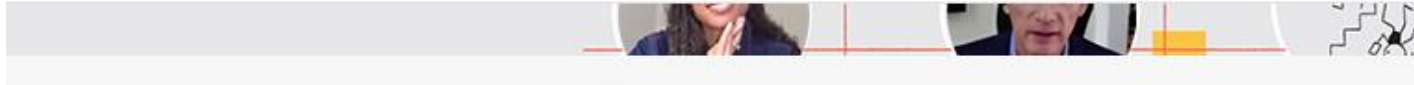
Dans ma discipline, la Psychologie...



Un peu d'épistémologie ne fait pas de mal



<https://aeon.co/essays/imre-lakatos-and-the-philosophy-of-bad-science>



https://www.nytimes.com/2013/04/28/magazine/diederik-stapels-audacious-academic-fraud.html?pagewanted=all&_r=0

The Mind of a Con Man



Retrouver les résultats... En fait non !


nature
human behaviour



62%

Letter | Published: 27 August 2018

Evaluating the replicability of social science experiments in *Nature* and *Science* between 2010 and 2015

Colin F. Camerer, Anna Dreber, Felix Holzmeister, Teck-Hua Ho, Jürgen Huber, Magnus Johannesson, Michael Kirchler, Gideon Nave, Brian A. Nosek , Thomas Pfeiffer, Adam Altmejd, Nick Buttrick, Taizan Chan, Yiling Chen, Eskil Forsell, Anup Gampa, Emma Heikensten, Lily Hummer, Taisuke Imai, Siri Isaksson, Dylan Manfredi, Julia Rose, Eric-Jan Wagenmakers & Hang Wu

Retrouver les résultats... En fait non !

NEWS | 12 October 2023

<https://doi.org/10.1038/d41586-023-03177-1>

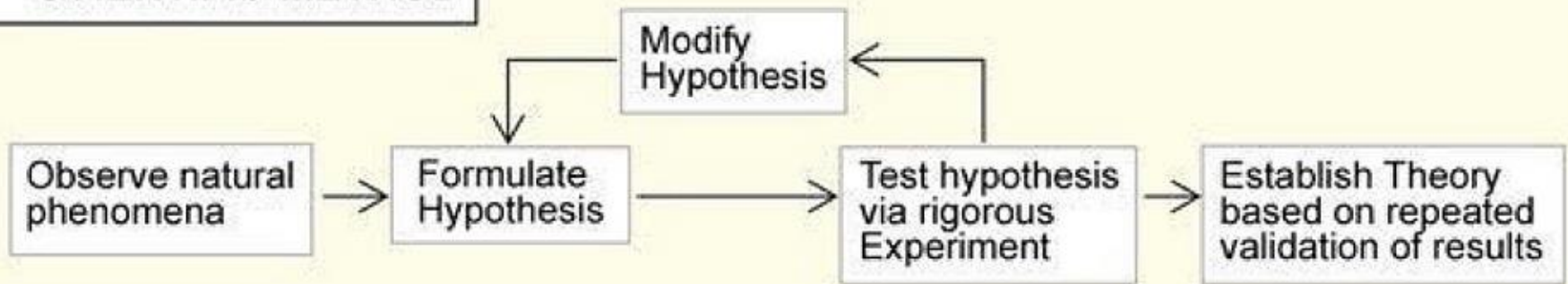
Reproducibility trial: 246 biologists get different results from same data sets

Wide distribution of findings shows how analytical choices drive conclusions.

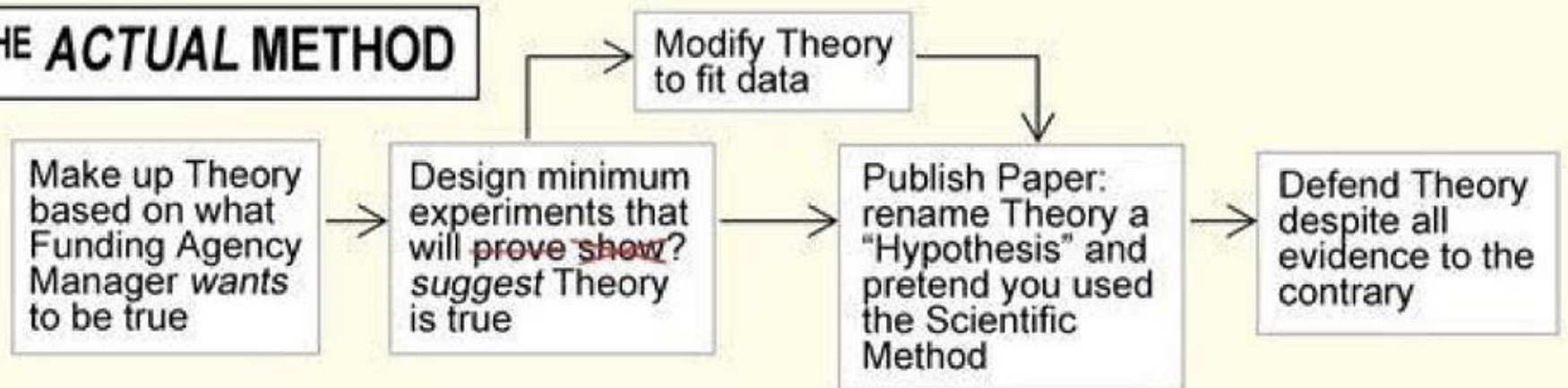
[Anil Oza](#)



THE SCIENTIFIC METHOD

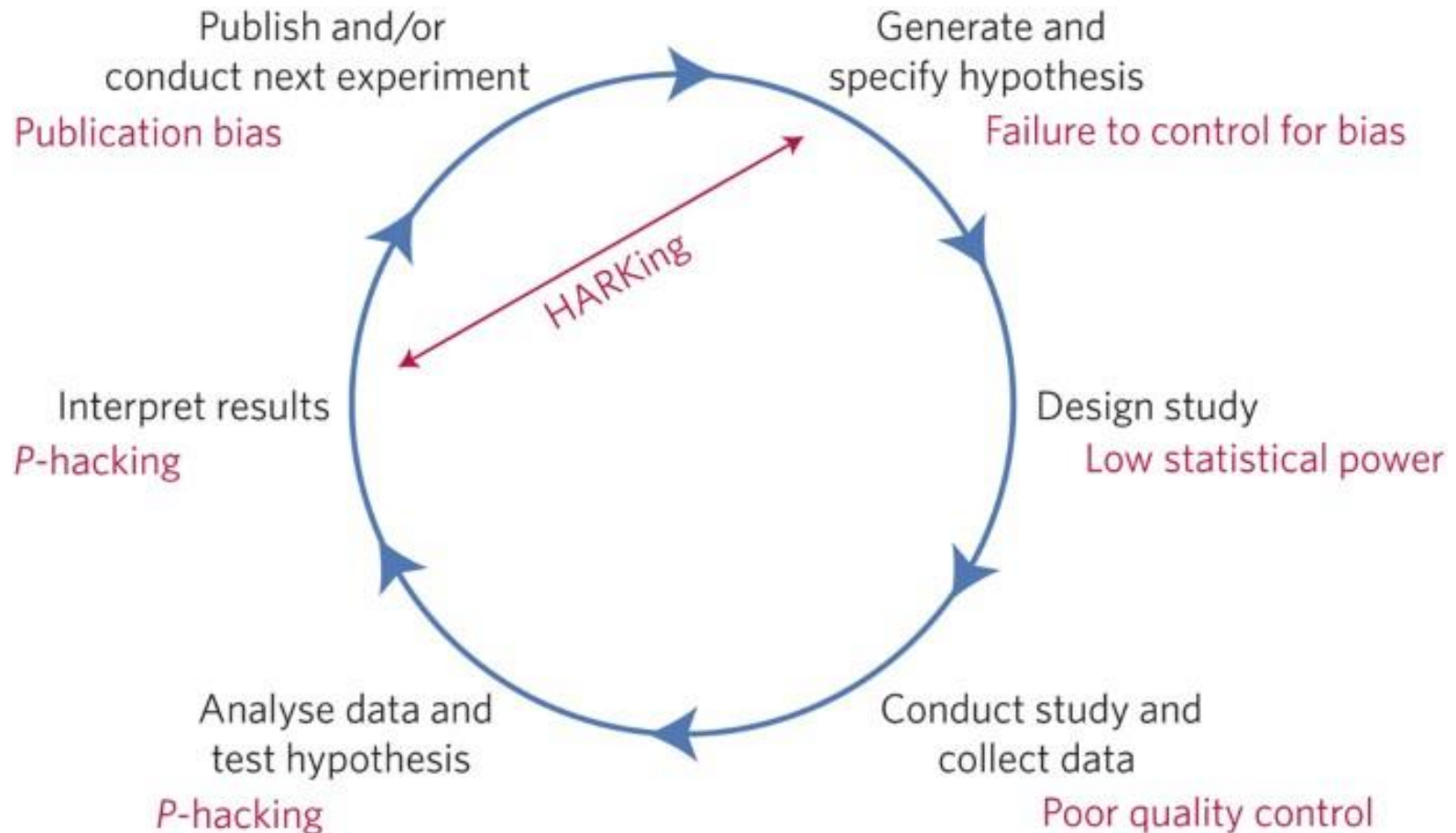


THE ACTUAL METHOD





www.phdcomics.com

Questionable Research Practices (QRPs)



