Responsible Publication Practices

roles of journals, researchers and research institutes

Lex Bouter

Lunchtime talk for Stellenbosch University and the Southern African Research and Innovation Management Association (SARIMA) on 25 November 2020 – 90 minutes including interaction.

Content

- Background
- Selective reporting
- Perverse incentives
- Retractions
- Assessment of researchers
- Research climate

What is good for the ***truth*** of and the ***trust*** in research is not always good for your academic career

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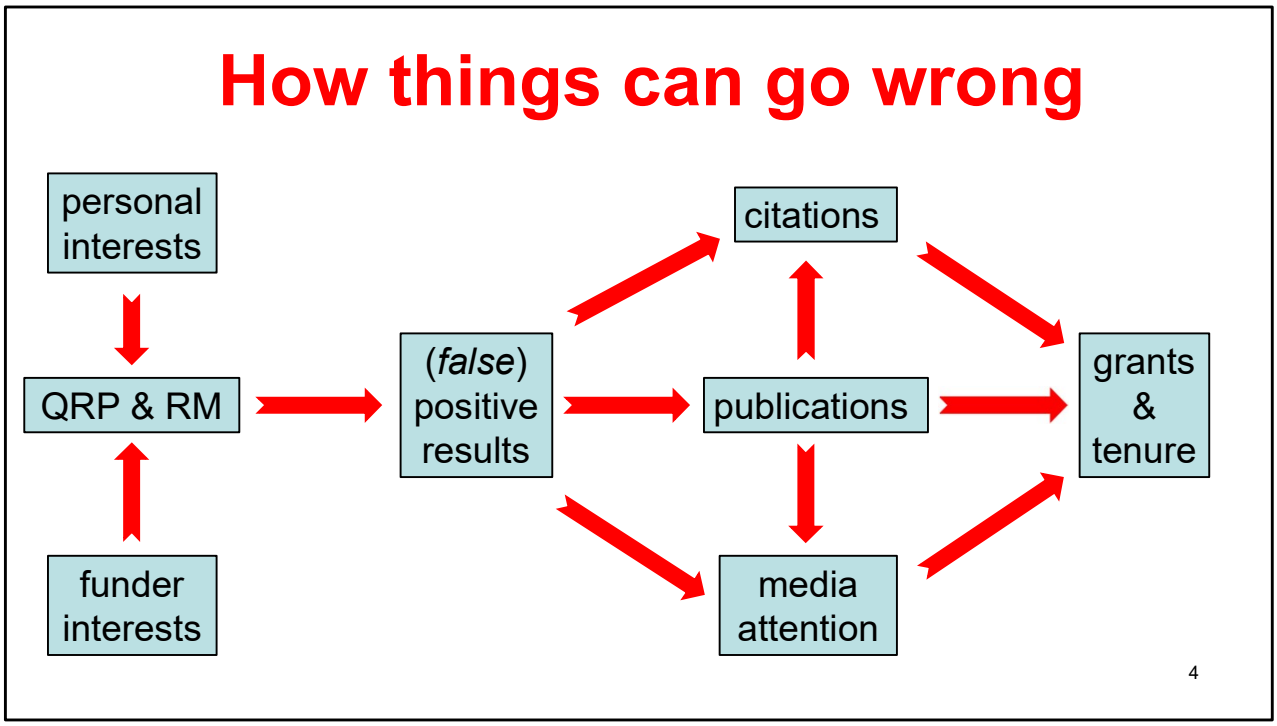
Many rewards in academia are linked to having positive and spectacular results as these are published more easily in high impact journals and will be cited more often.

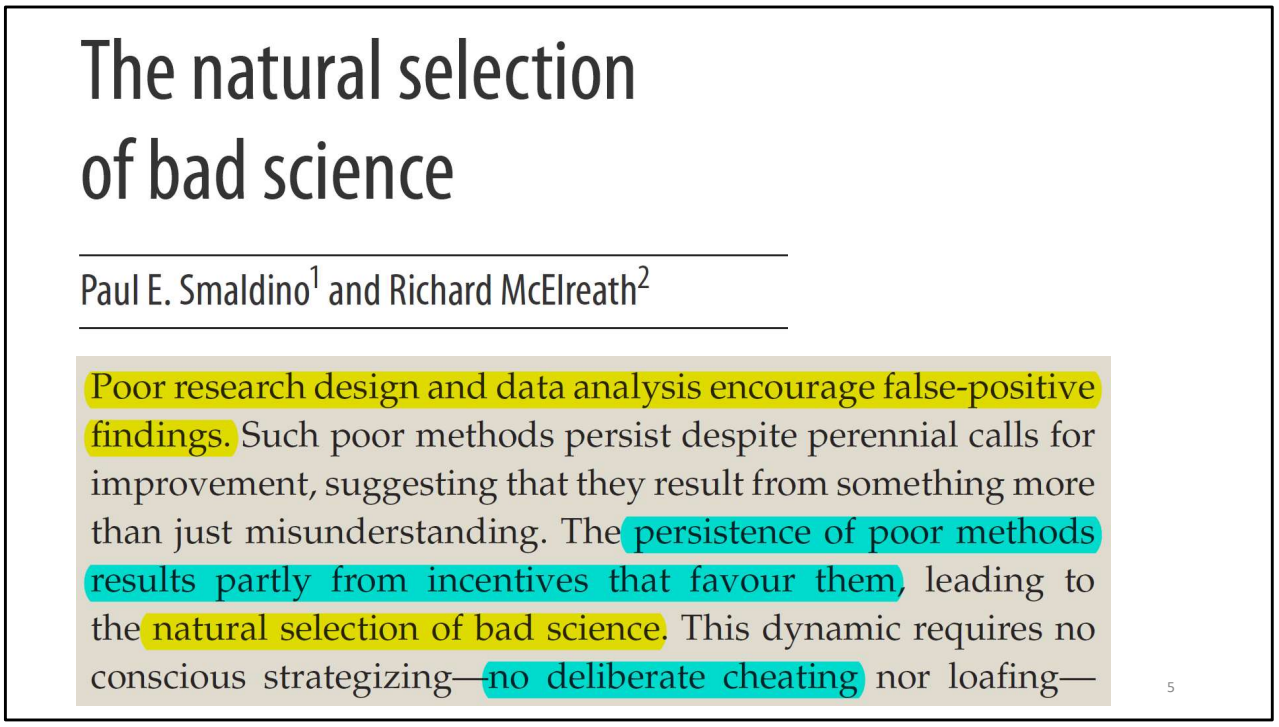
The various Questionable Research Practices (QRPs) have in common that they can effectively help to get these positive and spectacular results.



This slide shows – in a simplified way – how things can go wrong.

We like positive results a lot and that is not only because we want our favourite hypotheses to be true. It's also good for our career and the likelihood of getting grants. Questionable Research Practices (QRP) or worse (data fabrictation or falsification) can help us effectively to get positive results (which are then false like the chance findings we have as well).

Negative findings are so unpopular that often these are not reported at all. We just don't bother to report negative results and reviewers & editors are biased against them. This mechanism will lead to publication bias, outcome reporting bias and citation bias. These phenomena will distort the published record and is the main driver of the replication crisis.



Cutting corners or worse can compromise the validity of research but is sometimes better for your career. The survival value of cheating in science is probably substantial. This underlines the idea that the current science symstem involves perverse incentives. In short: researchers need a moral compass to anvigate the dilemmas the encounter.

