

# RCR1, An Introduction

Module 1+2: Integrity, misconduct,  
QRPs, authorship issues

3. October 2024, 09:00 – 12:00  
Holst

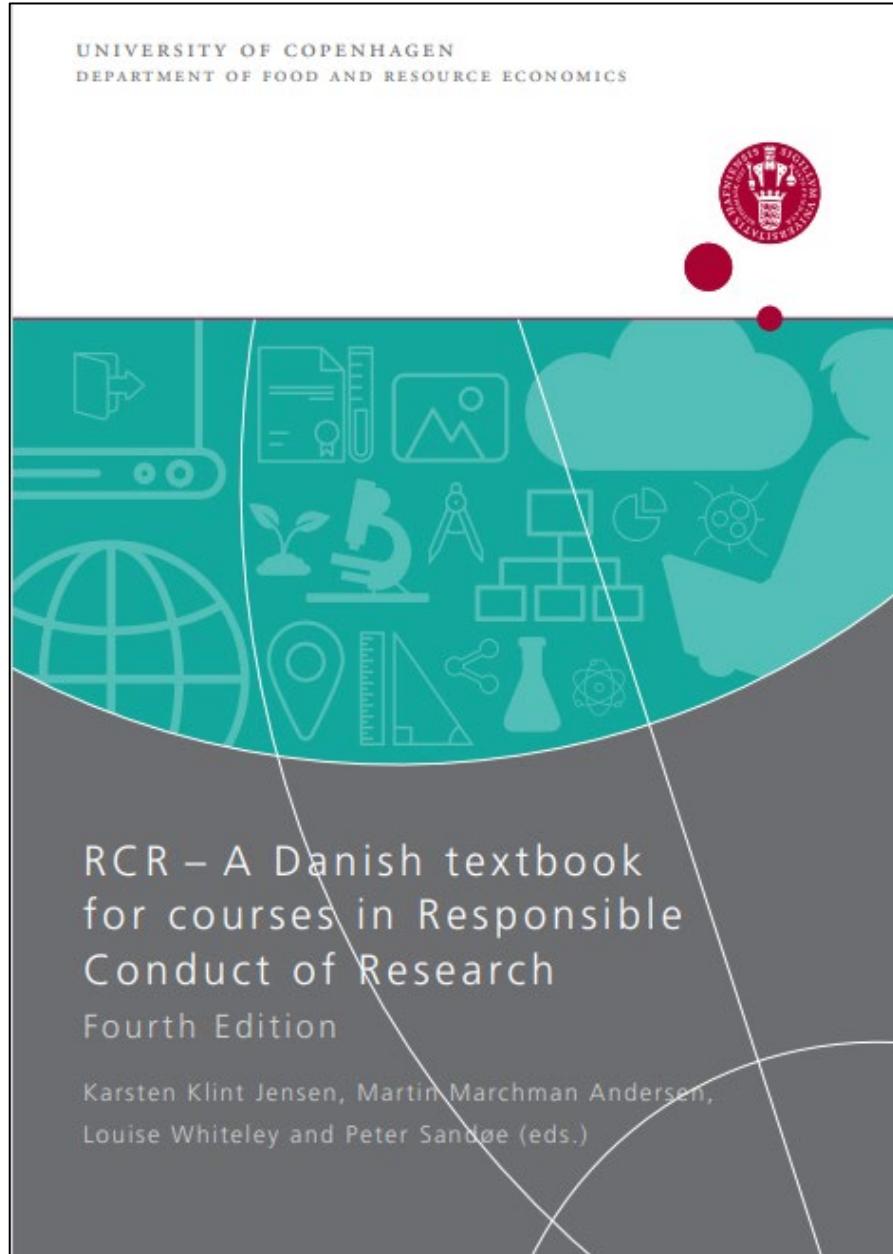
Robin Engelhardt,  
Teaching Associate Professor, UCPH

This file: RCR1\_M1+2\_SUND\_Robin\_20241003.pdf



# Ph.D. Course on Responsible Conduct of Research

Time	Lecture	
<b>3<sup>rd</sup> October '24</b>	Holst Auditorium	
09:00 – 12:00	<b>Module 1</b> , Robin Engelhardt	Overview of the field, scientific misconduct and questionable research practices.
	Break	
	<b>Module 2</b> , Robin Engelhardt	Authorship and the Vancouver Guidelines
12:00 – 12:45	Lunch	
12:45 – 14:15	<b>Module 3</b> , Asger Væring Larsen	Data Management
14:15 – 14:30	Break	
14:30 – 16:00	<b>Module 4</b> , Adam Bencard	Conflicts of interest and communication with the public
16:00 – 16:05	Evaluation of the course	



# A very important document

The curriculum  
[www.ifro.ku.dk/rcr.pdf](http://www.ifro.ku.dk/rcr.pdf)

Read it. You will have to refer  
to it in the final exam

# The rules – how to pass

- You have to be here
- You have to pass the assignment
  - 3 attempts
  - Otherwise you need to take the course again

## **Written assignment in the PhD course “Responsible Conduct of Research 1: An Introduction”**

### **Why a written assignment?**

In order to complete the PhD course “Responsible Conduct of Research 1: An Introduction” (RCR1) and to improve your learning outcome, as a PhD student, you must submit an assignment in which you **describe and discuss 1-2 RCR concepts or areas presented in the course curriculum in relation to your own research project.**

### **List of possible RCR concepts or areas to address (not exhaustive):**

- Authorship conflicts about e.g. co-authorship
- Inappropriate handling of data
- Academic freedom in relation to publication of results
- Communication to a wider public
- Sharing data and/or results with other researchers
- Handling of potential conflicts of interest
- Any other relevant RCR issue

## Disclosure of Conflicts of Interest:

I have no relevant conflicts of interest. However, any judgments or opinions about the material presented here are inevitably linked to my personal perspectives and are therefore approachable for criticism and debate.

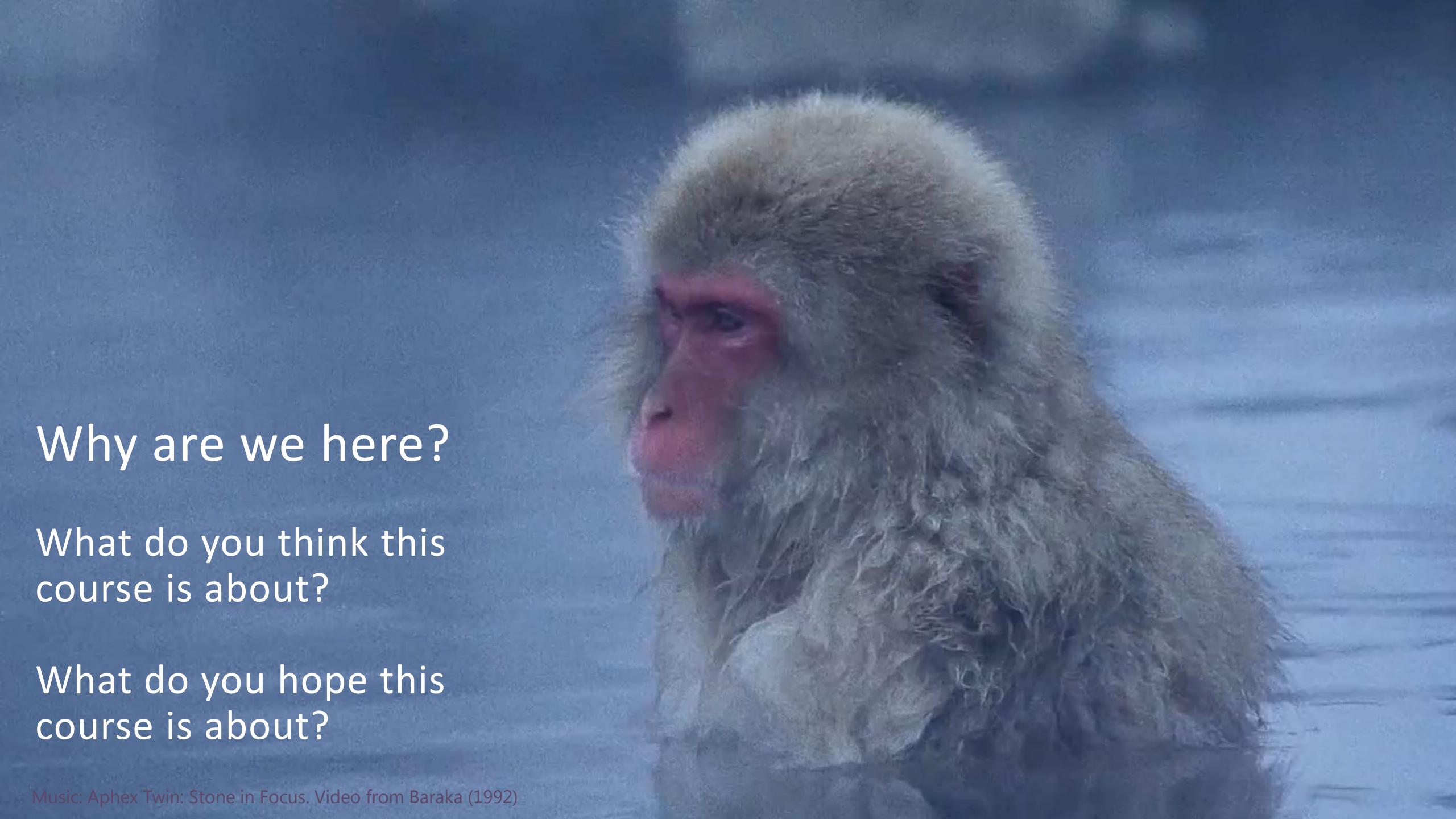
## Acknowledgements:

Thanks to Mickey Gjerris, Mads Paludan Goddiksen, Martin Marchman Andersen, Brian Nosek and Peter Sandøe for slides, taglines, and example cases.