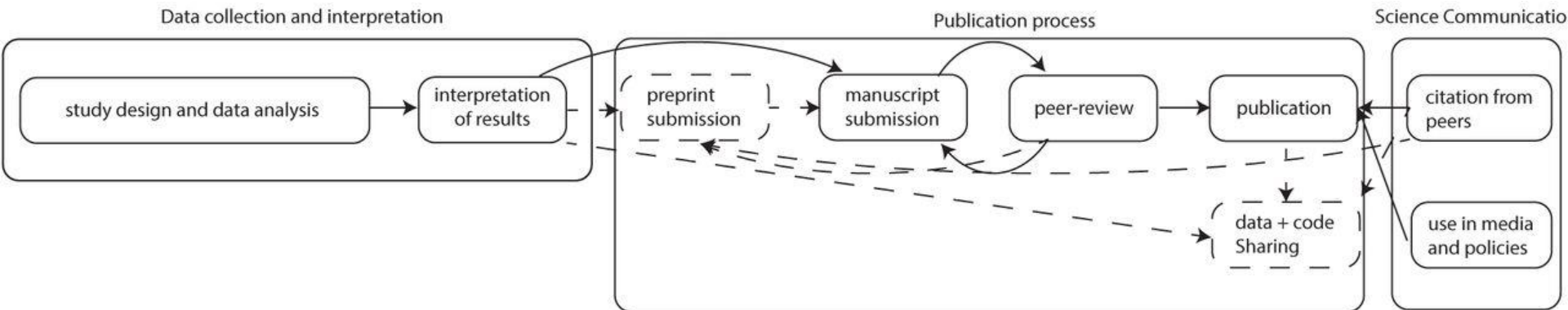
Munafò, M., Nosek, B., Bishop, D. *et al.* A manifesto for reproducible science. *Nat Hum Behav* 1, 0021 (2017). <https://doi.org/10.1038/s41562-016-0021>

Open Science Saves Lives: Lessons from the COVID-19 Pandemic

 Lonni Besançon,  Nathan Peiffer-Smadja,  Corentin Segalas,  Haiting Jiang,  Paola Masuzzo,
 Cooper Smout,  Eric Billy,  Maxime Deforet,  Clémence Leyrat

doi: <https://doi.org/10.1101/2020.08.13.249847>

Now published in *BMC Medical Research Methodology* doi: [10.1186/s12874-021-01304-y](https://doi.org/10.1186/s12874-021-01304-y)



Potential Issues

flawed design and inappropriate analysis

misinterpretation
misreporting

used as a reliable
source

fast-track peer review, failure to identify errors,
unreported conflict of interest

Open Science Solutions

registered reports (peer-reviewed protocols/plans)

Open Data and Open Source

open peer reviews

preregistration and clinical trial registration

statistical reviews

Direct Positive Impact

Indirect Positive Impact

<https://www.biorxiv.org/content/10.1101/2020.08.13.249847v2>

- - - - - Potential interaction

2. LES DIFFÉRENTES FACETTES DE LA SCIENCE OUVERTE

Ca commence mal...

@talyarkoni

- about
- CV
- papers
- code



Tal Yarkoni — bio

I'm a Research Associate Professor in the [Department of Psychology](#) at the [University of Texas at Austin](#).

I hate open science

<https://www.talyarkoni.org/blog/2019/07/13/i-hate-open-science/>

Now that I've got your attention: what I hate—and maybe *dislike* is a better term than *hate*—isn't the open science *community*, or open science *initiatives*, or open science *practices*, or open *scientists*... it's the *term*. I fundamentally dislike the term *open science*. For the last few years, I've deliberately tried to avoid using it. I don't call myself an open scientist, I don't advocate publicly for open science (per se), and whenever people use the term around me, I often make a point of asking them to clarify what they mean.

This isn't just a personal idiosyncrasy or mine in a chalk-on-chalkboard sense; I think at this point in time there are good reasons to think the continued use of the term is counterproductive, and we should try to avoid it in most contexts. Let me explain.

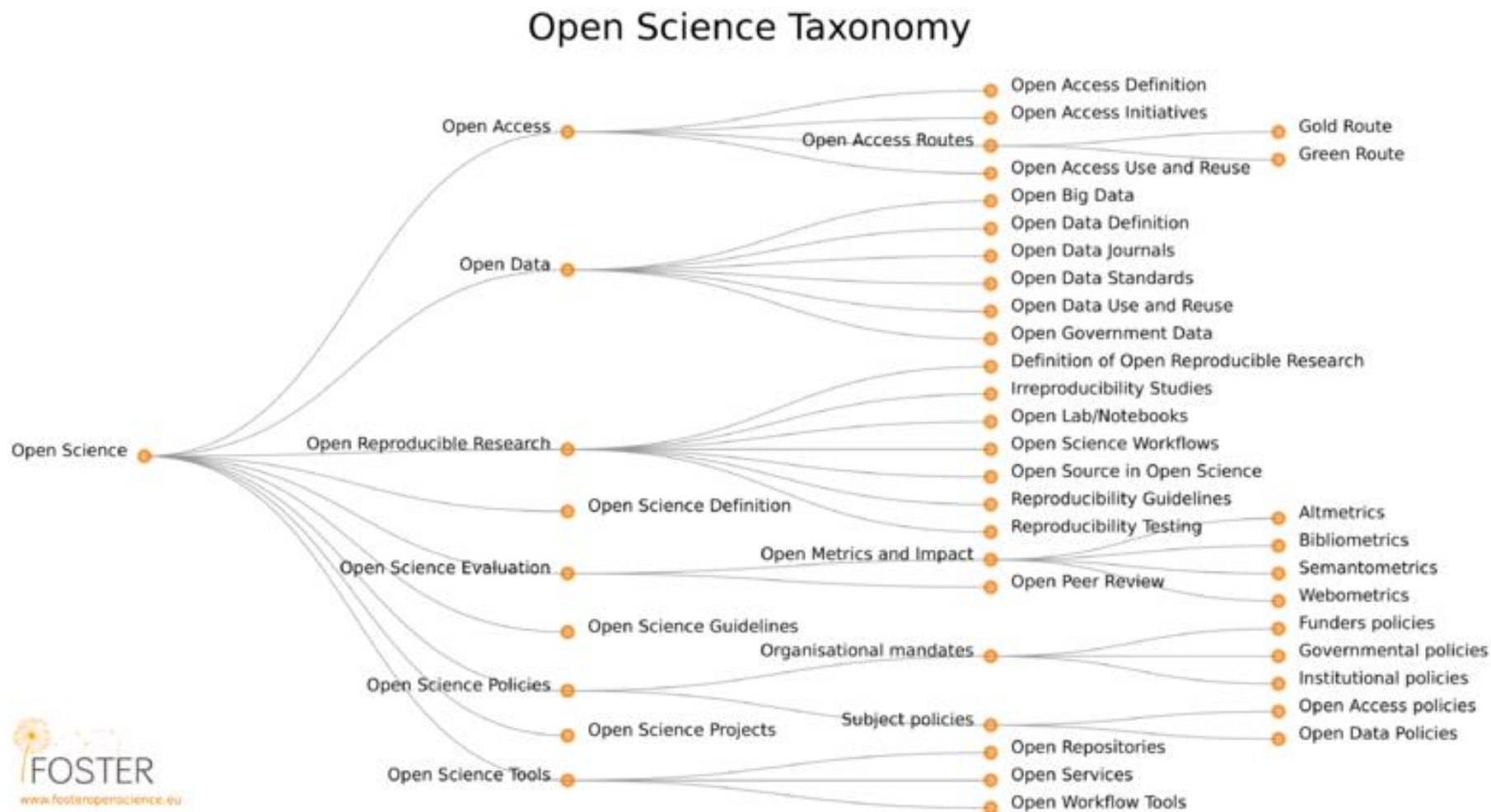
It's ambiguous

At [SIPS 2019](#) last week (SIPS is the Society for Improvement of Psychological Science), I had a brief chat with a British post-undergrad student who was interested in applying to graduate programs in the United States. He asked me what kind of open science community there was at my home institution (the University of Texas at Austin). When I started to reply, I realized that I actually had no idea what question the student was asking me, because I didn't know his background well enough to provide the appropriate context. What exactly did he mean by "open science"? The term is now used so widely, and in so many different ways, that the student could plausibly have been asking me about any of the following things, either alone or in combination:

- **Reproducibility.** Do people feel that it's important to value the ability to reproduce, computationally and/or experimentally, the scientific methods used to produce a given result? Do they, concretely, do they conduct their analyses programmatically, rather than using GUIs? Do they practice formal version control? Are there opportunities to learn these kinds of computational skills?
- **Accessibility.** Do people believe in making their scientific data, materials, results, papers, etc. publicly, freely, and easily available? Do they work hard to ensure that other scientists, funders, and the taxpaying public can easily get access to what scientists produce?
- **Incentive alignment.** Are there people actively working to align individual incentives and communal incentives, so that what benefits an individual scientist also benefits the community at large? Do they pursue local policies meant to promote some of the other practices one might call part of "open science"?
- **Openness of opinion.** Do people feel comfortable openly critiquing one another? Is there a culture of discussing (possibly trenchant) problems openly, without defensiveness? Do people take discussion on social media and post-publication review forums seriously?
- **Diversity.** Do people value and encourage the participation in science of people from a wide variety of ethnicities, genders, skills, personalities, socioeconomic strata, etc.? Do they make efforts to welcome others into science, invest effort and resources to help them succeed, and accommodate their needs?
- **Metascience and informatics.** Are people thinking about the nature of science itself, and reflecting on what it takes to promote a healthy and productive scientific enterprise? Are they developing systematic tools or procedures for better understanding the scientific process, or the work in specific scientific domains?

C'est ambigu

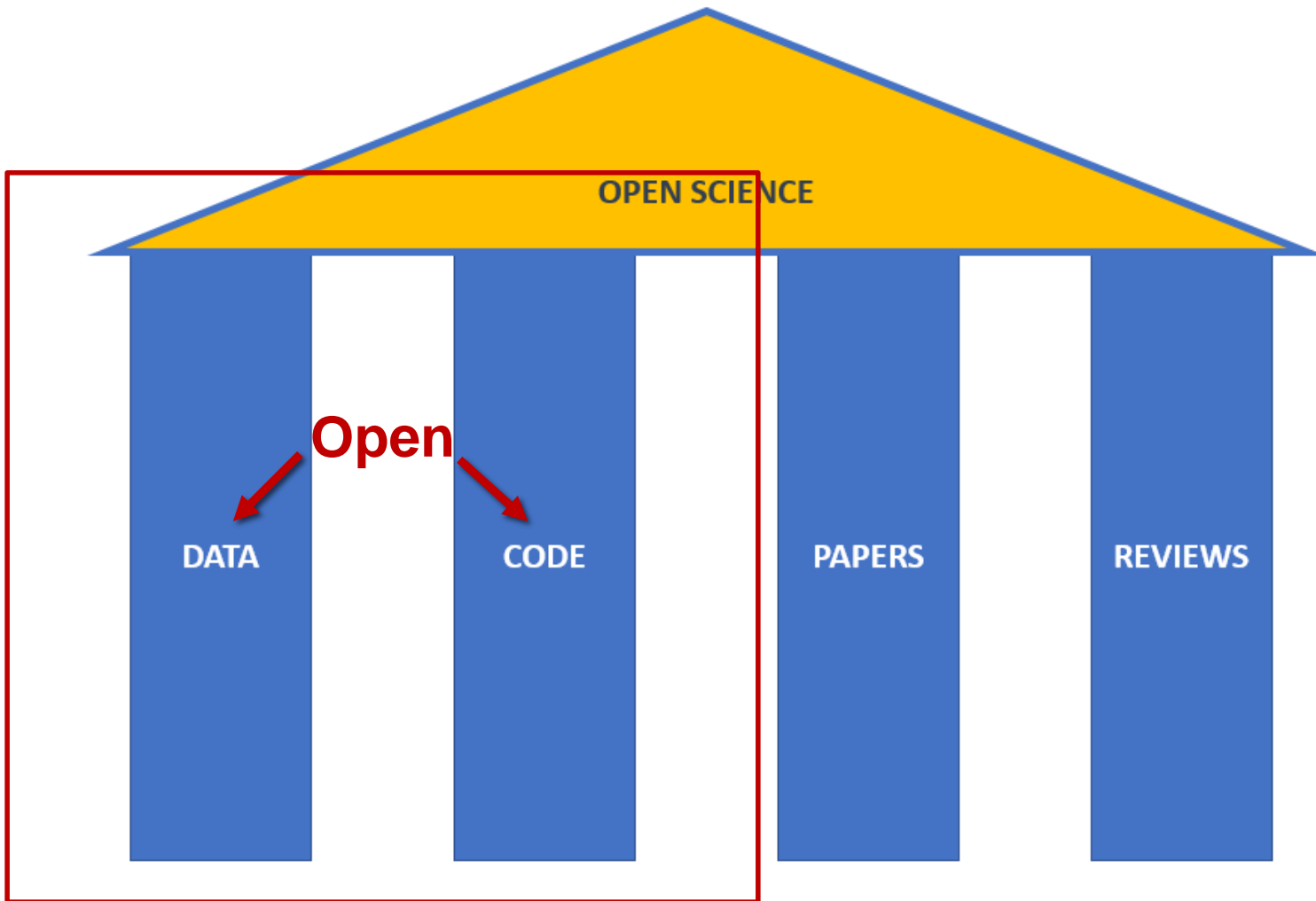
Les différentes facettes de la science ouverte