Smaldino et al - The natural selection of bad science - Royal Society Open Science 2016; 3 160384

Functioning of moral compass depends on:

- Virtuousness of the individual
- Research climate in the lab
- Adequate incentives

Researchers navigate the dilemmas in their work with their moral compass. The quality of this compass depends on how virtuous the researcher at issue is. Not much we can do about this after the upbringing is completed.

But there are also strong other drivers of their behaviour in the direct professional environment and the system of science at large.

That doesn't deminish the personal responsibility to behave well in research. In fact it makes personal responsilility larger: individual researchers also have to help to improve the research climate and to remove perverse incentives.

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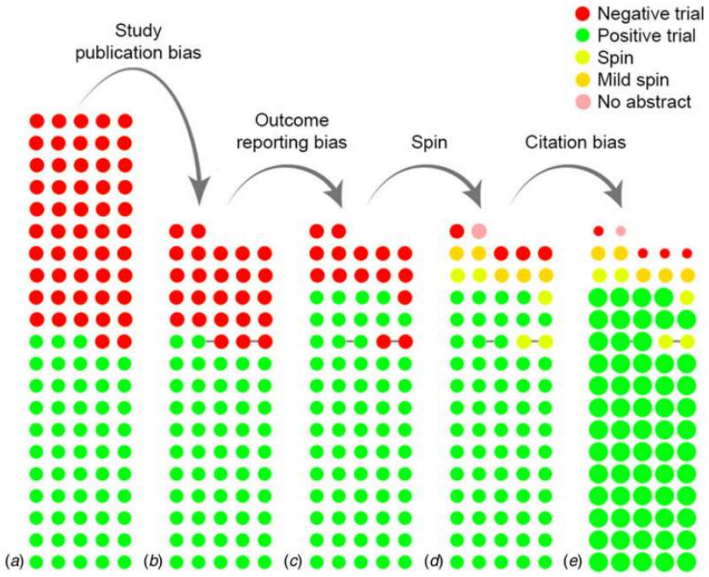
So now the scene is sketched. Let's move on with the specific topics I would like to discuss.

How negative results disappear from the published literature



8

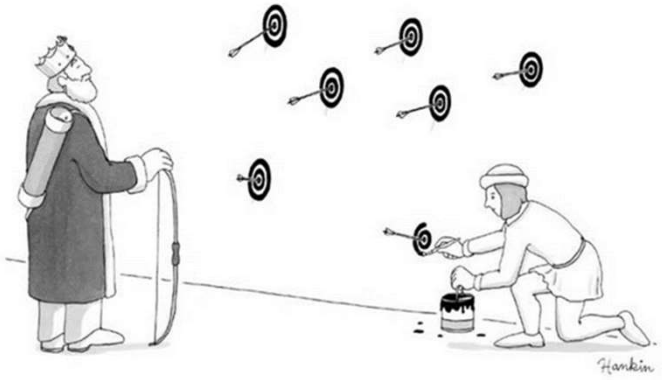
de Vries YA, Roest AM, de Jonge P, Cuijpers P, Munafò MR, Bastiaansen JA (2018). The cumulative effect of reporting and citation biases on the apparent efficacy of treatments: the case of depression. Psychological Medicine 1–3. https://doi.org/10.1017/S0033291718001873

This rather shocking example concerns the fate of an inception cohort of 105 RCTs of the efficacy of anti-depression drugs from the FDA database. The cohort is complete in the sense that pharmaceutical companies must register all trials they intend to use to obtain FDA approval before embarking on data collection. The FDA considered 50% of the trials to be positive after carefully looking at the original data.

Important causes of 'replicability crisis'

- Selective reporting
- Low power
- Low rate of true effects
- P-hacking
- HARKing

Hypothesizing After Results are Known



Wicherts et al - Degrees of freedom - checklist to avoid p-hacking - Front Psych 2016; 7: 1832
https://www.frontiersin.org/articles/10.3389/fpsyg.2016.01832/full

Ulrich, Miller - QRF may have little effect on replicability - eLife 2020; 9 e58237

Open Methods, Open Codes, Open Data

- enhances transparency and replicability
- enables re-analysis and re-use of data
- helps in detection of selective reporting, p-hacking, HARKING and worse

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TOP guidelines and TOP Factor

8 MODULAR STANDARDS

Citation Standards Describes citation of data	**Data Transparency** Describes availability and sharing of data
Analytical Methods Transparency Describes analytical code accessibility	**Research Materials Transparency** Describes research materials accessibility
Design and Analysis Transparency Sets standards for research design disclosures	**Preregistration of Studies** Specification of study details before data collection
Preregistration of Analysis Plans Specification of analytical details before data collection	**Replication** Encourages publication of replication studies

> 5000 signitories !

	0	1	2	3
Data transparency	Data sharing is encouraged, or not mentioned	Articles must state whether or not data are available. Requiring a data availability statement satisfies this level	Articles must have publicly available data, or an explanation why ethical or legal constraints prevent it.	Articles must have publicly available data and must be used to computationally reproduce or confirm results prior to publication

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It's important that journals engage in the Open Science Practices and communicate that by following the TOP guidelines and by making their TOP factor explicit.

It's important that researchers select these journals for submitting their manuscripts and that research institutes and funding agencies strohgly nudge them to do so.

preregistration and registered reports

https://cos.io/rr/

https://www.cos.io/initiatives/registered-reports

Nosek BA, Ebersole CR, DeHaven AC, Mellor D. The preregistration revolution. PNAS 2018;115:2600-6. (http://www.pnas.org/content/115/11/2600)

Chambers C. What's next for registered reports. Nature 2019; 573 187-189

Allen C, Mehler DMA. Open science challenges, benefits and tips in early career and beyond. PLoS Biol 2019; 17(5): e3000246. https://doi.org/10.1371/journal.pbio.3000246