# Outline for module 1

- Purpose of this course – discussion
- Rules, norms and grey areas
- Example: the publish or perish culture
- Definition of Research Integrity
- Research Misconduct: FFP
- Questionable Research Practices + exercise
- Deep dive: How bad can it get?
- Institutional handling of RM and QRP
- Cases for discussion





Why are we here?

What do you think this course is about?

What do you hope this course is about?

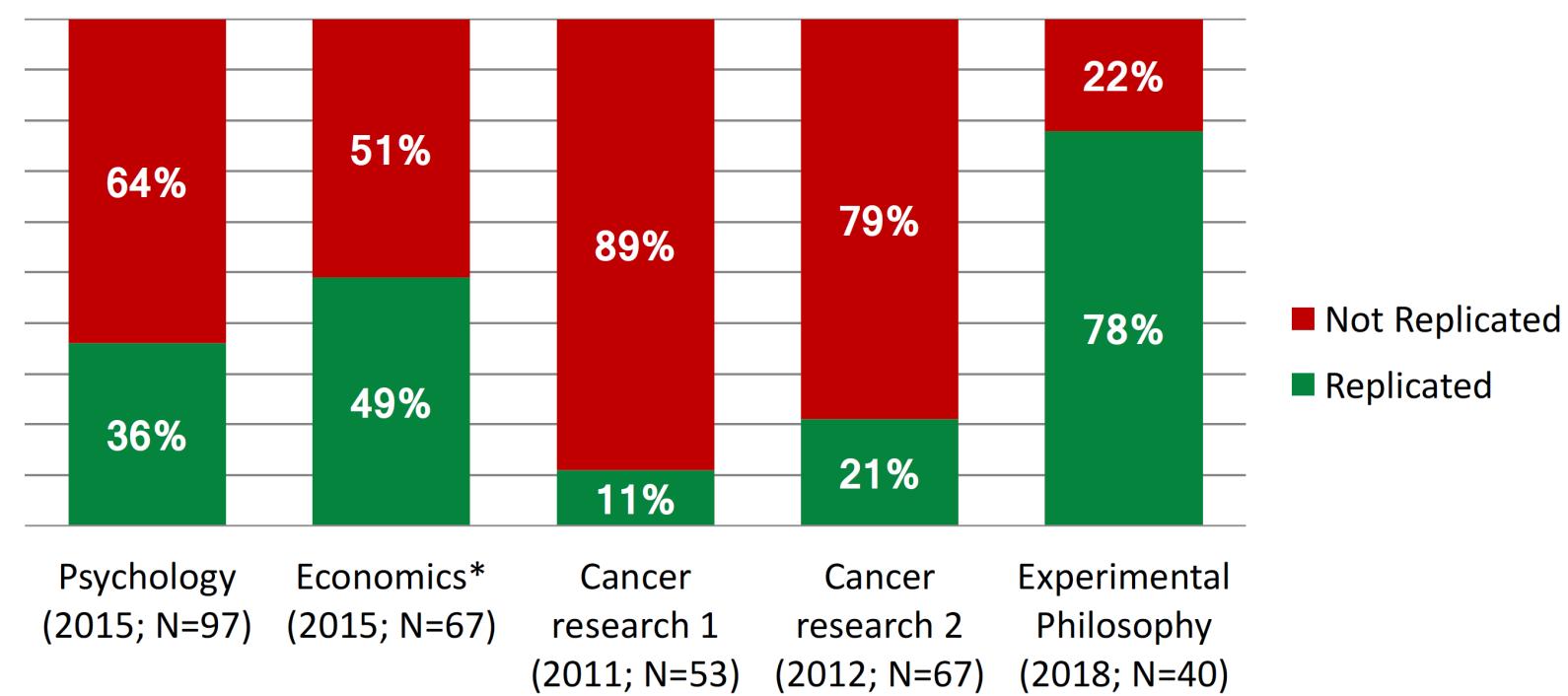


# Why do I have to take this course?

The easy answer:



The more interesting answer:



Open Science Collaboration (2015); Chang & Li (2015); Begley & Ellis (2012); Prinz et al. (2011); Cova et al. (2018)

# Personal Success, Proper Conduct or Research Integrity?

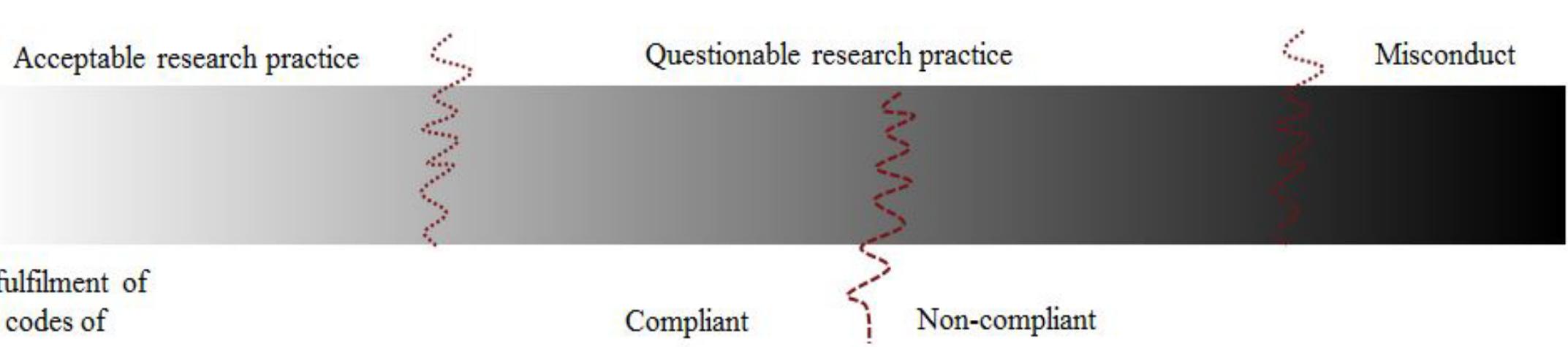
	<b>Self-regard</b>	<b>Conformity</b>	<b>Research Integrity</b>
<b>Focus</b>	Self	Significant others	Ethical values: honesty, clarity, rigor, responsibility, dignity and respect to all
<b>Motive</b>	Satisfy own desires	Show praise-worthiness and seek praise by peers	To live by the ethical values because you agree with them and identify with them.
<b>Method</b>	Avoid punishment	Following the rules and the norms	To strive for a common culture of honesty, transparency, rigor, dignity, etc.