Les différentes facettes de la science ouverte

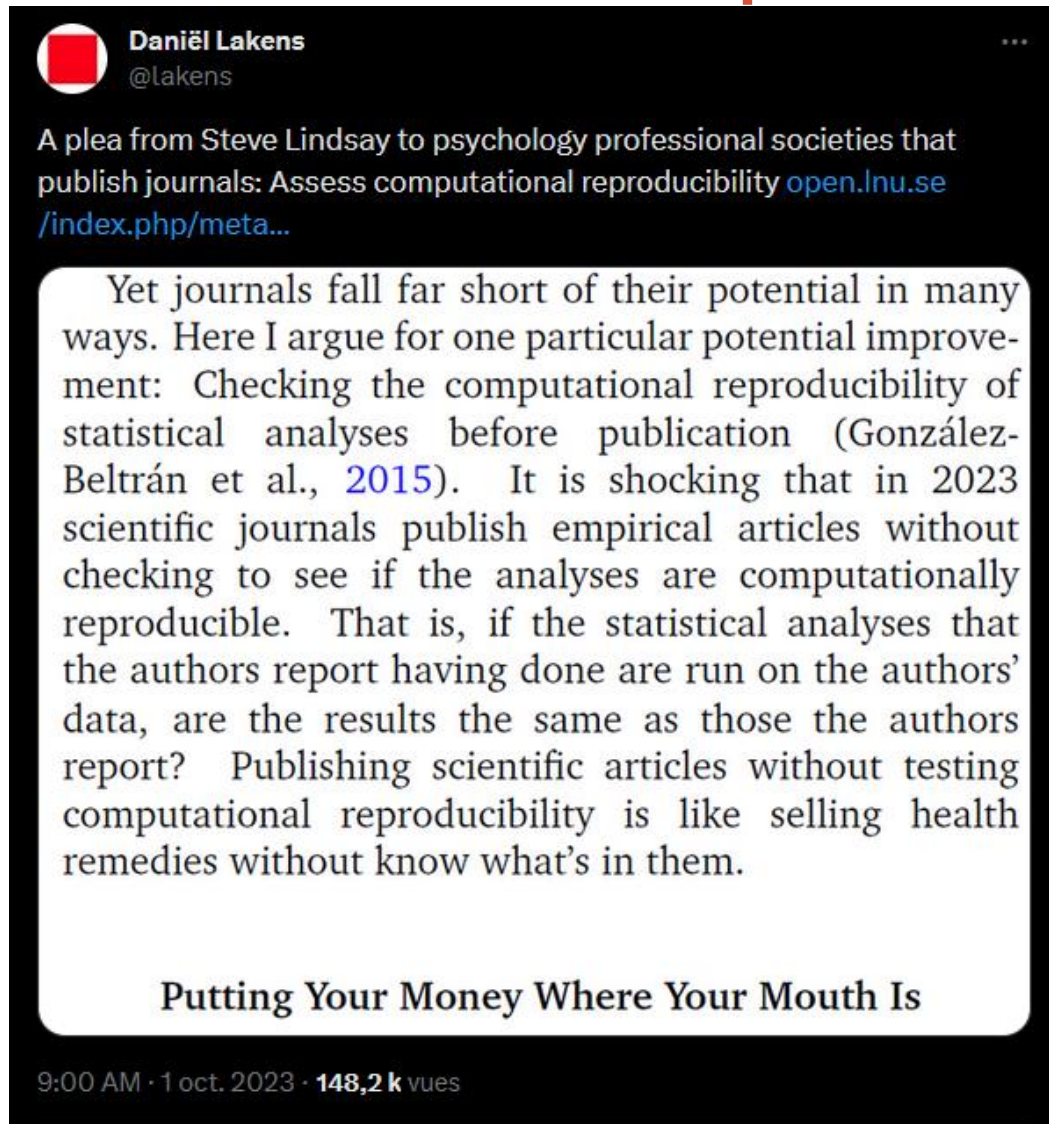
Si on résume :

1. **Des données ouvertes et des résultats reproductibles**
2. De l'ouverture des évaluations, des opinions et des critiques
3. Des technologies qui facilitent l'adoption des pratiques de science ouverte
4. Des politiques incitatives et de reconnaissances pour favoriser le changement
5. D'une plus grande implication de la société dans la science et ses productions



<https://www.fosteropenscience.eu/learning/what-is-open-science/#/id/5ab8ea32dd1827131b90e3ac>

La reproductibilité computationnelle



Reproducibility and Replicability in a Fast-Paced Methodological World



Sacha Epskamp 

Department of Psychology, University of Amsterdam

Advances in Methods and
Practices in Psychological Science

1–11

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DOI: 10.1177/2515245919847421

www.psychologicalscience.org/AMPPS



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📍 Cambridge, England amyorben.com

Open Working

Open Working from 4TU.ResearchData & TU Delft Library (Since 2017)

HOME

ABOUT THIS BLOG

DATA STEWARDSHIP

DATA CHAMPIONS

CONTACT

<https://openworking.wordpress.com/2019/02/11/what-does-reproducibility-mean-for-qualitative-research/>

FEBRUARY 11, 2019

What does reproducibility mean for qualitative research?

Written by Shalini Kurapati and Marta Teperek

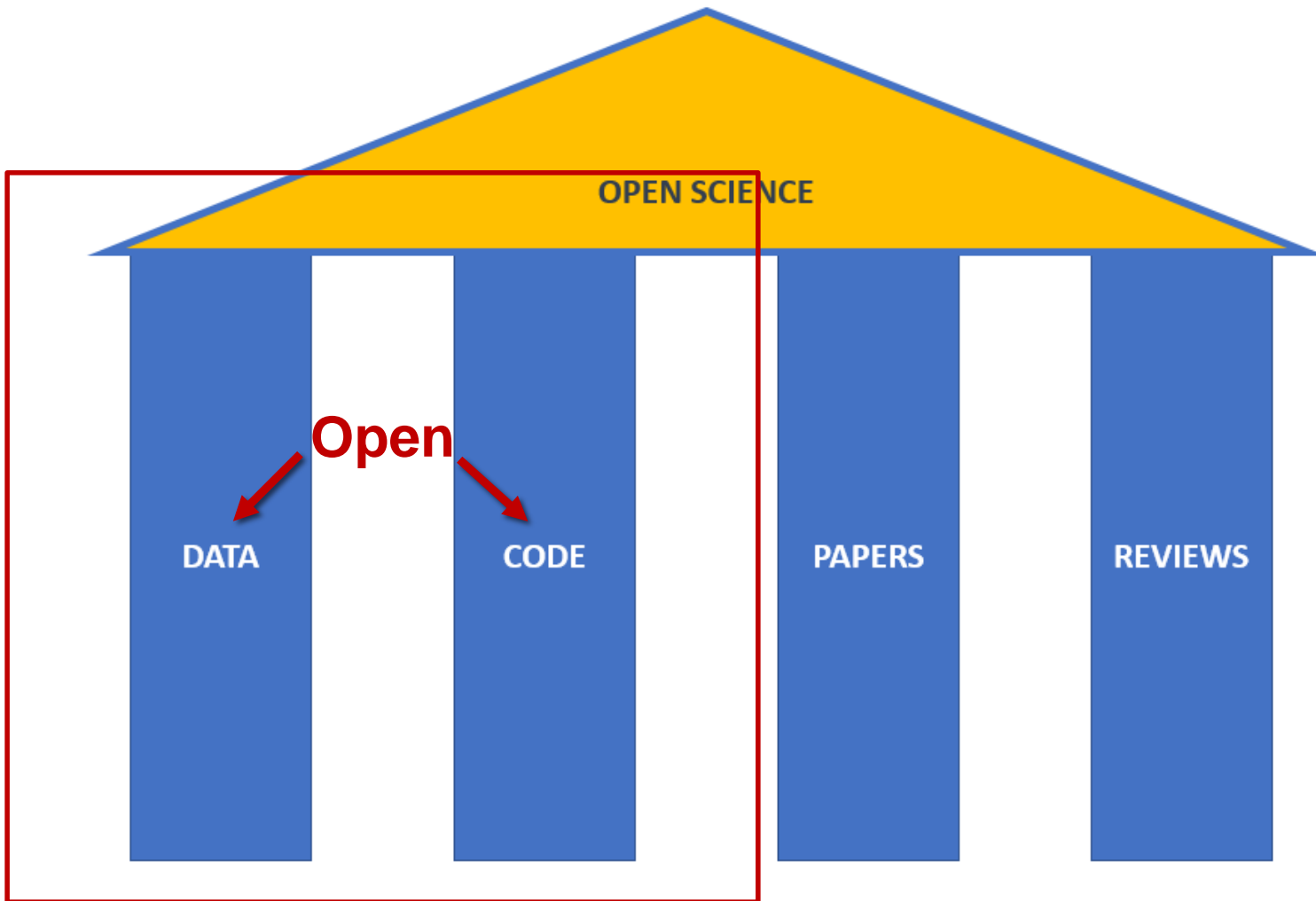
Sebastian Karcher of [Qualitative Data Repository](#) was at TU Delft on Jan 28 to share his thoughts and expertise on this topic in a two-part seminar organised by the 4TU.Centre for Research Data. Given that we are based at the Delft University of Technology, where qualitative research is not mainstream, we were positively surprised to see a lot of interest in the seminars and that the talk was attended by around 60 participants. The majority of researchers were from the faculty of Technology Policy and Management followed by Industrial Design Engineering. The second part was a hands-on workshop on qualitative data management techniques, which was attended by 20 participants.



Les différentes facettes de la science ouverte

Si on résume :

1. Des données ouvertes et des résultats reproductibles
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<https://www.fosteropenscience.eu/learning/what-is-open-science/#/id/5ab8ea32dd1827131b90e3ac>



About PubPeer

The PubPeer Foundation

The **PubPeer** Foundation is a California-registered public-benefit corporation with 501(c)(3) nonprofit status in the United States. The overarching goal of the Foundation is to improve the quality of scientific research by enabling innovative approaches for community interaction. The bylaws of the Foundation establish pubpeer.com as a service run for the benefit of its readers and commenters, who create its content. Our current focus is maintaining and developing the **PubPeer** online platform for post-publication peer review.