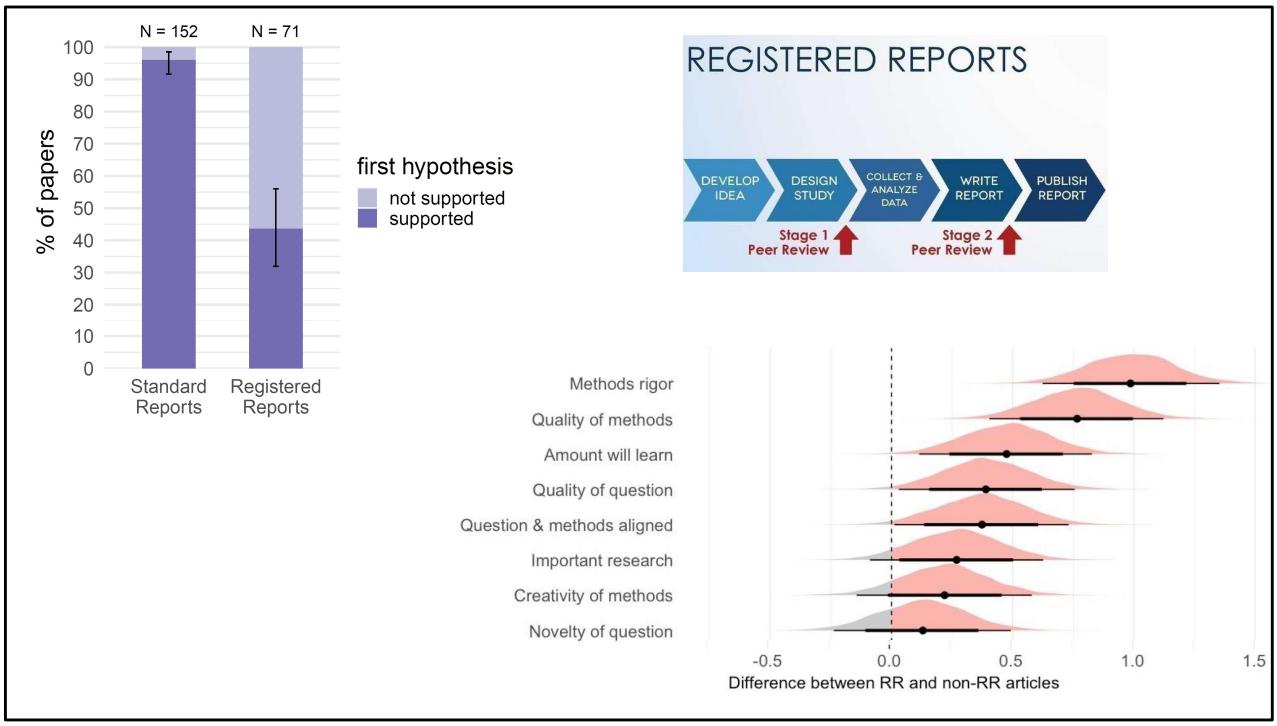
The preregistration revolution

Brian A. Nosek[a,b,1], Charles R. Ebersole[b], Alexander C. DeHaven[a], and David T. Mellor[a]

Progress in science relies in part on generating hypotheses with existing observations and testing hypotheses with new observations. This distinction between postdiction and prediction is appreciated conceptually but is not respected in practice. Mistaking generation of postdictions with testing of predictions reduces the credibility of research findings. However, ordinary biases in human reasoning, such as hindsight bias, make it hard to avoid this mistake. An effective solution is to define the research questions and analysis plan before observing the research outcomes—a process called preregistration. Preregistration distinguishes analyses and outcomes that result from predictions from those that result from postdictions.

2600–2606 | PNAS | March 13, 2018 | vol. 115 | no. 11

Nosek BA, Ebersole CR, DeHaven AC, Mellor D. The preregistration revolution. PNAS 2018;115:2600-6. (http://www.pnas.org/content/115/11/2600)



Chambers C. What's next for registered reports. Nature 2019; 573 187-189

Allen C, Mehler DMA. Open science challenges, benefits and tips in early career and beyond. PLoS Biol 2019; 17(5): e3000246. https://doi.org/10.1371/journal.pbio.3000246

Scheel et al. An excess of positive results: comparing the standard psychology literature with registered reports. PsyArXiv 2020.

Soderberg CK, Errington TE , Schiavone SR, Bottesini J, Thorn FS, Vazire S, Esterling KM, Nosek BA. Research Quality of Registered Reports Compared to the Standard Publishing Model. OSF preprint.

https://cos.io/rr/

FAIR data reposition

Box 2 | The FAIR Guiding Principles

To be Findable:
F1. (meta)data are assigned a globally unique and persistent identifier
F2. data are described with rich metadata (defined by R1 below)
F3. metadata clearly and explicitly include the identifier of the data it describes
F4. (meta)data are registered or indexed in a searchable resource

To be Accessible:
A1. (meta)data are retrievable by their identifier using a standardized communications protocol
A1.1 the protocol is open, free, and universally implementable
A1.2 the protocol allows for an authentication and authorization procedure, where necessary
A2. metadata are accessible, even when the data are no longer available

To be Interoperable:
I1. (meta)data use a formal, accessible, shared, and broadly applicable language for knowledge representation.
I2. (meta)data use vocabularies that follow FAIR principles
I3. (meta)data include qualified references to other (meta)data

To be Reusable:
R1. meta(data) are richly described with a plurality of accurate and relevant attributes
R1.1. (meta)data are released with a clear and accessible data usage license
R1.2. (meta)data are associated with detailed provenance
R1.3. (meta)data meet domain-relevant community standards

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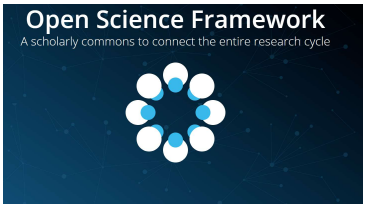
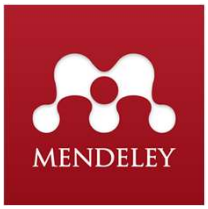
Wilkinson MD, etal. The FAIR Guiding Principles for scientific data management and stewardship. Scientific Data 2016; 3: 160018. (https://www-nature-com.vu-nl.idm.oclc.org/articles/sdata201618)

https://www.go-fair.org/fair-principles/

> 2000 Data Repositories





https://osf.io/

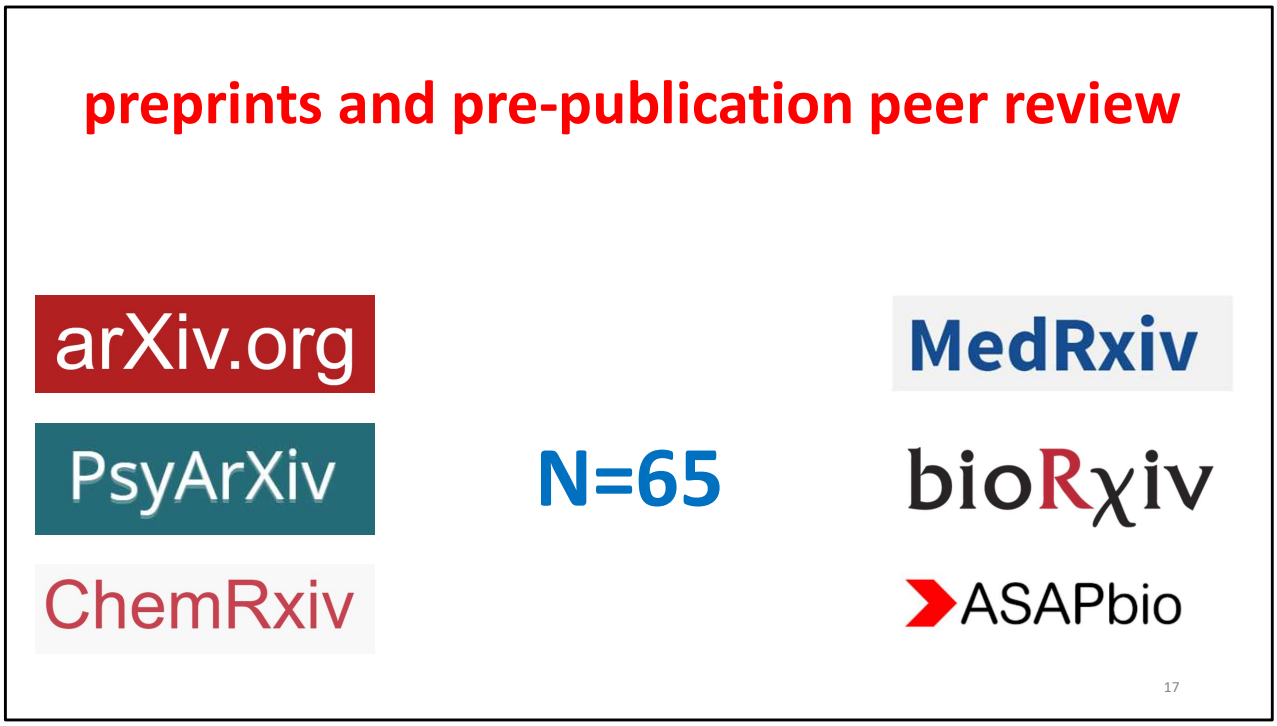
https://dataverse.org/

https://www.mendeley.com/

https://datadryad.org/

www.re3data.org

https://figshare.com/



https://arxiv.org/
https://chemrxiv.org/
https://www.biorxiv.org/
https://psyarxiv.com/
http://asapbio.org/