Good practice, allowed

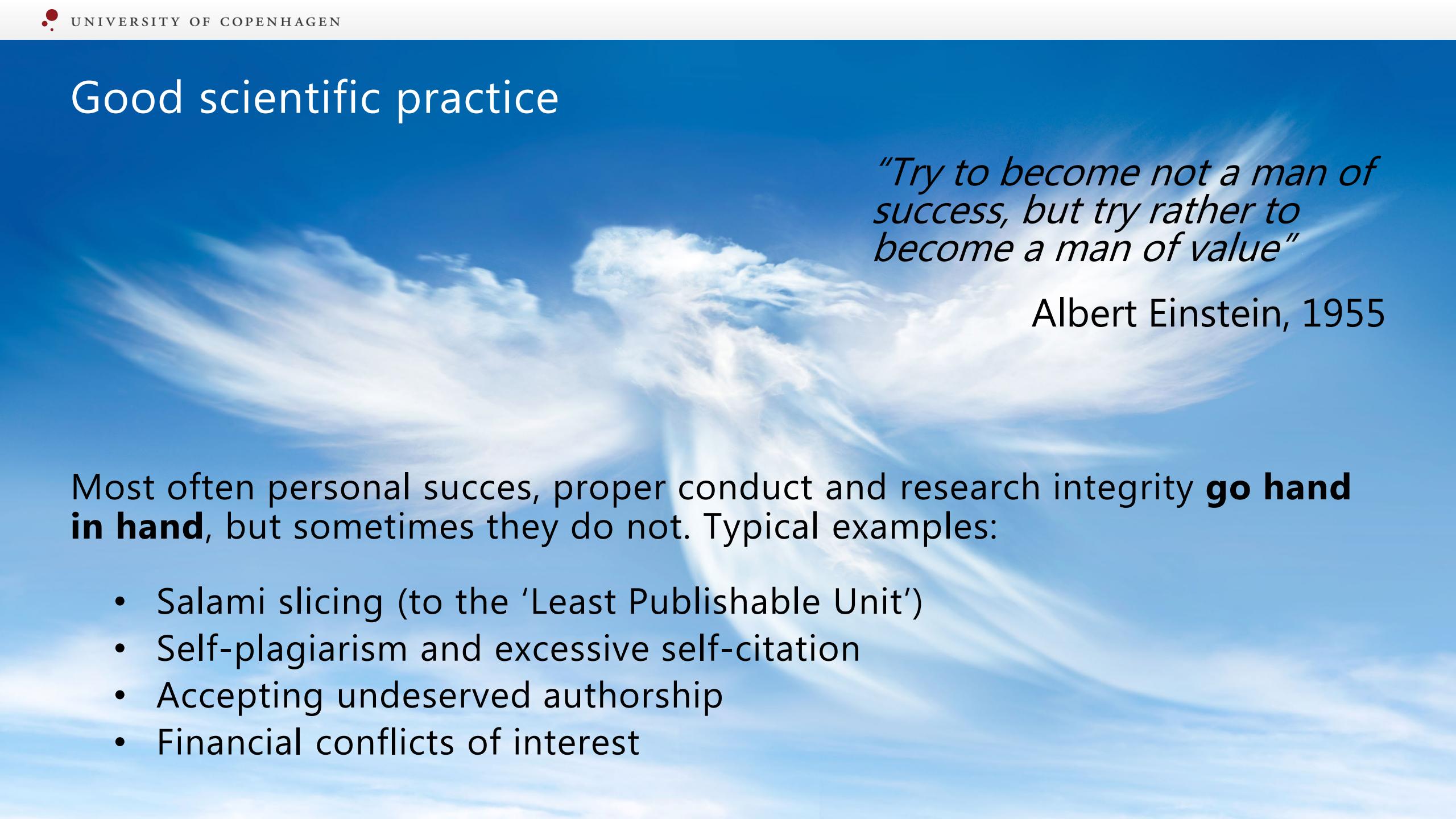
Bad practice, not allowed

# Personal Success, Proper Conduct or Research Integrity?

	<b>Self-regard</b>	<b>Conformity</b>	<b>Research Integrity</b>
<b>Focus</b>	Self	Significant others	Ethical values: honesty, clarity, rigor, responsibility, dignity and respect to all
<b>Motive</b>	Satisfy own desires	Show praise-worthiness and seek praise by peers	To live by the ethical values because you agree with them and identify with them.
<b>Method</b>	Avoid punishment	Following the rules and the norms	To strive for a common culture of honesty, transparency, rigor, dignity, etc.



# Good scientific practice



*"Try to become not a man of success, but try rather to become a man of value"*

Albert Einstein, 1955

Most often personal succes, proper conduct and research integrity **go hand in hand**, but sometimes they do not. Typical examples:

- Salami slicing (to the 'Least Publishable Unit')
- Self-plagiarism and excessive self-citation
- Accepting undeserved authorship
- Financial conflicts of interest

# Research integrity is a huge task and will take years to achieve

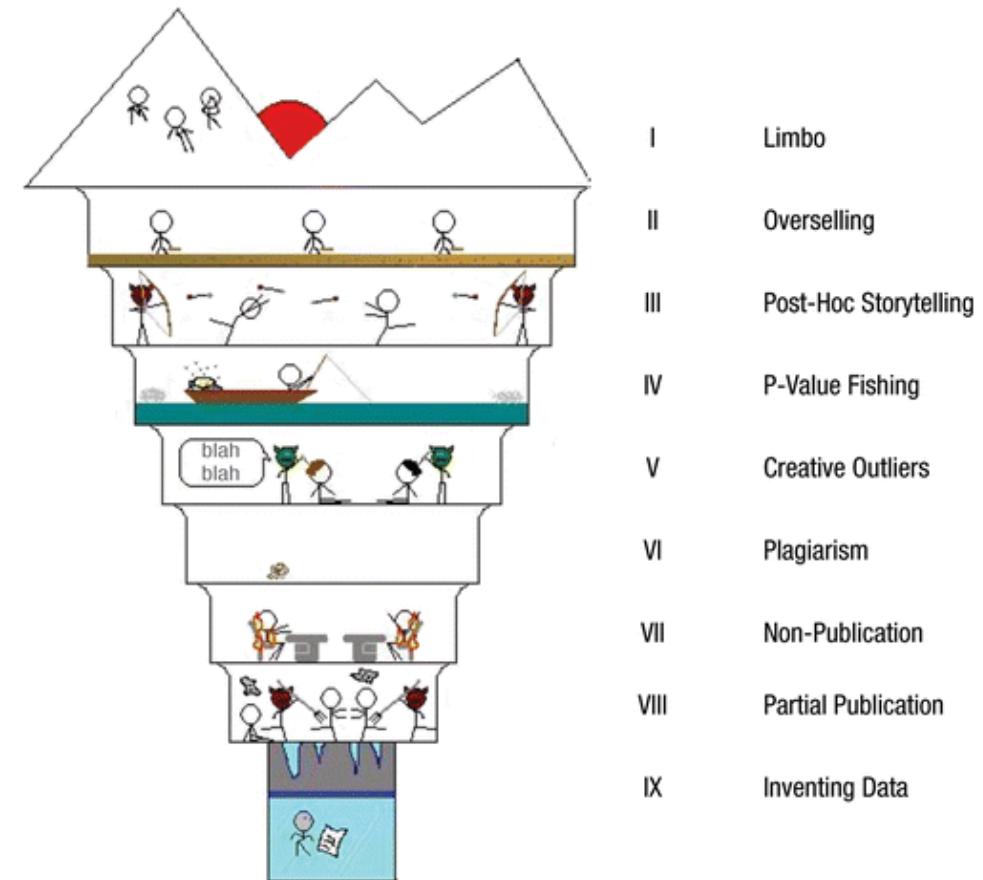
- The aim of this course is to help you to **calibrate your moral compass** and to get you to **internalize widely accepted scientific values** and to learn to express them wisely in complex, unique situations.
- Most of the learning will happen **after the official training is over**: In the daily practice in labs, and in your collaboration with colleagues.
- However, the functioning of a good moral compass depends not only on individual virtuousness. It also (mainly?) depends on other **external and internal forces that work against research integrity** such as:
  - The local research climate and the norms at the university and/or in the country
  - Other “silent” incentives in academia such as 1) external funder expectations and 2) publication biases (mainly due to our ‘publish or perish’ culture)

# Publication bias

On the one hand we are expected to uphold the norms of integrity, but on the other hand: We NEED to raise money and publish papers.

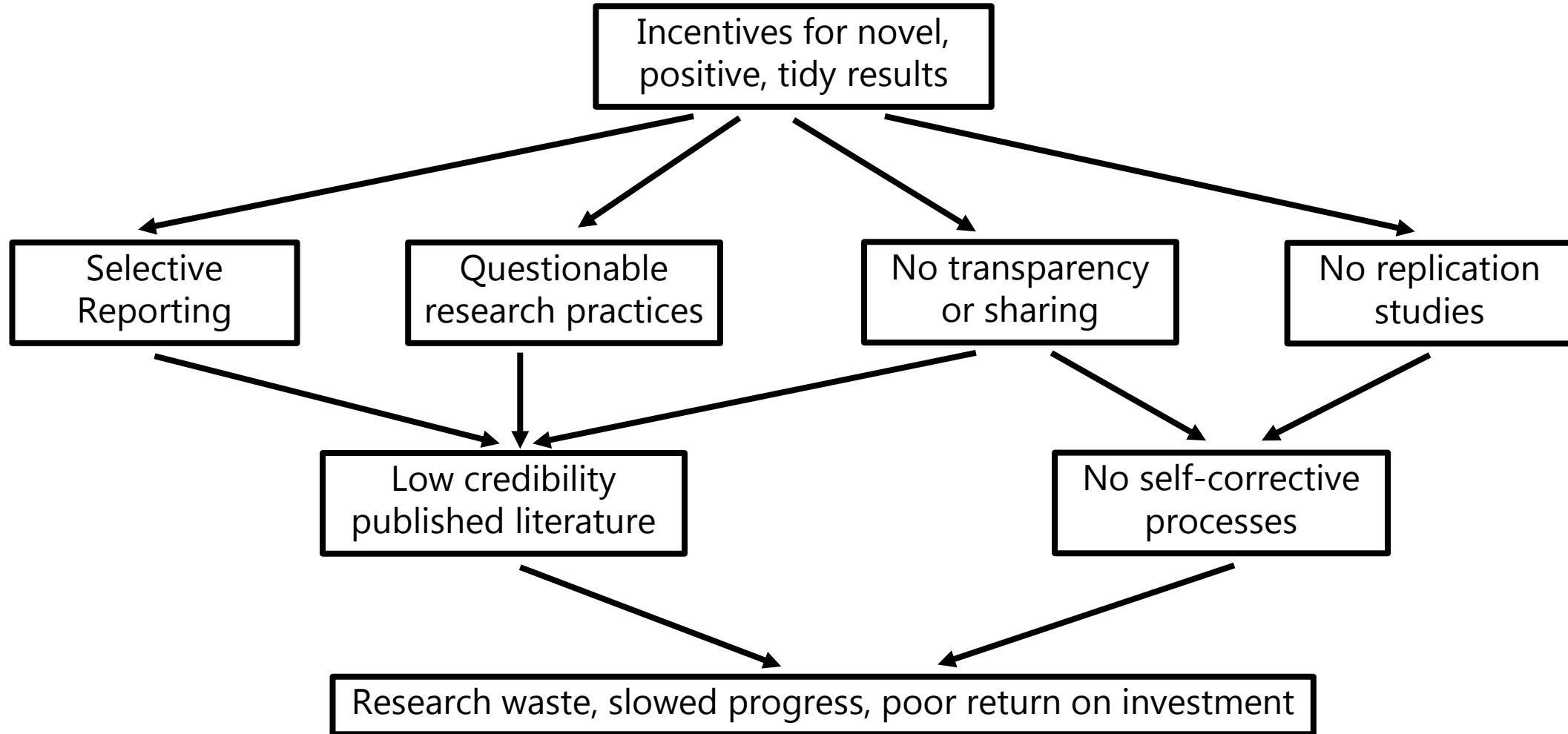
**Ergo: Incentives for individual success are focused on getting it published, not on getting it right.**

Thus, there is a misalignment between what is good for science, and what is good for us as scientists employed at universities.