Thinking about evidence, and vice versa

[114] Exhibits 3, 4, and 5

Posted on September 16, 2023 by Uri, Joe, & Leif

We recently presented evidence of data tampering in four retracted papers co-authored by Harvard Business School professor Francesca Gino. She is now suing the three of us (and Harvard University). Gino's lawsuit (.htm), like many lawsuits, contains a number of Exhibits that present information relevant to the case. For example, the lawsuit contains some Exhibits...

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Types of Peer Review



ANONYMOUS

Single Anonymized: Reviewers know the authors' identities, but reviewer names are protected.

Double Anonymized: Reviewer and author names are protected.



SIGNED

Reviewers sign their comments. Authors receive reviewer names in the decision letter.



COLLABORATIVE

Reviewers collaborate and submit joint comments, or in some cases confer with authors and editors during the review process.



PORTABLE

Reviewers are sought by an organization or journal and shared with any journals that require them later on.



PUBLISHED

Reviewer comments and/or names are published with the article or preprint.



POST-PUBLICATION

After a manuscript is posted the community reviews the research in an open forum. Reviewer names are usually published with their comments.

SCIENCE

PAPERS

REVIEWS



Les différentes facettes de la science ouverte

Si on résume :

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4. Des politiques incitatives et de reconnaissances pour favoriser le changement
5. D'une plus grande implication de la société dans la science et ses productions

Science ouverte avec les étudiants + une formation à venir (LECD-CLIPSYD) EPN-R doctorants



<> Code ⓘ Issues 🔁 Pull requests ▶ Actions 📁 Projects 1 📖 Wiki 🔒 Security 🔍 Insights ⚙️ Settings

🔗 master 1 branch 1 tag [Go to file](#) [Add file](#) [Code](#)

QuentinBARILLOT WIP on word to rmd, early EFA edfff80 7 days ago 🔄 40 commits

📁 R	First commit project template	4 months ago
📁 analysis	WIP on word to rmd, early EFA	7 days ago
📁 biblio	First commit project template	4 months ago
📁 codebook	Nboot 1000 -> 500	22 days ago
📁 datasynt	Dat2c with SPQ 25%/50%/25%	26 days ago
📁 doc	Setup ready !	last month
📁 figs	Almost done	20 days ago
📁 manuscript	WIP on word to rmd, early EFA	7 days ago
📁 output	Almost done	20 days ago
📁 references	Pre-final manuscript	19 days ago
📁 setup	Dat2c with SPQ 25%/50%/25%	26 days ago
📁 vignettes	First commit project template	4 months ago

About ⚙️
Network Analysis on VULCAN data

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Contributors 2

- QuentinBARILLOT** Quentin BARILLOT
- yannickmorvan** Yannick Morvan

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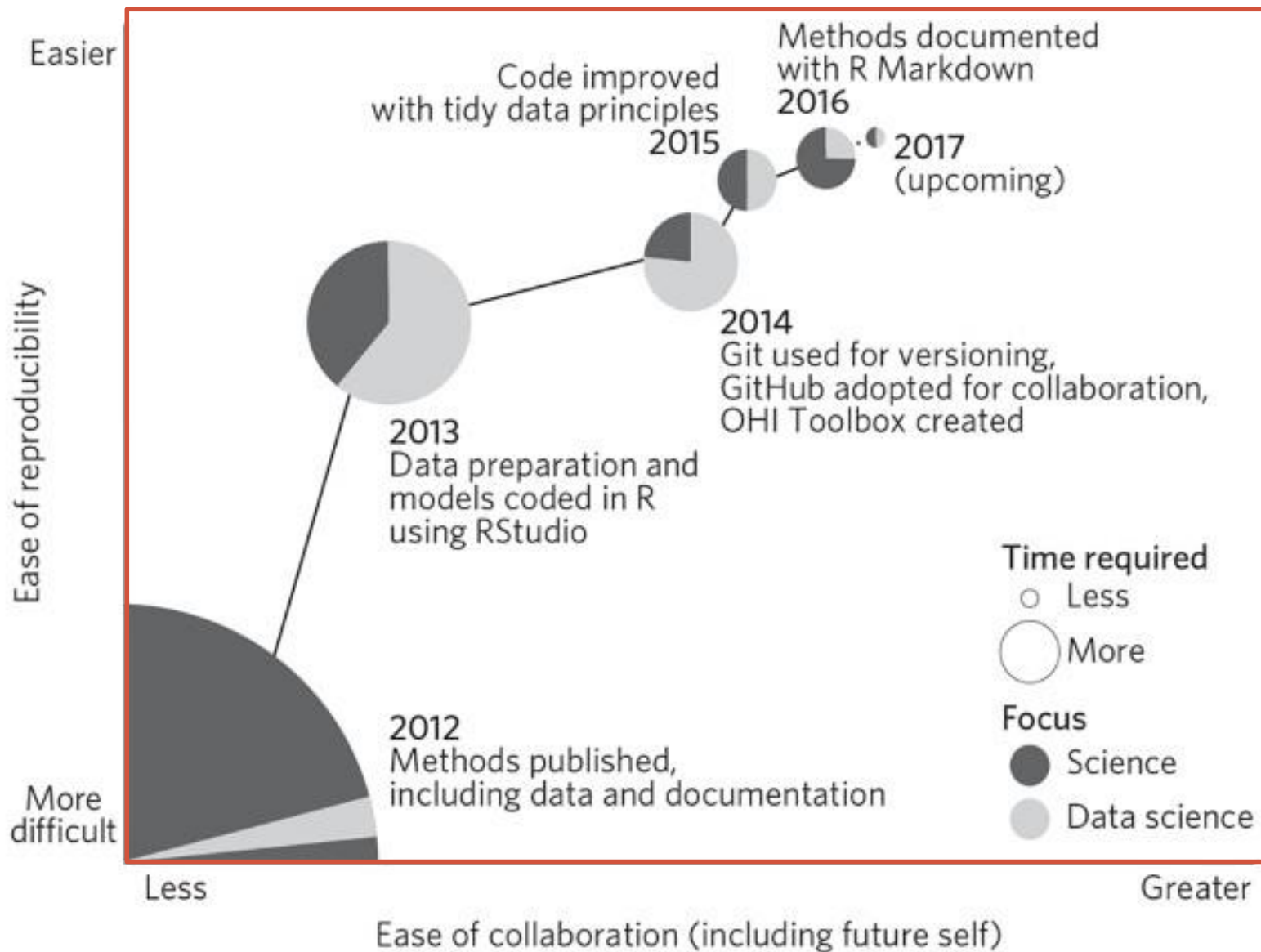