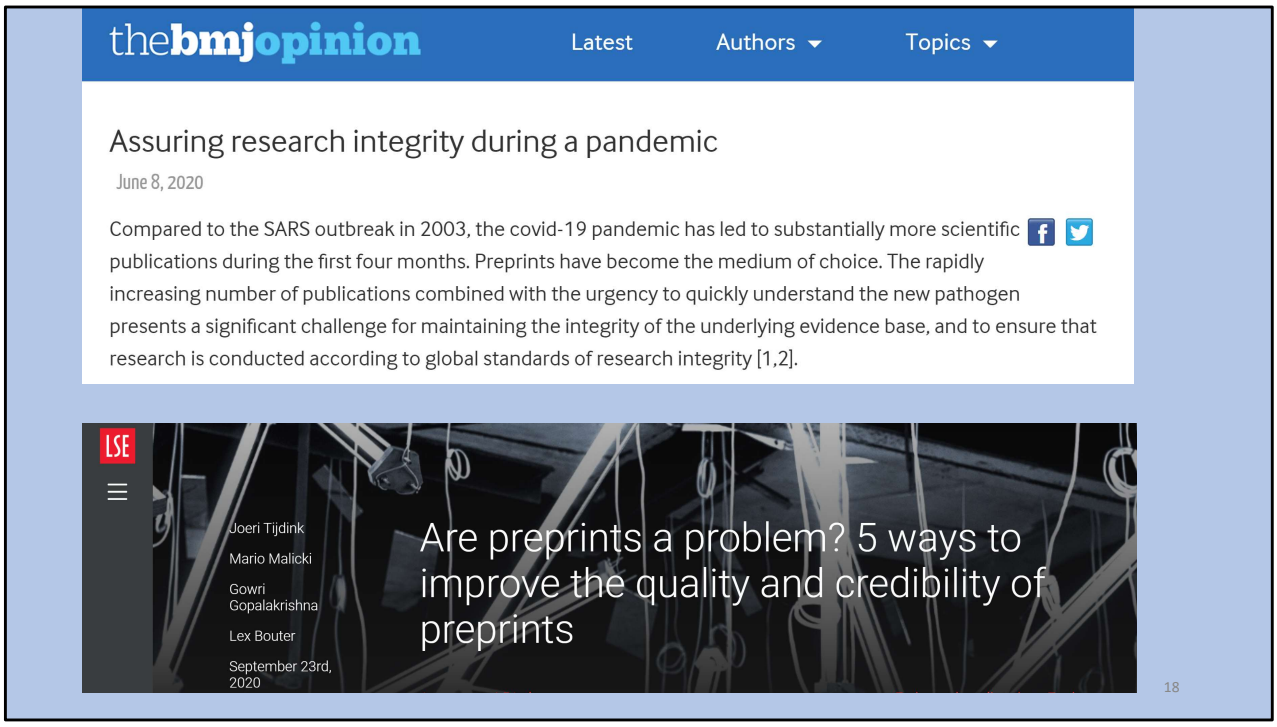
List of 65 preprint servers at
https://docs.google.com/spreadsheets/d/17RgfuQcGJHKSsSJwZZn0oiXAnimZu2sZsWp8Z6ZaYYo/edit#gid=0

YouTube video 'What are preprints?'
(https://www.youtube.com/watch?time_continue=9&v=2zMgY8Dx9co)

Malički M, Jerončić A, ter Riet G, Bouter LM, Ioannidis JPA, Goodman S, Aalbersberg IJJ. Preprint servers' policies, submission requirements, and transparency in reporting and research integrity recommendations. JAMA 2020; 324: 16: 1901-3.

Chalmers I, Glaziou P. Should there be greater use of preprint servers for publishing

reports of biomedical science? F1000Research 2016; 5: 272



https://blogs.bmj.com/bmj/2020/06/08/assuring-research-integrity-during-a-pandemic/#content

https://blogs.lse.ac.uk/impactofsocialsciences/2020/09/23/are-preprints-a-problem-5-ways-to-improve-the-quality-and-credibility-of-preprints/

5 ways to improve the quality and credibility of preprints

For preprint servers:

- Provide clear guidance to authors
- Link preprints to published versions

For authors of preprints:

- Apply the same responsible research practices
- Be an active reviewer of preprints in your area of expertise
- Be explicit about strengths and limitations of your preprints

https://blogs.lse.ac.uk/impactofsocialsciences/2020/09/23/are-preprints-a-problem-5-ways-to-improve-the-quality-and-credibility-of-preprints/

Full list of recommendations: https://osf.io/w4ydg/?pid=eb6wv

Malički M, Jerončić A, ter Riet G, Bouter LM, Ioannidis JPA, Goodman S, Aalbersberg IJJ. Preprint servers' policies, submission requirements, and transparency in reporting and research integrity recommendations. JAMA 2020; 324: 16: 1901-3.

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WORLD VIEW *A personal take on events*

Payouts push professors towards predatory journals

If South Africa truly wants to encourage good research, it must stop paying academics by the paper, says **David William Hedding**.

Open Access

Nature 2019; 565: 267

- Research Outputs Policy (2015): # publications is a main driver of university budget for research
- Percentage of pay-per-publication that is forwarded to department, research group and personal bank accounts varies
- This likely is a strong behavioural incentive

The Research Output Policy (2015) of the SA Department of Higher Education and Training (DHET):
http://www.sun.ac.za/english/research-innovation/Research-Development/Documents/Research%20Outputs/Research%20Output%20Policy/ENGLISH/Research%20Outputs%20policy%20gazette.pdf

The DHET subsidizes research outputs in the following categories:

Journal articles (research articles) in accredited journals
Peer-reviewed books/chapters in books
Peer-reviewed published conference proceedings

Internal distribution rules of University of Johannesburg:
https://www.uj.ac.za/research/Pages/DHET-Publication-Subsidy.aspx

Incentives works well

- For ***intended*** effects:
  - More publications
- But also for ***unintended*** effects:
  - Focus on quantity, not quality
  - More plagiarism and duplicate publication
  - More 'salami slicing', gift authorship and use of predatory OA journals
  - Stronger 'Matthew effect', less equity
  - Less time-consuming responsible research practices
- All incentives can and will be gamed if stakes are high

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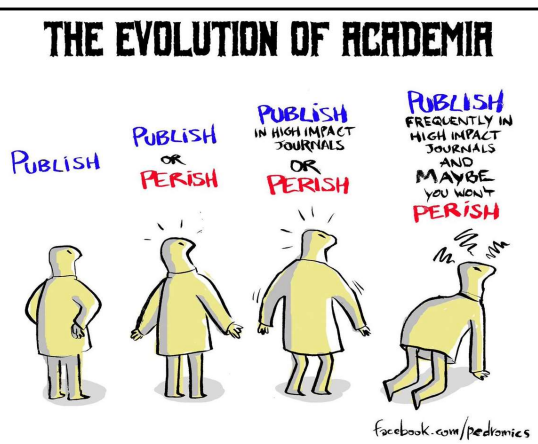
Tomaselli KG. Perverse incentives and the political economy of South African academic journal publishing. S Afr J Sci. 2018;114(11/12), Art. #4341, 6 pages. https://doi.org/10.17159/sajs.2018/4341