Source: Neuroskeptic, November 9, 2010: <http://neuroskeptic.blogspot.com/2010/11/9-circles-of-scientific-hell.html>)

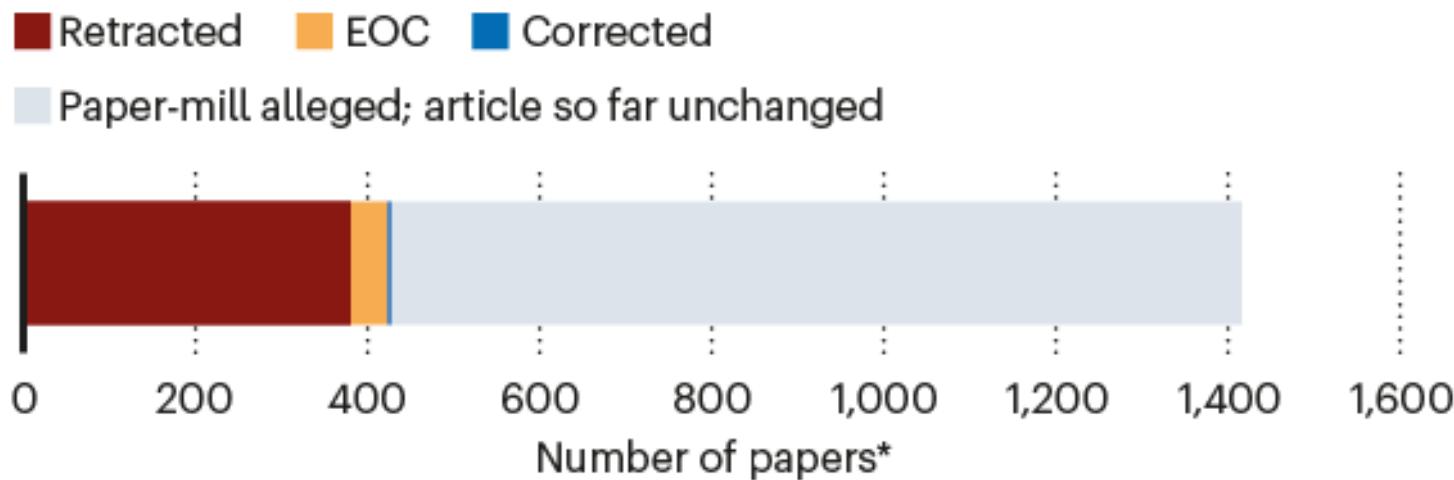
# Publish or Perish



# Industrialized Cheating / Paper Mills

## FRAUD ALLEGATIONS

Since January 2020, independent sleuths and journals have flagged more than 1,000 published papers potentially linked to paper mills — companies that produce fraudulent articles. Hundreds of these papers have been retracted, corrected or labelled with an expression of concern (EOC).



\*All papers include authors from Chinese hospitals. Another 197 articles (at least) with authors at Chinese hospitals have been retracted since January 2020. These are not ones that have made it onto lists of potential publication-mill products. Data collated by Nature up to 18 March.

©nature

A **paper mill** is a "profit oriented, unofficial and potentially illegal organisation that produces and sells fraudulent manuscripts that resemble genuine research. According to *Nature* (2021), thousands of papers in academic journals have been traced to paper mills from China, Iran and Russia, and some journals are revamping their review processes."

Sources: <https://www.nature.com/articles/d41586-021-00733-5>) and Wikipedia, [https://en.wikipedia.org/wiki/Research\\_paper\\_mill](https://en.wikipedia.org/wiki/Research_paper_mill)

# Co-authorship for sale

## Article for sale

#73 **Июнь 2019 выход журната** Тема доступна только клиентам, которые оплатили

Набор в журнал до 22-02-2019  
126000 руб 3 чел. (авторов) в этой статье

Соавтор 1-й 2-й 3-й 3 coauthors

рубли 49000 42000 35000 0 0 0  
№ 73.1 № 73.2 № 73.3

В статье рассмотрены такие вопросы: Cardiovascular disease risk factors assessment in rural people  
Оценка факторов риска сердечно-сосудистых заболеваний у сельских жителей

Дополнительно:  
2-й - дог 943  
3-й - дог 939

Название журнала доступно только клиентам, которые оплатили Venezuela  
Q3 Scopus SJR=0,158

## Article in the journal indexed by Scopus

1 Cardiovascular risk assessment among rural population in Russian Federation: A case study of Irkutsk region Glushkov, S., Varavko, Y., Maksikova, T. 2019 Revista Latinoamericana de Hipertension 14(4), c. 212-219

## Profile of the journal in Scimago

**Revista Latinoamericana de Hipertension** 7

Country Venezuela - SCIMAGO INSTITUTIONS RANKINGS

Subject Area and Category Medicine  
Cardiology and Cardiovascular Medicine  
Internal Medicine

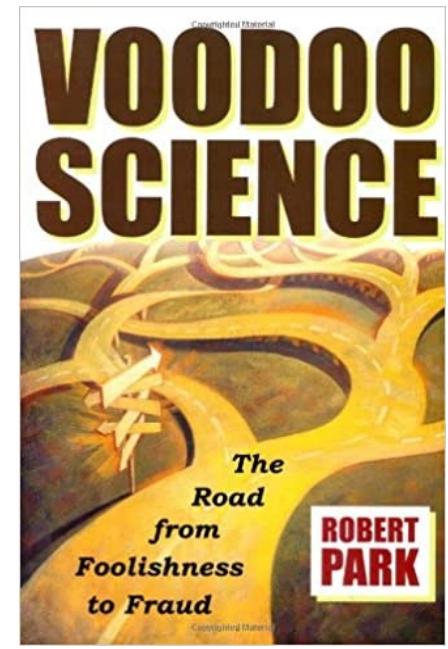
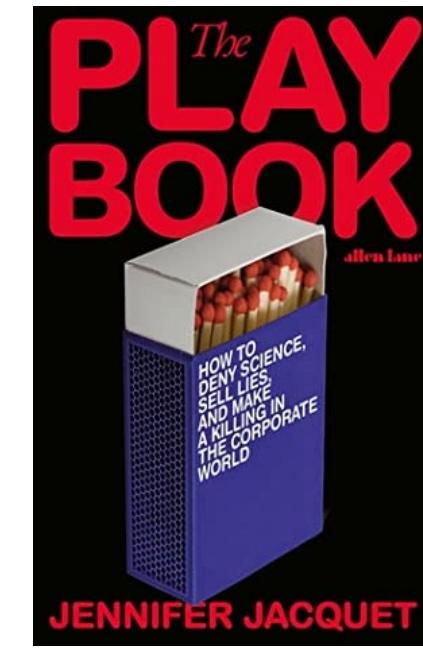
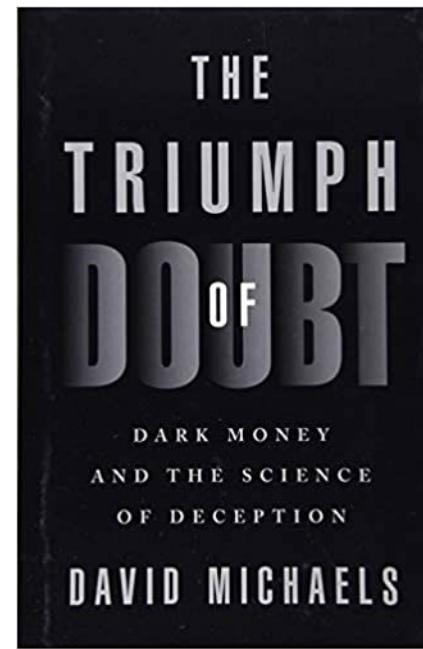
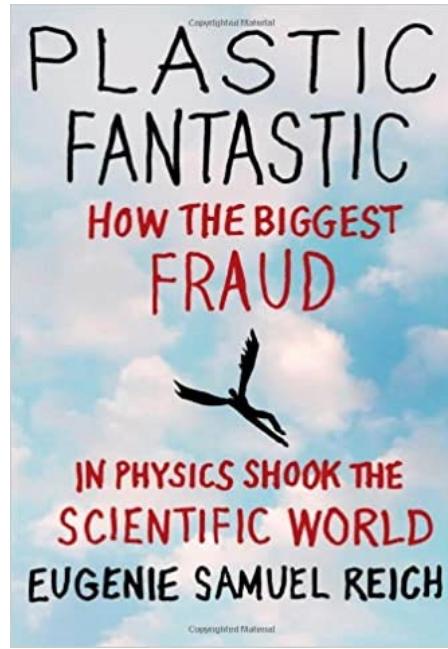
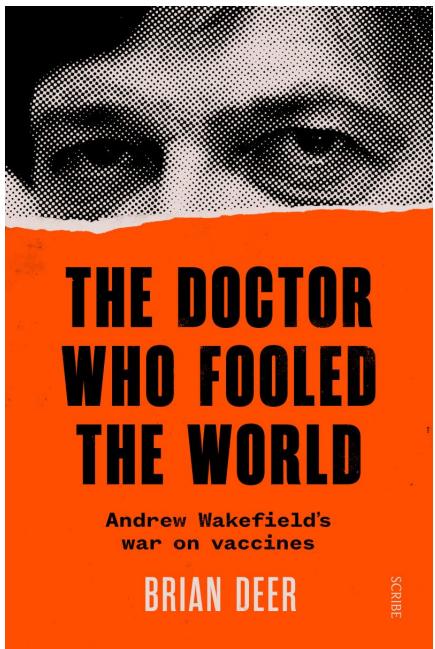
Publisher Sociedad Latinoamericana de Hipertension