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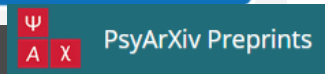
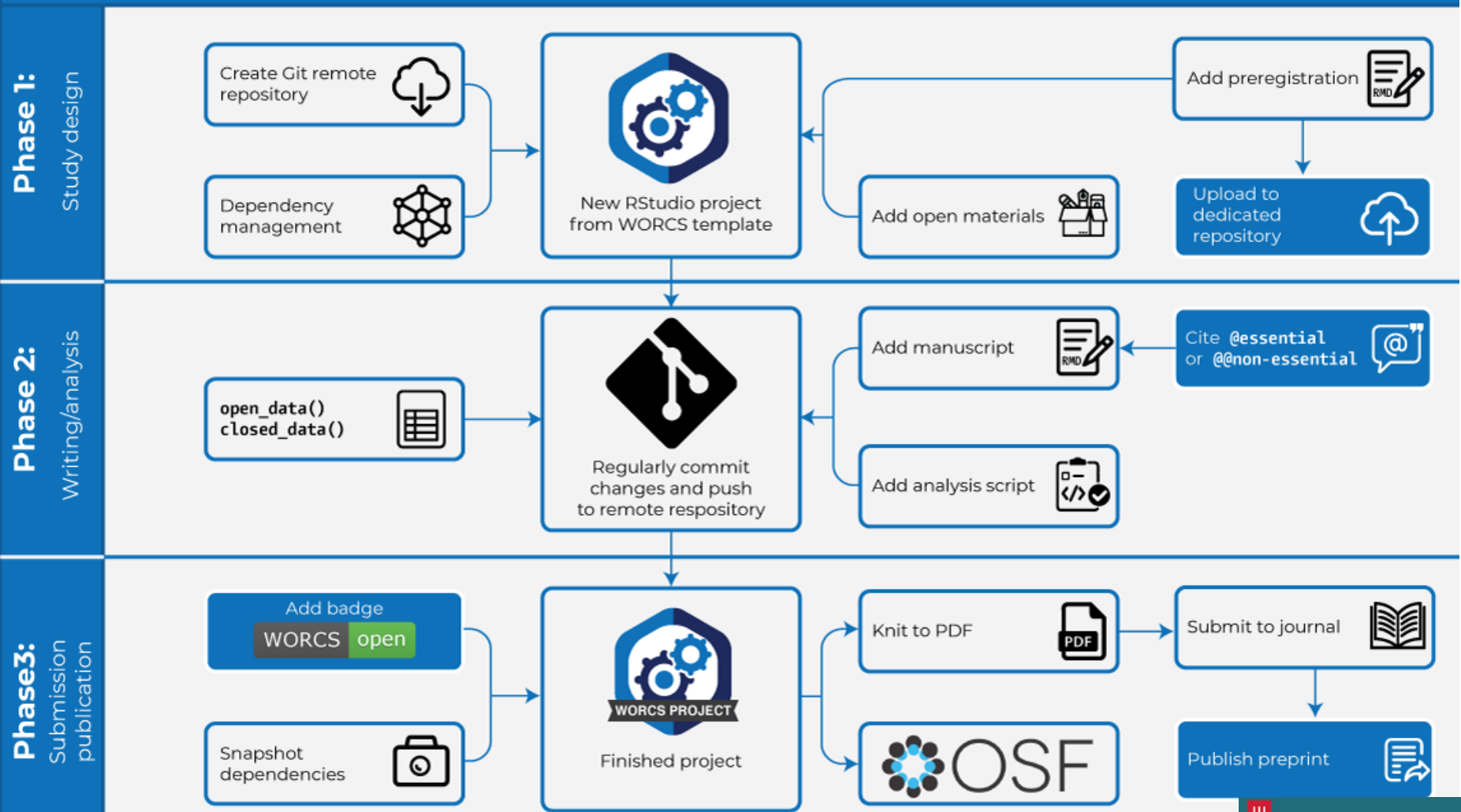
[See an example](#)



Our path to better science in less time using open data science tools

<https://www.nature.com/articles/s41559-017-0160>

Workflow for Open Reproducible Code in Science (WORCS)



WORCS: A Workflow for Open Reproducible Code in Science

AUTHORS
Caspar J. van Lissa, Andreas Markus Brandmaier, Loek Brinkman, Anna-Lena Lamprecht, Aaron Peikert, Marijn Struiksma, Barbara Vreede

"FINAL".doc



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FINAL_rev.6.COMMENTS.doc



FINAL_rev.8.comments5.
CORRECTIONS.doc



FINAL_rev.18.comments7.
corrections9.MORE.30.doc



FINAL_rev.22.comments49.
corrections.10.#@\$%WHYDID
ICOMETOGRADSSCHOOL?????.doc



WWW.PHDCOMICS.COM

Introduction to Open Reproducible Science Workflows

SECTION ONE

SECTION ONE - AN INTRODUCTION TO OPEN REPRODUCIBLE SCIENCE WORKFLOWS

LEARNING OBJECTIVES

Section One - An Introduction to Open Reproducible Science Workflows

In section one of this textbook, you will learn about open reproducible science. You will learn about a suite of open source tools that are often used in open reproducible science workflows including `Bash / Shell`, `Python`, and the `Jupyter` ecosystem, including `Jupyter Notebook`. You will also learn about best practices for open reproducible projects and workflows.

Learning Objectives

After completing this section of the introduction to earth data science online textbook, you will be able to:

- Define open reproducible science and explain its importance.
- Describe how reproducibility can benefit you and others.
- Identify best practices for open reproducible science projects and workflows.
- Run `Bash` commands in the terminal to work with files and directories on your computer.
- Launch and navigate the `Jupyter Notebook` dashboard to access and create `Jupyter Notebook` files.
- Run cells within `Jupyter Notebook` to execute `Python` code and render `Markdown` text.

Section 1. Introduction to Open Reproducible Science Workflows

Chapter 1 : Open Reproducible Science Workflows

Des outils à utiliser qui peuvent vous simplifier la vie au final mais avec un cout d'entrée => Investissement sur le long terme

Utilisez R, Rstudio, Rmarkdown, GitHub, OSF, PsyArXiv...

<https://www.earthdatascience.org/courses/intro-to-earth-data-science/open-reproducible-science/>

Les différentes facettes de la science ouverte

Si on résume :

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4. **Des politiques incitatives et de reconnaissances pour favoriser le changement**
5. D'une plus grande implication de la société dans la science et ses productions

Déclaration de San Francisco sur l'évaluation de la recherche

Il est urgent d'améliorer les méthodes d'évaluation des résultats de la recherche scientifique par les agences de financement, les établissements d'enseignement et de recherche et d'autres parties. Pour régler cette question, un groupe de rédacteurs en chef et d'éditeurs de revues savantes s'est réuni à San Francisco en Californie le 16 décembre 2012, dans le cadre du congrès annuel de l'American Society for Cell Biology (ASCB). Ce groupe a élaboré un ensemble de recommandations, désormais appelé « Déclaration de San Francisco sur l'évaluation de la recherche ». Nous invitons les parties intéressées de toutes les disciplines scientifiques à manifester leur soutien en ajoutant leur nom à la présente Déclaration.

Les apports de la recherche sont nombreux et variés : articles contenant de nouvelles connaissances, données, réactifs, logiciels ainsi que propriété intellectuelle et jeunes scientifiques hautement qualifiés. Les agences de financement, les établissements qui emploient des chercheurs et ces scientifiques eux-mêmes éprouvent tous le désir et le besoin d'évaluer la qualité et l'impact de la production scientifique. Il est donc impératif que la production scientifique soit mesurée rigoureusement et évaluée avec discernement.

Le facteur d'impact des revues est souvent utilisé comme principal paramètre pour comparer la production

العربية

Bahasa Indonesia

中文

Català

Čeština

Српски

Deutsch

Eesti keel

English

Español

Ελληνικά

Coalition for Advancing Research Assessment

Our vision is that the assessment of research, researchers and research organisations recognises the diverse outputs, practices and activities that maximise the quality and impact of research. This requires basing assessment primarily on qualitative judgement, for which peer review is central, supported by responsible use of quantitative indicators.



Signatories

The agreement is open for signature to organisations from across the world. As of 19 October 2023, 638 organisations have signed the agreement. This page is updated on a regular basis following signature checks by the CoARA Secretariat.

The Agreement

Based on 10 commitments, establishes a common direction for research assessment reform, while respecting organisations' autonomy. The Agreement on Reforming Research Assessment sets a shared direction for changes in assessment practices for research, researchers and research performing organisations, with the overarching goal to maximise the quality and impact of research.