Mathama E, McKenna S. The Unintended Consequences of Using Direct Incentives to Drive the Complex Task of Research Dissemination. Education as Change 2020; 24: 6688. https://upjournals.co.za/index.php/EAC/article/view/6688

Thomas A, De Bruin GP. Plagiarism in South African management journals. S Afr J Sci 2015;111: 2014-0017. http://dx.doi.org/10.17159/sajs.2015/20140017

https://en.wikipedia.org/wiki/Goodhart%27s_law

Open Access



PLOS ONE

RESEARCH ARTICLE

Perceived publication pressure in Amsterdam: Survey of all disciplinary fields and academic ranks

Tamarinde L. Haven[1]*, Lex M. Bouter[1,2], Yvo M. Smulders[3], Joeri K. Tijdink[1,4]

PLOS ONE 2019; 14: e0217931

Perceived Publication Pressure

- Publication pressure is particularly a **detrimental stressor** for **postdocs** and **assistant professors**
- Publication pressure concerns researchers from all disciplinary fields but is **highest for researchers in the humanities**
- Our findings emphasize the need to move the debate forward towards a healthy **publication climate**, where researchers are **incentivised** to **optimize quality and integrity** of their publications

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Haven TL, Bouter LM, Smulders YM, Tijdink JK. Perceived publication pressure in Amsterdam: survey of all disciplinary fields and academic ranks. PLoS ONE 2019; 14: e0217931. (https://doi.org/10.1371/journal.pone.0217931)

See also:
http://www.amsterdamresearchclimate.nl/

Content

- Background
- Selective reporting
- Perverse incentives
- **Retractions and corrections**
- Assessment of researchers
- Research climate

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Coping with Chaos: How Disordered Contexts Promote Stereotyping and Discrimination

Diederik A. Stapel[1]* and Siegwart Lindenberg[1,2]*

Being the victim of discrimination can have serious negative health- and quality-of-life–rela[illegible] consequences. Yet, could being discriminated against depend on such seemingly tri[illegible] garbage on the streets? In this study, we show, in two field experiments, that disorder[illegible] contexts (such as litter or a broken-up sidewalk and an abandoned bicycle) inde[illegible]mote[illegible]eoty[illegible]g and discrimination in real-world situations and, in three la[illegible]eriment[illegible] is a[illegible]ed need for structure that mediates these effects (numb[illegible]cts[illegible]tween[illegible]experiment). These findings considerably advance our kn[illegible] the[illegible] the[illegible]l environment on stereotyping and discrimination a[illegible]ea[illegible]olicy im[illegible]tion[illegible]agnose environmental disorder early and interven[illegible]y.

There is [illegible] evidence that [illegible]ination has [illegible] consequences for those w[illegible]criminated against, as well as for socie[illegible] general (1–3). A neglected possible source of stereotyping and discrimination is physical disorder. The environment can affect the relative accessibility of important goals (4, 5) and recently it has been found that physical

when people's desire for structure and predictability is high, they are more likely to engage in stereotyping than when it is low (10–13). Thus, disorder can be expected to increase the need for structure and make the goal to perceive order more salient, a goal that can, at least temporarily, be satisfied by stereotyping. Seen in this light, stereotyping is a way to cope with chaos, a men-

our two field experiments, we tested the impact of real-world situations of disorder on stereotyping and its behavioral correlates. In the three lab experiments, we subsequently tested the proposed mechanism itself. In all experiments, we tested for effects of participants' gender and mood. Because we did not find [illegible] significant effects of these two variabl[illegible] w[illegible]t report them in the re[illegible] this [illegible]cle. [illegible] field ex[illegible] we interviewed tr[illegible] sta[illegible] this experiment the depende[illegible] consisted of a judgmental [illegible] survey of trait judgments about some [illegible] groups) and a behavioral measure (discrimination measured as physical distance from a member of an ingroup versus outgroup while filling out the survey). We predicted that in a dirty train station people stereotype more and would choose to sit further away from an outgroup confederate than in a (relatively) clean train station. A recent strike by the cleaners of Utrecht train station in the Netherlands provided a unique opportunity to test the impact of considerable physical disorder on stereotyping against the impact of physical orderliness in the same public location. Utrecht station is a train hub in the middle of the Netherlands, where thousands of travelers pass through on a daily basis. Thus, during the

RETRACTED

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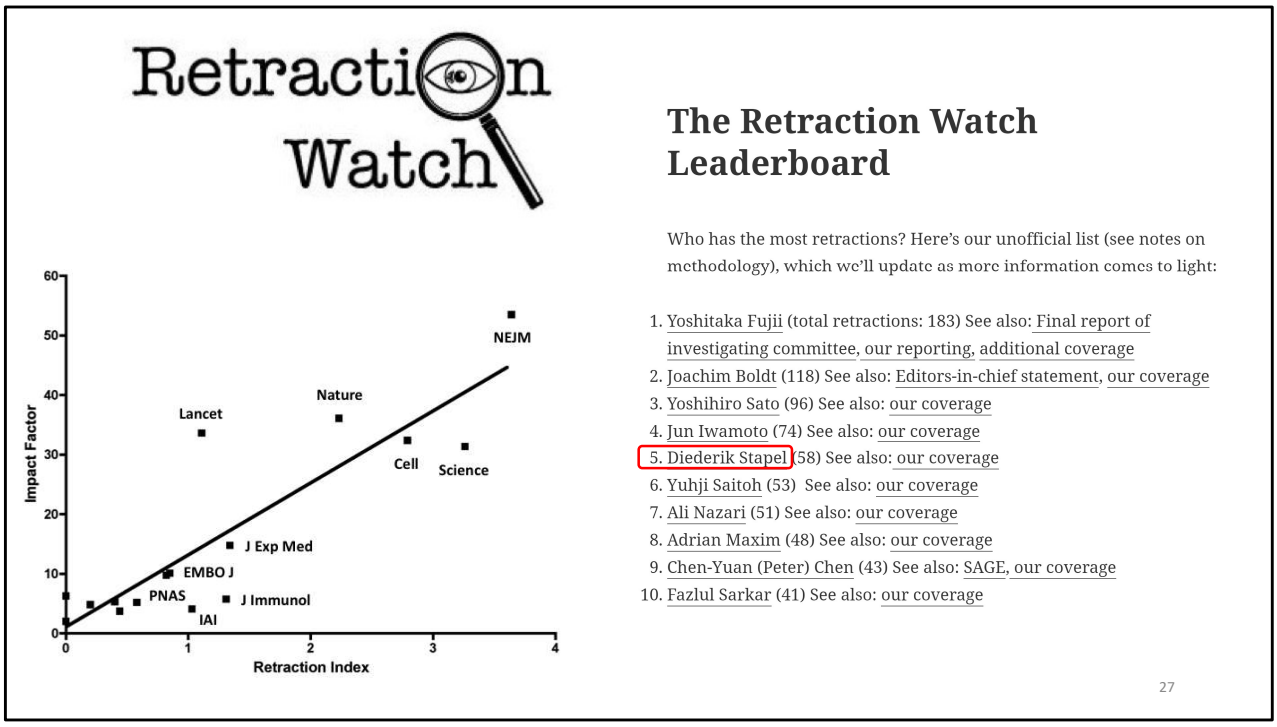
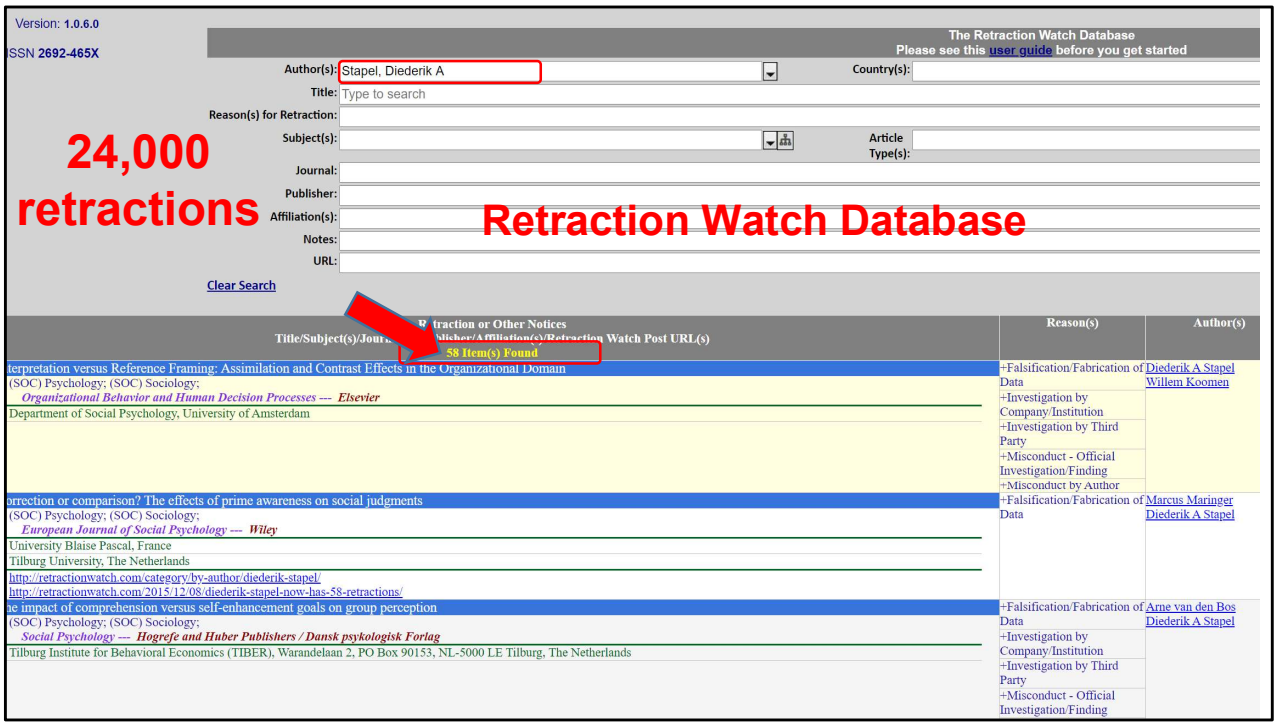