H Index

"The website 123mi.ru by "International publisher" in March 2019 with the title "Cardiovascular disease risk factors assessment in rural people" offered three co-authorships available for sale. The ... article was to be submitted to a Venezuelan journal and indexed in Scopus. [...] a search in Scopus yields an almost exact match: the article was published in the Venezuelan journal *Revista Latinoamericana de Hipertension* in 2019 and is credited to three Russian researchers [...]. Prices for "co-authorship" range from \$1,300 to \$6,200 per article."

Source:

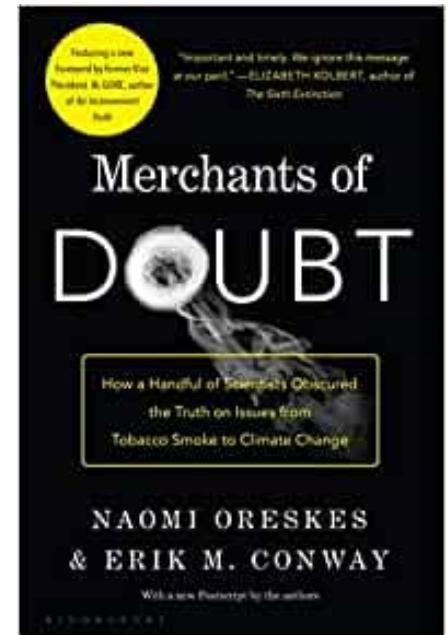
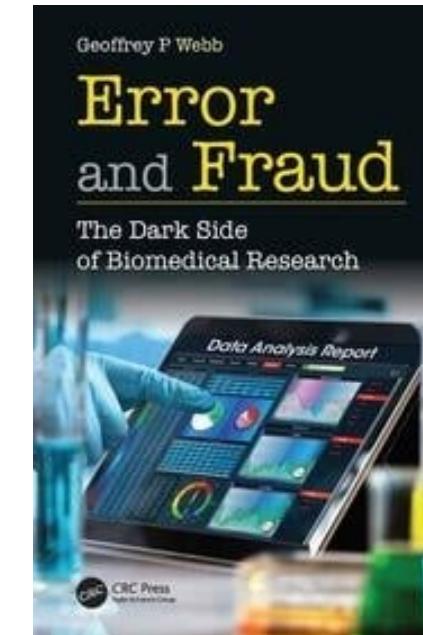
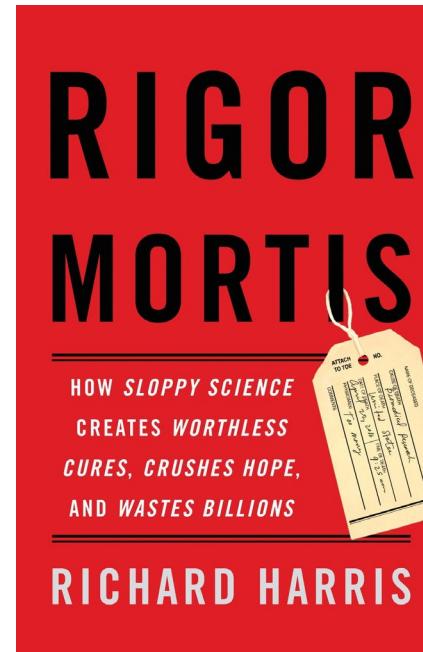
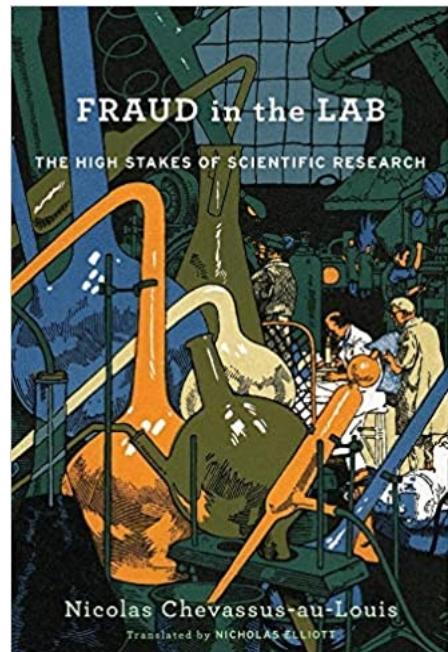
<https://scholarlykitchen.sspnet.org/2021/02/04/guest-post-unethical-practices-in-research-and-publishing-evidence-from-russia/>