The Agreement includes the principles, commitments and timeframe



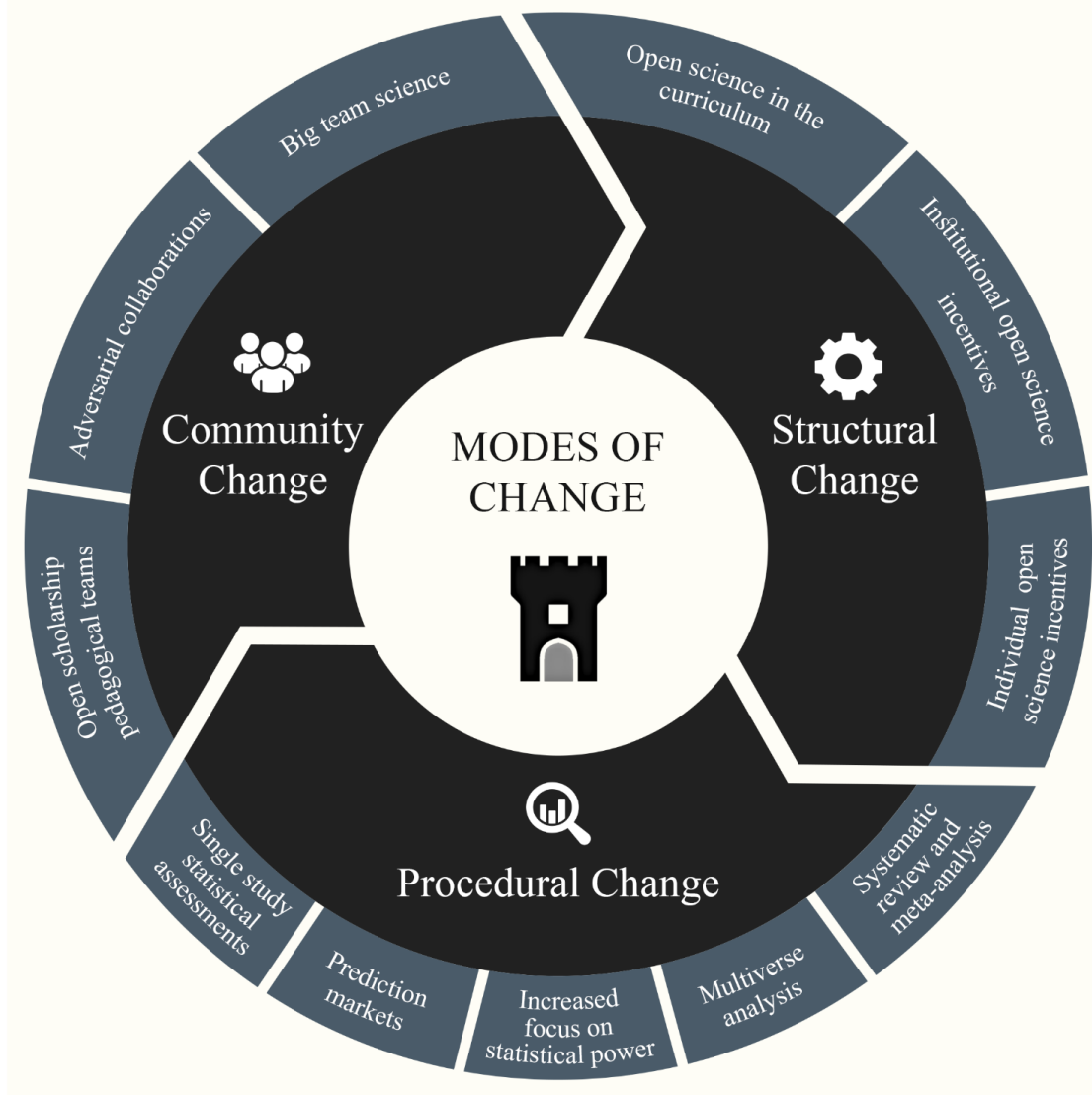
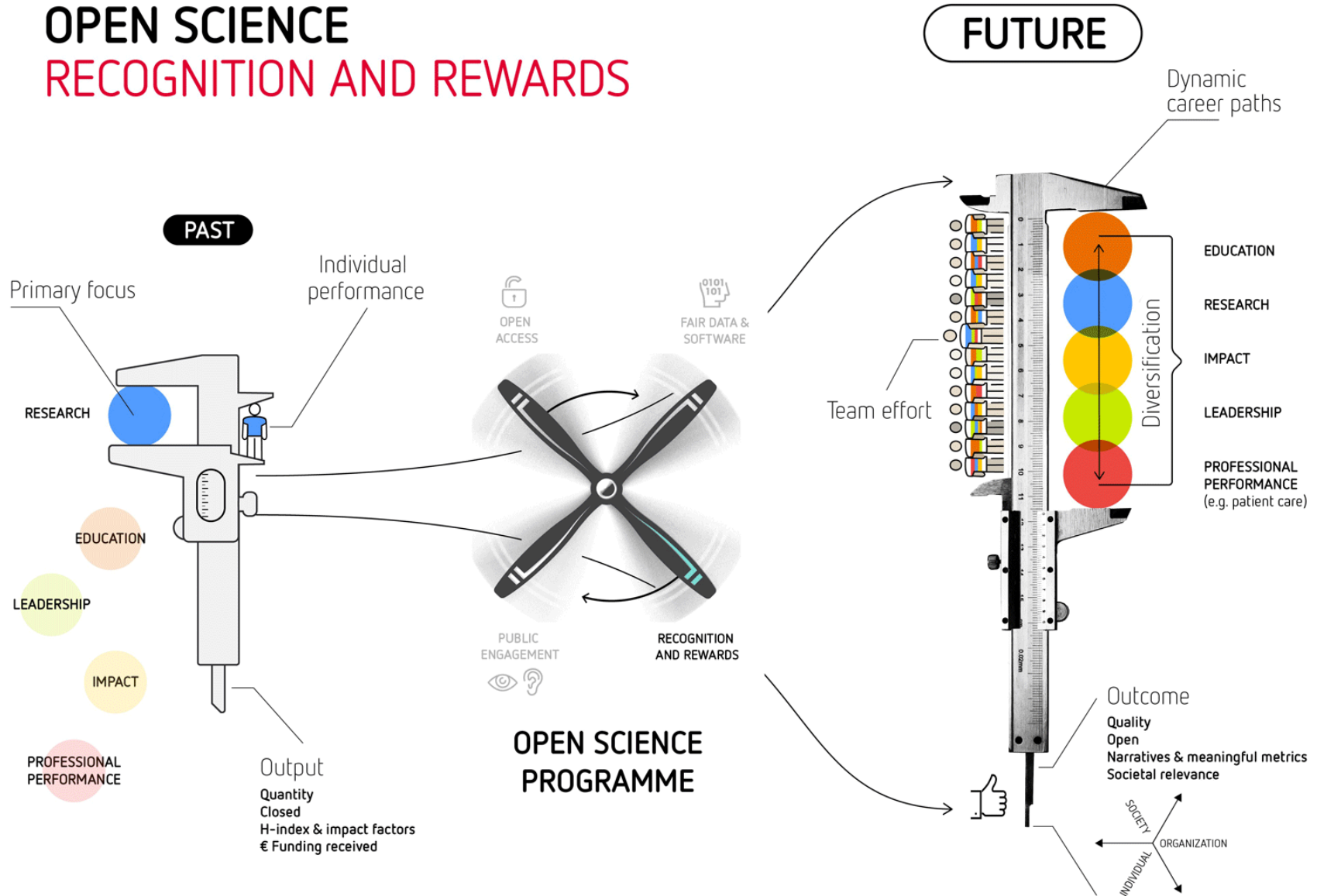


Fig. 1 Modes of change towards scientific credibility. This figure presents an overview of the three modes of change proposed in this article: structural change is often evoked at the institutional level and expressed by new norms and rules; procedural change refers to behaviours and sets of commonly used practices in the research process; community change encompasses how work and collaboration within the scientific community evolves.

Modes de changements pour une crédibilité scientifique. Crédit Korbmacher et al. (2023)

<https://osf.io/preprints/metaarxiv/r6cvx/>

OPEN SCIENCE RECOGNITION AND REWARDS



3. CONCLUSION : (OPEN) SCIENCE & SOCIÉTÉ

Les différentes facettes de la science ouverte

Si on résume :

1. Des données ouvertes et des résultats reproductibles
2. De l'ouverture des évaluations, des opinions et des critiques
3. Des technologies qui facilitent l'adoption des pratiques de science ouverte
4. Des politiques incitatives et de reconnaissances pour favoriser le changement
5. **D'une plus grande implication de la société dans la science et ses productions**

Sommaire

- Un engagement stratégique porté par l'équipe de gouvernance du site
- Une diversité d'actions, un socle commun
- Un partenariat fort avec les professionnels du territoire
- Une auto-évaluation
- Méthodologie

Critères du label « Science avec et pour la société » (SAPS)

Dans le cadre de la stratégie ministérielle en faveur d'une « science avec et pour la société » (SAPS), le MESRI délivrera un label assorti de moyens aux sites universitaires qui satisferont aux quatre critères suivants en vue de constituer un réseau d'établissements engagés dans la structuration de cette politique publique.