We don't know why retractions are more common in journals with high Impact Factors:

- Authors more often engage in cheating to get results spectacular enough to be accepted by a high IF journal
- Readers scrutinize articles in high IF journals more intensely or blow the whistle more often when they find a fatal flaw in high IF journals
- High IF retract a larger proportion of their fatally flawed aricles

Fang FC, Casadevall A. Retracted Science and the Retraction Index. INFECTION AND IMMUNITY, Oct. 2011, p. 3855–3859 Vol. 79, No. 10
Josh Farkas. Dear NEJM: We both know that conflicts of interest matter. EMCrit Project; 1 May 2015. (https://emcrit.org/pulmcrit/dear-nejm-we-both-know-that-conflicts-of-interest-matter/)

https://retractionwatch.com/



http://retractiondatabase.org/RetractionSearch.aspx?

Reason of retraction	Number	Percentage
Fraud (FF)	993	24 %
Error	911	22 %
Plagiarism (P)	554	13 %
Duplicate publication (P)	547	13 %
Faked review	384	9 %
Authorship issues	249	6 %
Other	211	5 %
Unknown	254	8 %
TOTAL	**4203**	**100 %**

Tao Wang, Qin-Rui Xing.

https://www.researchsquare.com/article/rs-14371/v1)

Difficult issues with retraction

- Journals are (very) **slow** in responding
- Journals are **reluctant** to investigate
- Unclear if (all) **authors** need to **agree**
- Cleaning journals from **flawed** articles or **sanction** for RM
- Explanations are **vague** and aimed at avoidance of **lawsuits**
- Retracted articles are being **still cited**
- **Honorable self-retraction** is not clearly indicated

This is an interesting attempt to develop a better set of labels for different types of retractions.

https://f1000research.com/articles/6-1960

132 | Nature | Vol 581 | 14 May 2020

A good example of distuptive innovation: https://pubpeer.com/

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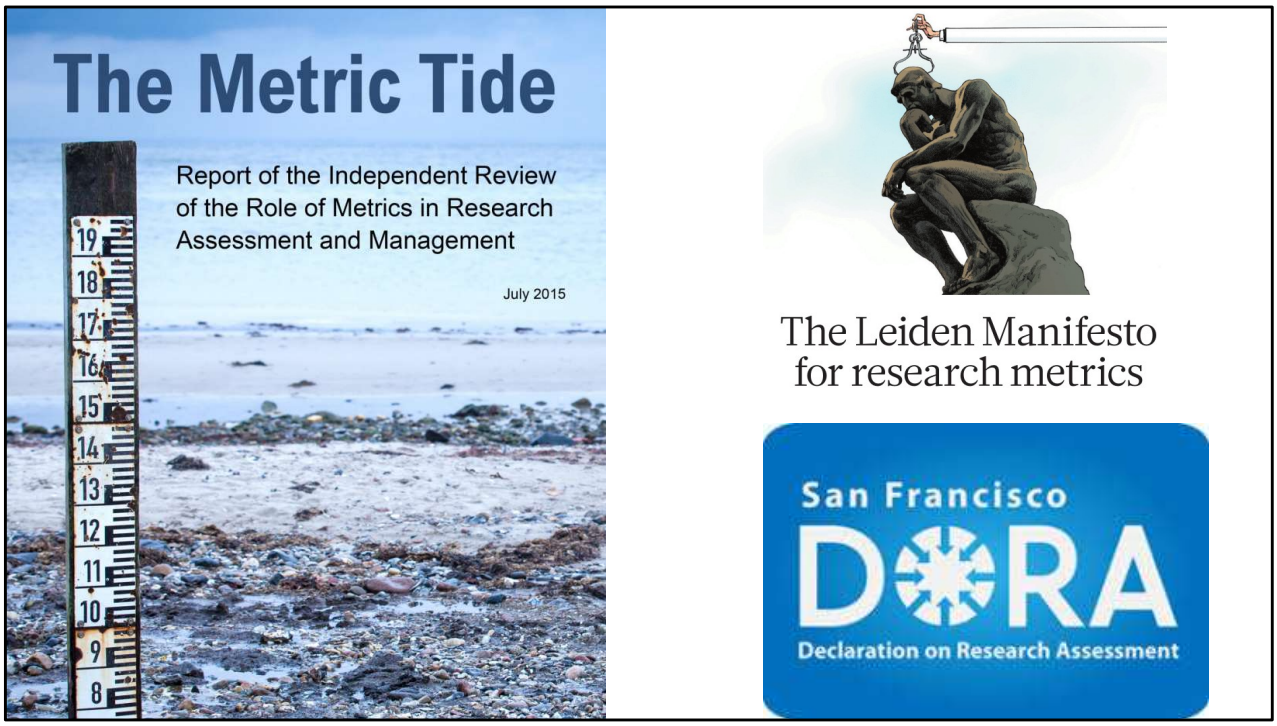

During recent years the simplistic and isolated use of quantitative bibliometric indicators (e.g. Impact Factor and H-index) to evaluate research and researchers has been strongly criticized.