**Science Fictions**  
Stuart Ritchie



Exposing Fraud,  
Bias, Negligence  
and Hype in Science

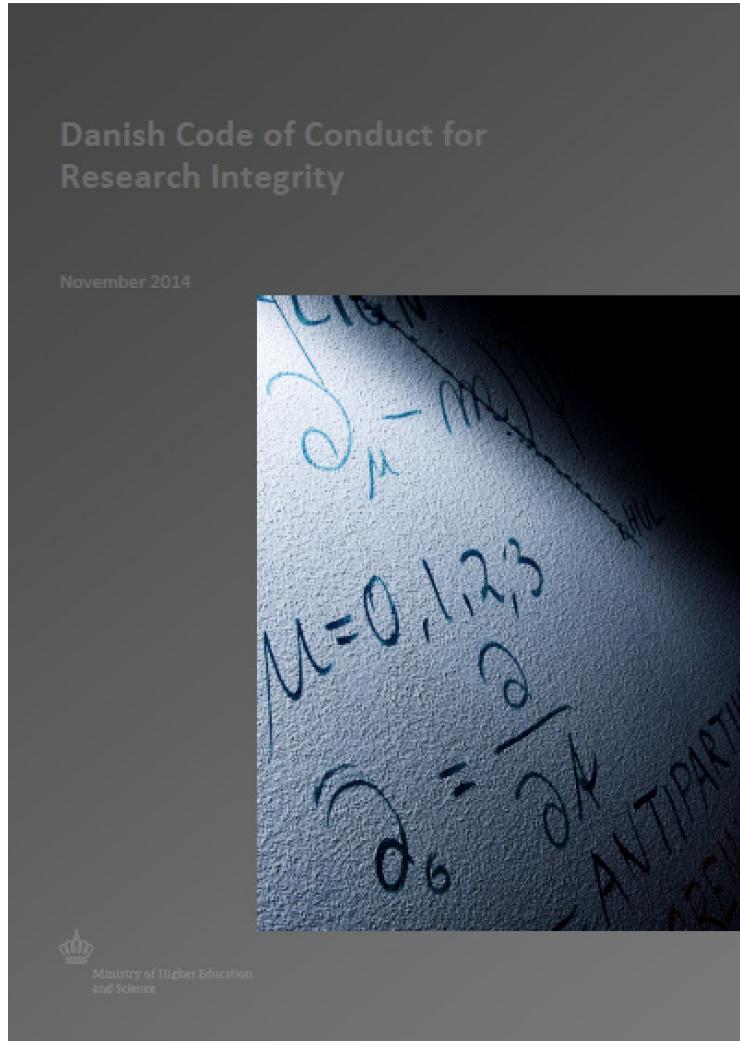


# Short break

# Research Integrity

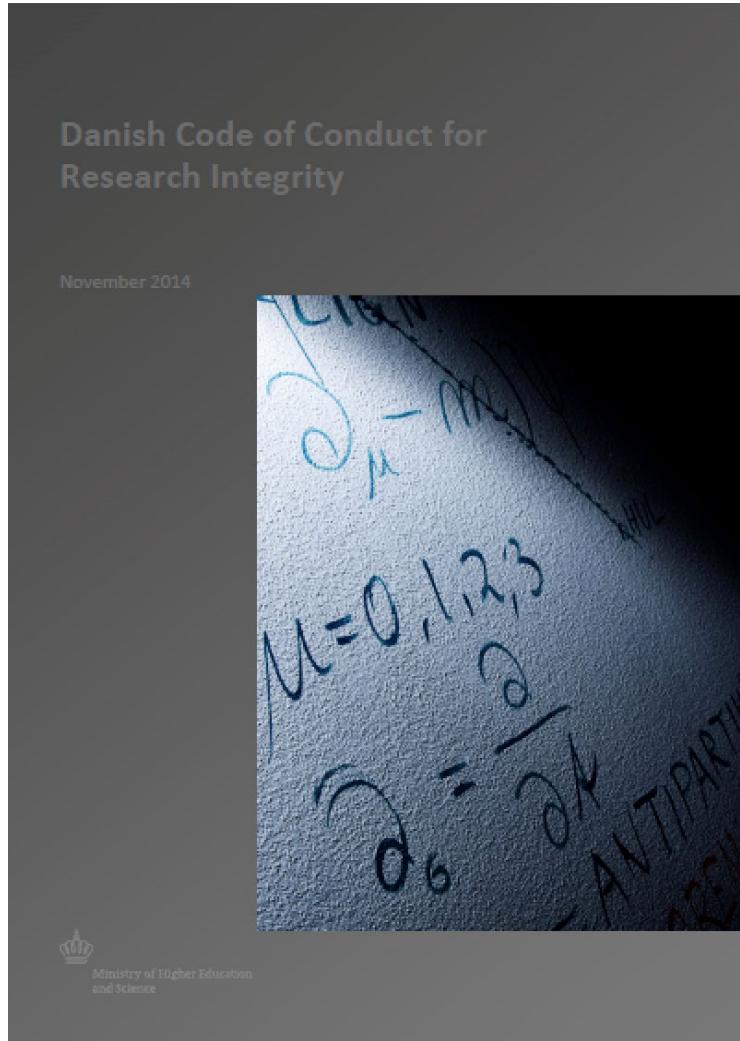
---

# The Danish Code of Conduct for Research Integrity (2014)



- Aims to support a common understanding and common culture of research integrity in Denmark.
- Not a legally binding document in itself.
- Addresses six basic standards for conducting research:
  - Research planning and conduct
  - Data management
  - Publication and communication
  - Authorship
  - Collaborative research
  - Conflicts of interest

# The Danish Code of Conduct for Research Integrity (2014)



Characterizes research integrity in terms of three features:

- **Honesty**
- **Transparency**
- **Accountability**

These features should “pervade all phases of research”.

# Discussion (3-4 persons, ~10 mins)

Please re-read the “Principles and Responsibilities” in box 8 (p. 23) of the course book.

Then discuss whether adhering to some of the responsibilities could cause problems or conflicts at your workplace?



# Research Misconduct

---

# Act on Research Misconduct etc. (2017)

## Act on Research Misconduct etc.

We Margrethe the Second, by the Grace of God Queen of Denmark hereby witness:

Folketinget (the Danish Parliament) has adopted and We with Our consent hereby enact the following Act:

### **Part 1**

#### *Purpose and scope*

**1.-**(1) The purpose of this Act is to enhance credibility and integrity in Danish research.

**(2)** This Act sets out the framework for management of:

- 1) Research misconduct;
- 2) Questionable research practices.

# Definition of research misconduct

“Fabrication, falsification, and plagiarism committed wilfully or gross negligent in planning, performing, or reporting of research.”

- **Fabrication:** Undisclosed construction of data or substitution with fictitious data.
- **Falsification:** Manipulation of research material, equipment or process as well as changing or omitting data or results making the research misleading.
- **Plagiarism:** Appropriation of others' ideas, processes, results, texts or specific terms without rightful crediting.

# Research misconduct in the media



**WIKIPEDIA**  
The Free Encyclopedia

Main page  
Contents  
Current events  
Random article  
About Wikipedia  
Contact us  
Donate

Contribute  
Help  
Learn to edit  
Community portal  
Recent changes  
Upload file

Not logged in Talk Contributions Create account Log in

Article Talk

Read Edit View history

Search Wikipedia

## List of scientific misconduct incidents

From Wikipedia, the free encyclopedia

Scientific misconduct is the violation of the standard codes of scholarly conduct and ethical behavior in the publication of professional scientific research. A *Lancet* review on *Handling of Scientific Misconduct in Scandinavian countries* gave examples of policy definitions. In Denmark, scientific misconduct is defined as "intention[al] or gross negligence leading to fabrication of the scientific message or a false credit or emphasis given to a scientist", and in Sweden as "intention[al] distortion of the research process by fabrication of data, text, hypothesis, or methods from another researcher's manuscript form or publication; or distortion of the research process in other ways."<sup>[1][2]</sup>

A 2009 systematic review and meta-analysis of survey data found that about 2% of scientists admitted to falsifying, fabricating, or modifying data at least once.<sup>[3]</sup>

Field	#
Biomedical sciences	67
Chemistry	7
Computer science and mathematics	2
Philosophy	4
Physics, engineering	7
Plant biology	2
Social sciences	8
Other	6



Plagiarism → module 2

# Questionable Research Practice (QRP)

---

# Definition of questionable research practice

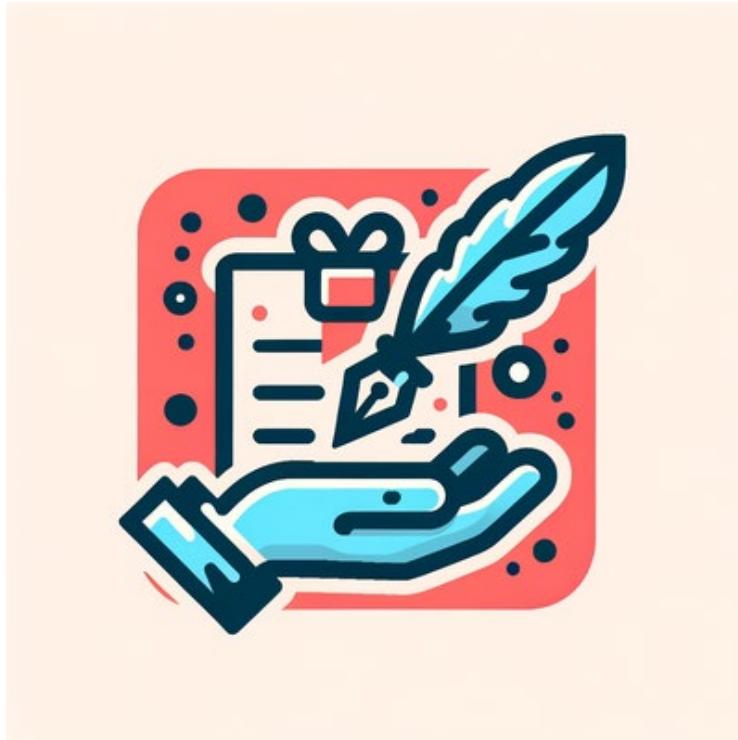
**"Breaches of current standards** on responsible conduct of research, including those of the Danish code of conduct, and other applicable institutional, national and international practices and guidelines on research integrity".

There are two kinds:

- Deviations from good practice.
- Fabrication, falsification or plagiarism without the intent to do so.