Science

 ARTICLE / CD'IDÉES 22 MAR. 2023

Sciences participatives : la science n'est pas qu'une affaire de scientifiques

CLIMAT & ENVIRONNEMENT



Crédit : Tomfry/Adobe stock



Frédérique Chlous

Temps de lecture

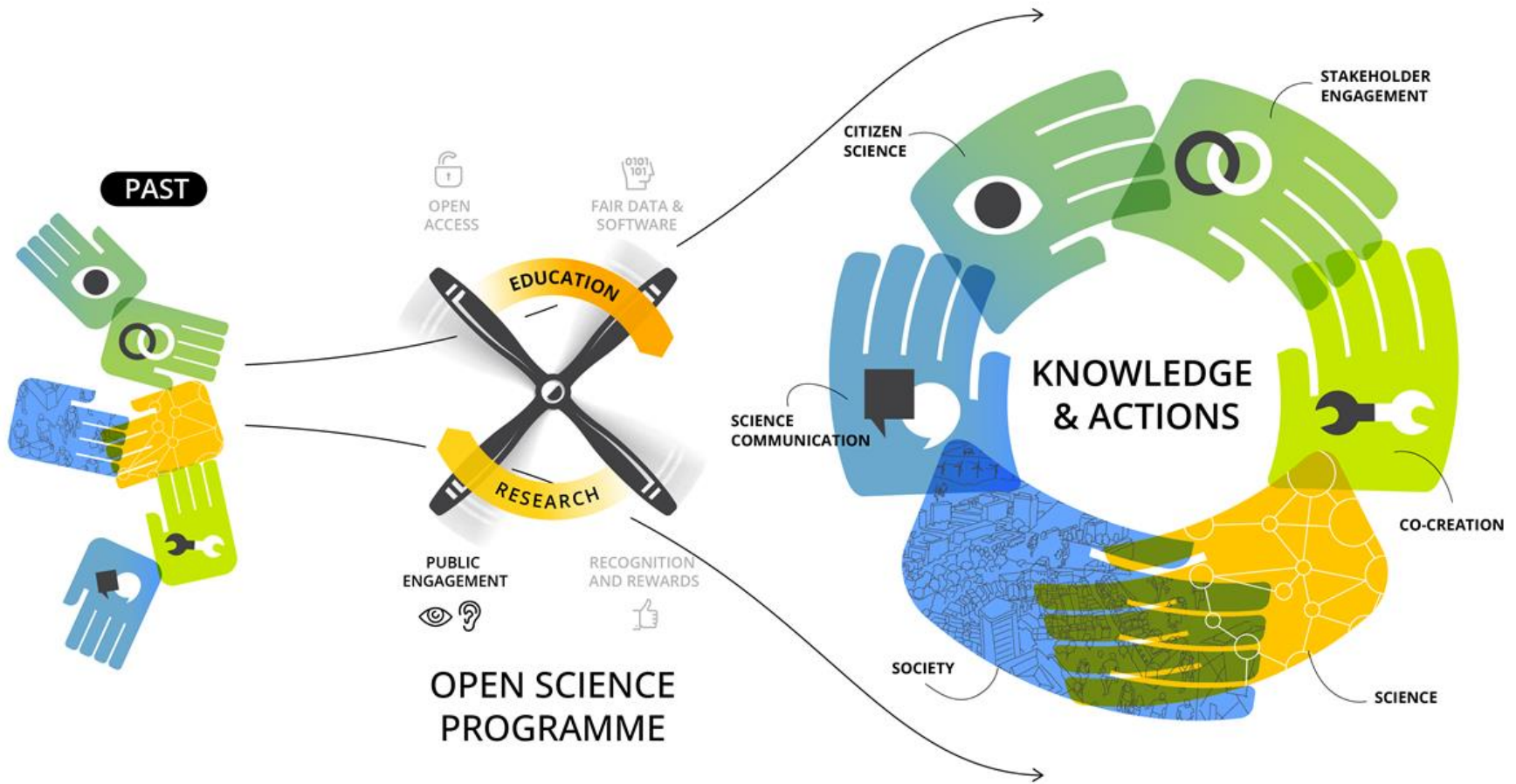
6 min

Les sciences participatives connaissent aujourd'hui un essor singulier que l'on mesure à l'aune de la croissance des publications scientifiques mentionnant l'engagement des citoyens, de la multiplication des initiatives coconstruites, ainsi que de l'intérêt grandissant des institutions pour le sujet. Quels sont les enjeux des sciences participatives ? quels sont ses apports ? pour quels usages ? quid de la fiabilité des données collectées ? quel(s) rôle(s) pour les citoyens ? peuvent-elles être un levier de transformation des politiques publiques ?

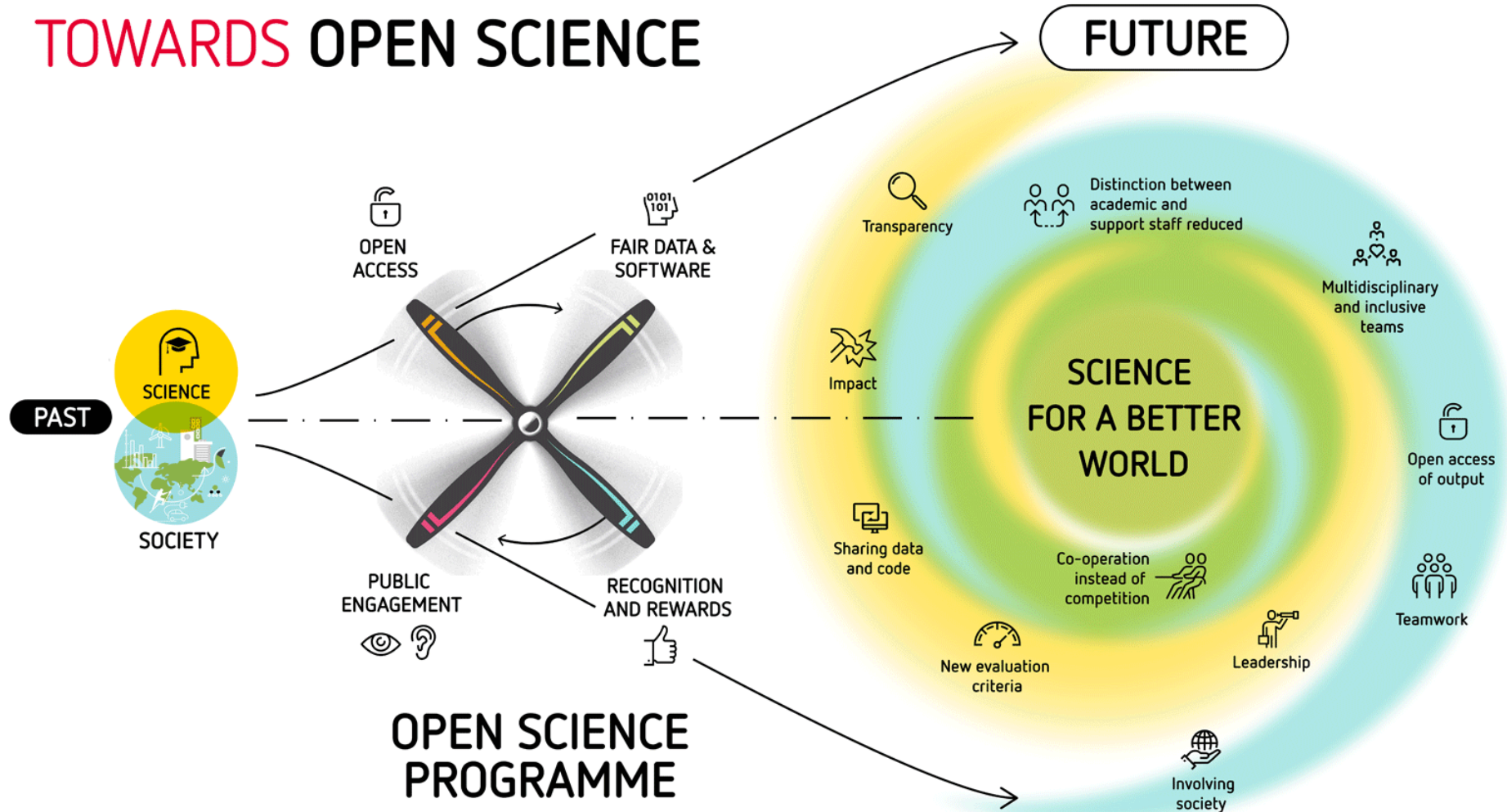
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OPEN SCIENCE PUBLIC ENGAGEMENT

FUTURE



TOWARDS OPEN SCIENCE



MERCI