The Hong Kong Principles aim at restoring the balance in the assesment for researchers by rely much less on bibliometric indicators and by taking into account open science modalities that strenghten research integrity.

https://re.ukri.org/sector-guidance/publications/metric-tide/

http://www.leidenmanifesto.org/

https://sfdora.org/read/

How to realize fair assessment procedures of researchers is outlined in the HKPs.

The name Hong Kong refers to the city where the 6th WCRI was held in 2019. Before and during the conference we discussed the HKPs and after the conference they were endorsed by its participants.

Moher D, Bouter L, Kleinert S, Glasziou P, Sham MH, Barbour V, Coriat AM, Foeger N, Dirnagl U. The Hong Kong principles for assessing researchers: fostering research integrity. PLoS Biology 2020; 18: e3000737 https://journals.plos.org/plosbiology/article?id=10.1371/journal.pbio.3000737

Please endorse the HKPs at www.wcrif.org/guidance/hong-kong-principles
On this webpage you can also find best practices, PP slides and a video on the HKPs.

- Grant applications
- Vacancies
- Promotion
- Tenure
- Awards

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Hong Kong Principles

1. Assess responsible research practices
2. Value complete reporting
3. Reward the practice of Open Science
4. Acknowledge a broad range of research activities
5. Recognize essential other tasks like peer review and mentoring

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Moher D, Bouter L, Kleinert S, Glasziou P, Sham MH, Barbour V, Coriat AM, Foeger N, Dirnagl U. The Hong Kong principles for assessing researchers: fostering research integrity. PLoS Biology 2020; 18: e3000737
Https://journals.plos.org/plosbiology/article?id=10.1371/journal.pbio.3000737

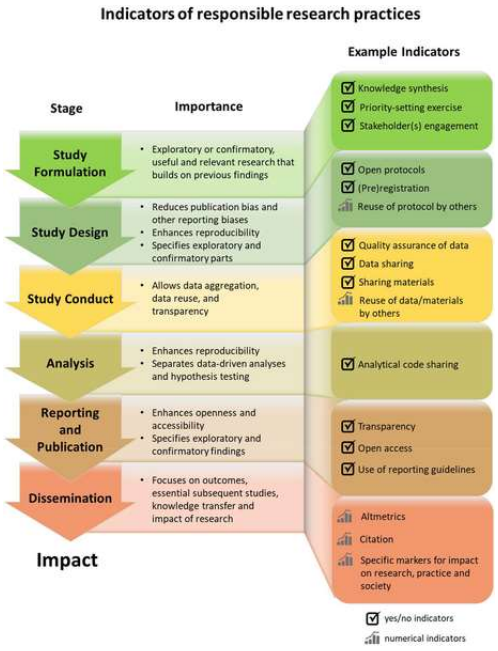
Please endorse the HKPs at www.wcrif.org/guidance/hong-kong-principles
On this webpage you can also find best practices, PP slides and a video on the HKPs.

https://rori.figshare.com/articles/report/The_changing_role_of_funders_in_responsible_research_assessment_progress_obstacles_and_the_way_ahead/13227914

Moher D, Bouter L, Kleinert S, Glasziou P, Sham MH, Barbour V, Coriat AM, Foeger N, Dirnagl U. (2020)

The Hong Kong Principles for assessing researchers: Fostering research integrity

PLOS Biology 18(7): e3000737.



Moher D, Bouter L, Kleinert S, Glasziou P, Sham MH, Barbour V, Coriat AM, Foeger N, Dirnagl U. The Hong Kong principles for assessing researchers: fostering research integrity. PLoS Biology 2020; 18: e3000737 https://journals.plos.org/plosbiology/article?id=10.1371/journal.pbio.3000737

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https://amsterdamresearchclimate.nl/

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Preregistration of study protocol and data analysis plan: https://osf.io/x6t2q/

Publications and preprints:

- Haven TL, Tijdink JK, Martinson BC, Bouter LM. Perceptions of research integrity climate differ between academic ranks and disciplinary fields: results from a survey among academic researchers in Amsterdam. PLoS ONE 2019; 14: e0210599 (https://doi.org/10.1371/journal.pone.0210599).
- Haven TL, de Goede MEE, Oort FJ. Personally perceived publication pressure: revising the Publication Pressure Questionnaire (PPQ) by using work stress models. Research Integrity and Peer Review (2019) 4:7 (https://doi.org/10.1186/s41073-019-0066-6)
- Haven TL, Bouter LM, Smulders YM, Tijdink JK. Perceived publication pressure in Amsterdam: survey of all disciplinary fields and academic ranks. PLoS ONE 2019; 14: e0217931. (https://doi.org/10.1371/journal.pone.0217931)
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Review 2019; 4:25. (https://doi.org/10.1186/s41073-019-0081-7)

- Haven T, Tijdink T, Martinson B, Bouter L, Oort F. Explaining variance in perceived research misbehavior: results from a survey among academic researchers in Amsterdam. MetaArXiv (April 06, 2020). (https://osf.io/preprints/metaarxiv/mhqsd/)

The Wellcome Trust recently published very informative survey results on how researchers perceive their culture: (https://wellcome.ac.uk/sites/default/files/what-researchers-think-about-the-culture-they-work-in.pdf).
The Academic Research Climate in Amsterdam (ARCA) study) explored these perceptions empirically.

Haven TL, Tijdink JK, Martinson BC, Bouter LM. Perceptions of research integrity climate differ between academic ranks and disciplinary fields: results from a survey among academic researchers in Amsterdam. PLoS ONE 2019; 14: e0210599 (https://doi.org/10.1371/journal.pone.0210599).
Haven TL, Bouter LM, Smulders YM, Tijdink JK. Perceived publication pressure in Amsterdam: survey of all disciplinary fields and academic ranks. PLoS ONE 2019; 14: e0217931. (https://doi.org/10.1371/journal.pone.0217931)

See also: https://amsterdamresearchclimate.nl/

Research Integrity Climate

- **junior researchers** perceive this **more negatively** than seniors
- **junior researchers** say that their **supervisors are too little committed** to fostering research integrity
- **PhD students** perceive **more competition and suspicion** among colleagues than associate and full professors
- **natural sciences** researchers have a **more positive perception** of the research integrity climate
- **social sciences** and **humanities** researchers perceive **less fairness** in **publishing** and **acquiring funding**