# Common types of QRPs and their prevalence

# Guest authorships, ghost authorships, conflicts of interest



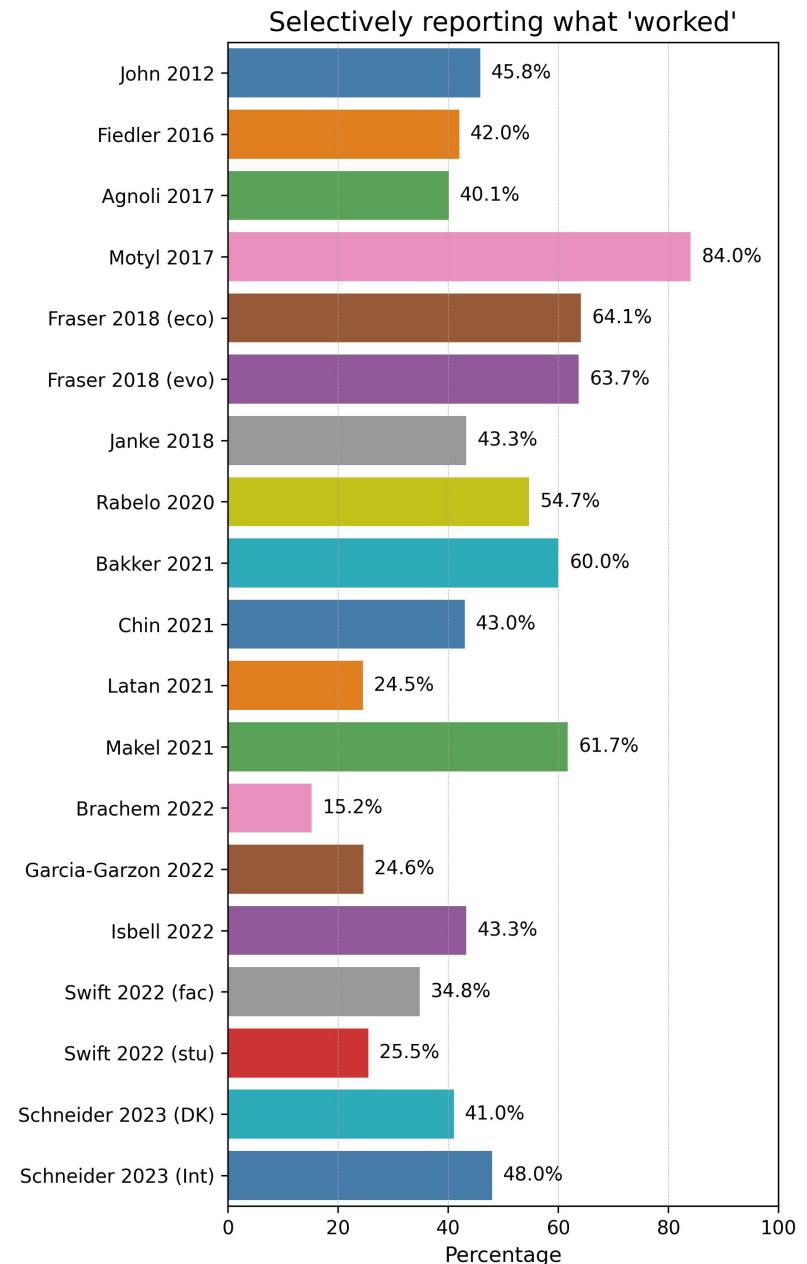
# Salami slicing

- **Salami slicing** is considered a type of questionable research misconduct. It refers to the splitting of data derived from a single research project into multiple smaller “publishable” units or “slices” of articles.
- Salami slicing **artificially inflates** the researchers' publication record while potentially obscuring the broader context and significance of the research.
- **Potential detrimental consequences:** duplication of data (bad for meta-studies); misrepresentation of results; fragmented understanding, low value.



# Selectively reporting 'what worked'

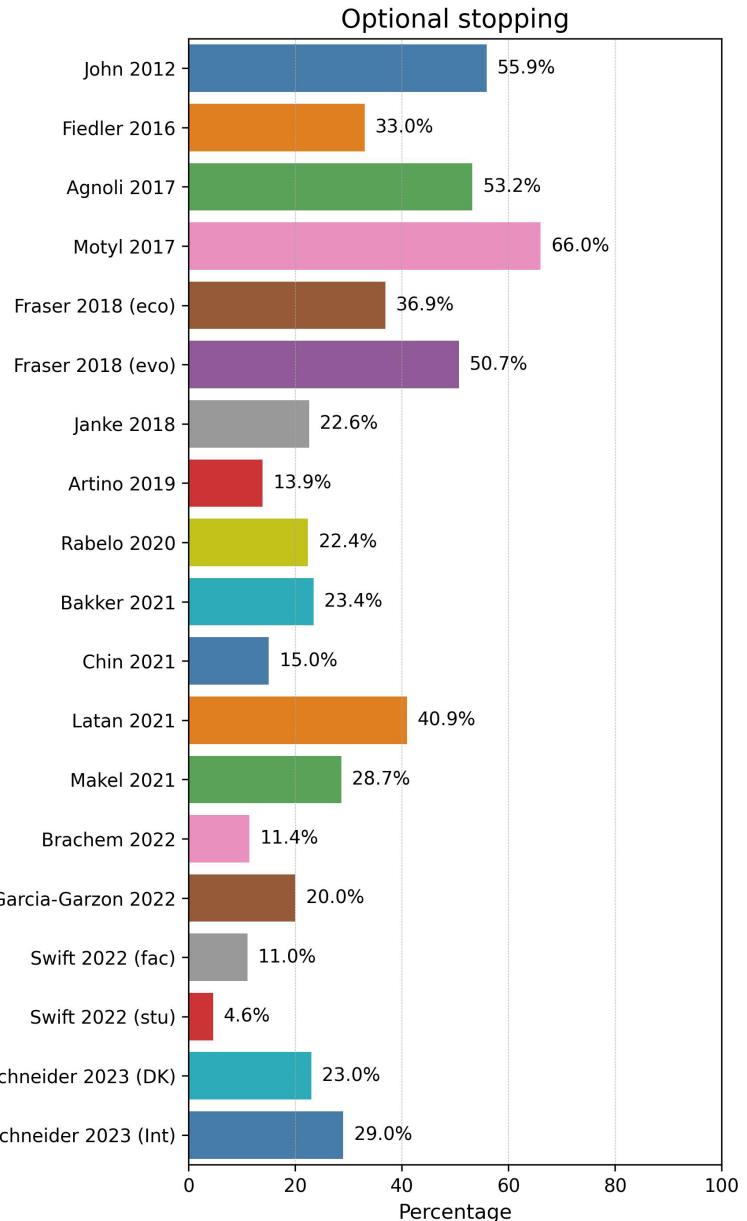
- Selectively reporting what worked – or “**cherry picking**” – is an umbrella term for different kinds of **p-hacking** that can be deemed as being misconduct or QRP, depending on its severity.
- **Examples** are: Not reporting studies or variables that failed to reach statistical significance, selective reporting of a hypothesis, excluding non-statistically significant results.
- **Detrimental consequences:** misrepresentation of results; high false positive rates; faulty conclusions; misguided actions; low trust in science.



Adapted from Lakens, 2024

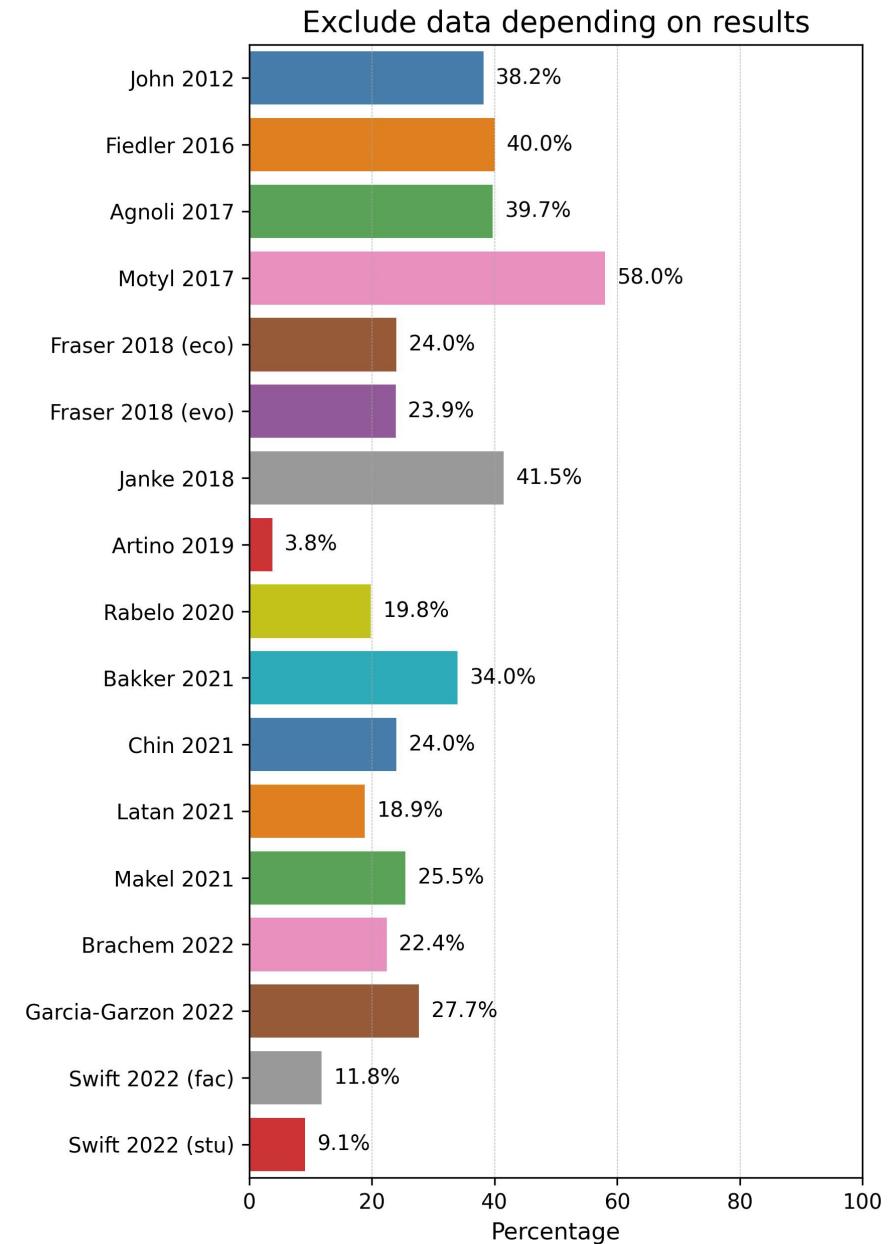
# Optional stopping

- **Optional stopping** is the questionable practice of analyzing data throughout the data collection phase and stopping when statistical significance for the desired outcome is reached. If not, more data is collected.
- **Examples:** Extra participants are sampled until statistical significance is reached.
- **Detrimental consequences:** misrepresentation of results; high false positive rates; faulty conclusions; misguided actions; low trust in science.