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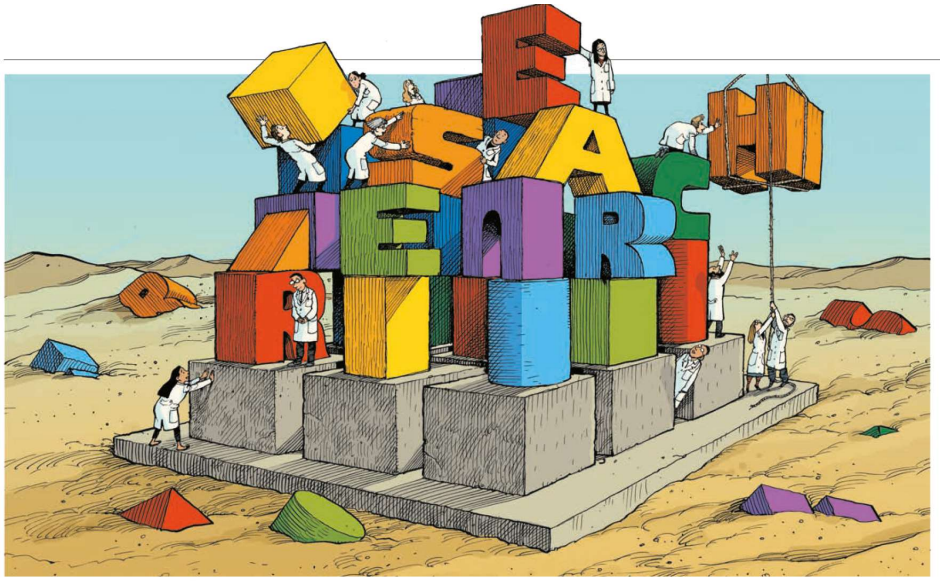
Haven TL, Tijdink JK, Martinson BC, Bouter LM. Perceptions of research integrity climate differ between academic ranks and disciplinary fields: results from a survey among academic researchers in Amsterdam. PLoS ONE 2019; 14: e0210599
https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0210599

See also: http://www.amsterdamresearchclimate.nl/

https://www.vumc.nl/educatie/onze-opleidingen/opleidingsdetail/superb-supervision-junior-mentoring-your-phd-candidate-towards-responsible-conduct-of-research.htm



Open Access

Research integrity: nine ways to move from talk to walk

Nature 2020; 586: 358-60

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Researchers need help from their institutions in avoiding questionable research practices.

Recently we published in Nature what these institutions should do specifically, based on research from a large EU consortium.

Mejlgaard N, Bouter LM, Gaskell G, Kavouras P, Allum N, Bendtsen AK, Charitidis CA, Claesen N, Dierickx K, Domaradzka A, Reyes Elizondo A, Foeger N, Hiney M, Kaltenbrunner W, Labib K, Marušić A, Sørensen MP, Ravn T, Rea Ščepanović R, Tijdink JK, Veltri GA. Research integrity: nine ways to move from talk to walk. Nature 2020; 586: 358-60. (https://www.nature.com/articles/d41586-020-02847-8)

Area	Topic	Action*
Support	Research environment	Ensure fair assessment procedures and prevent hypercompetition and excessive publication pressure.
	Supervision and mentoring	Create clear guidelines for PhD supervision (such as on meeting frequency); set up skills training and mentoring.
	Integrity training	Establish training and confidential counselling for all researchers.
Organization	Ethics structures	Establish review procedures that accommodate different types of research and disciplines.
	Integrity breaches	Formalize procedures that protect both whistle-blowers and those accused of misconduct.
	Data practices and management	Provide training, incentives and infrastructure to curate and share data according to FAIR principles.
Communication	Research collaboration	Establish sound rules for transparent working with industry and international partners.
	Declaration of interests	State conflicts (financial and personal) in research, review and other professional activities.
	Publication and communication	Respect guidelines for authorship and ensure openness and clarity in public engagement.

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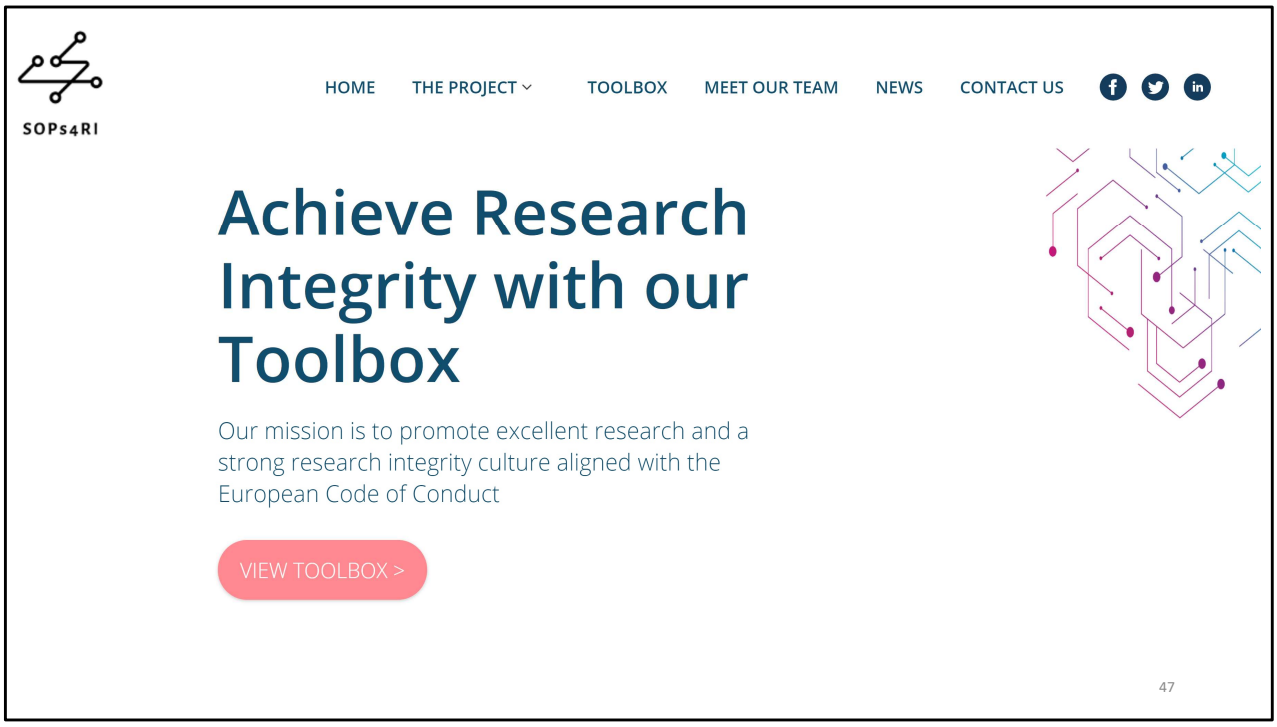
The SOPs4RI toolbox covers 3 areas and 9 topics.

Mejlgaard N, Bouter LM, Gaskell G, Kavouras P, Allum N, Bendtsen AK, Charitidis CA, Claesen N, Dierickx K, Domaradzka A, Reyes Elizondo A, Foeger N, Hiney M, Kaltenbrunner W, Labib K, Marušić A, Sørensen MP, Ravn T, Rea Ščepanović R, Tijdink JK, Veltri GA. Research integrity: nine ways to move from talk to walk. Nature 2020; 586: 358-60. (https://www.nature.com/articles/d41586-020-02847-8)



https://sops4ri.eu/

The Toolbox of this Horizon 2020 funded consortium contains guidelines, standard operating procedures and best practice examples that can inspire research performing organizations (RPOs) and research funding organizations (RFOs) to foster research integrity better.

Summary

Action	Journal	Researcher	Institute
pre-registration or registered report	demand	just do it	reward
open data (FAIR)	demand	comply	reward
preprint	allow	just do it	reward
retraction	act fast	don't resist	inform
self-retraction	allow	if needed	encourage
peer review	request	accept	reward
pre- and post-publication peer review	encourage	just do it	reward
predatory journals	close down	stay away	punish
perverse incentives	ignore	ignore	remove

Even shorter:

- Journals should adopt Transparency and Openness Practices guidelines
- Research Institutes should follow Hong Kong Principles
- Researchers should select journals and research institutes that do so


7th WORLD CONFERENCE ON
RESEARCH INTEGRITY
Cape Town, South Africa
29 May – 1 June 2022
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