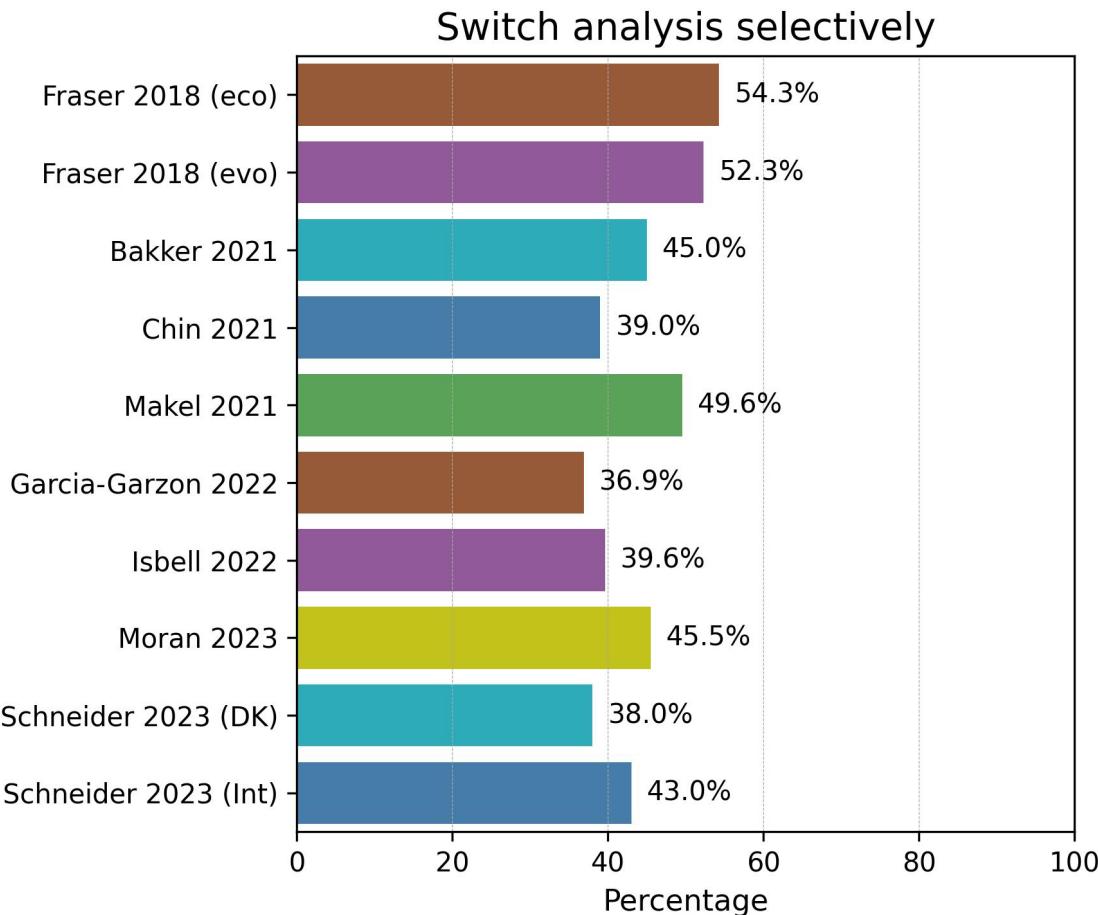
# Excluding data

- **Excluding data dependent on result** is a type QRP which can be deemed as misconduct if it falsifies data in order to change the conclusion substantially.
- **Examples:** Excluding data after looking at the impact of doing so; Excluding valid data points as “**outliers**” without good reasons; Reporting only a subsets of conditions, measures, or covariates.
- **Detrimental consequences:** misrepresentation of results; high false positive rates; faulty conclusions; misguided actions; low trust in science.



# Switching data analysis

- **Switching data analysis** selectively demonstrates statistical acumen and ethical flexibility. The purpose is to provide a more favorable outcome after the initial analysis failed to reach statistical significance or some other desired statistical threshold.
- **Examples:** Maybe a t-test doesn't show the desired result? Try the Wilcoxon rank-sum test. Or maybe bootstrapping?
- **Detrimental consequences:** Over-estimation of significant effects; inappropriate interpretations; distorted scientific findings; mislead readers; etc..



Adapted from Lakens, 2024

## Same Data, Different Conclusions

Twenty-nine research teams were given the same set of soccer data and asked to determine if referees are more likely to give red cards to dark-skinned players. Each team used a different statistical method, and each found a different relationship between skin color and red cards.

Referees are  
**three times as**  
**likely** to give red  
cards to  
dark-skinned  
players

Twice as likely

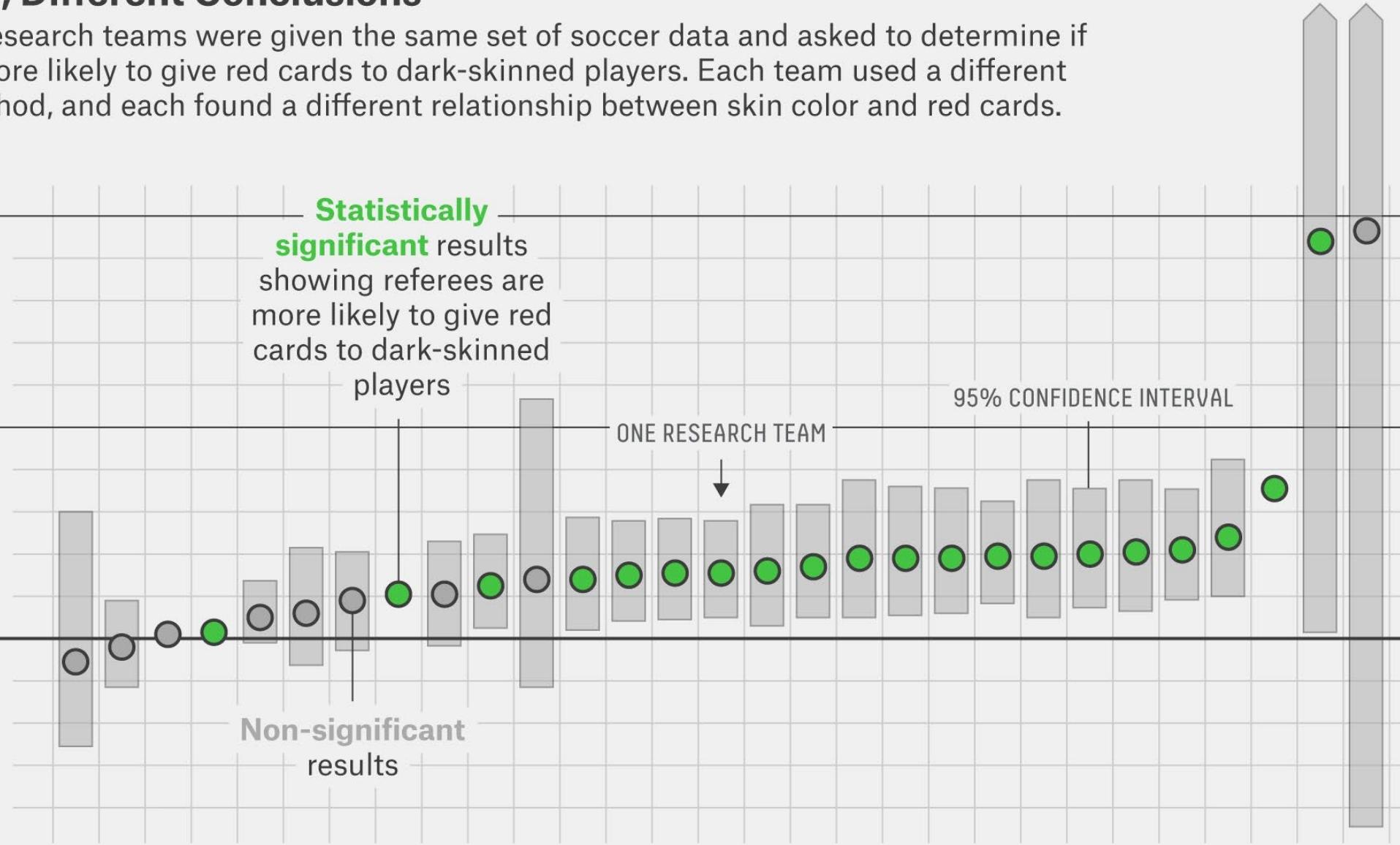
Equally likely

**Statistically**  
**significant** results  
showing referees are  
more likely to give red  
cards to dark-skinned  
players

ONE RESEARCH TEAM

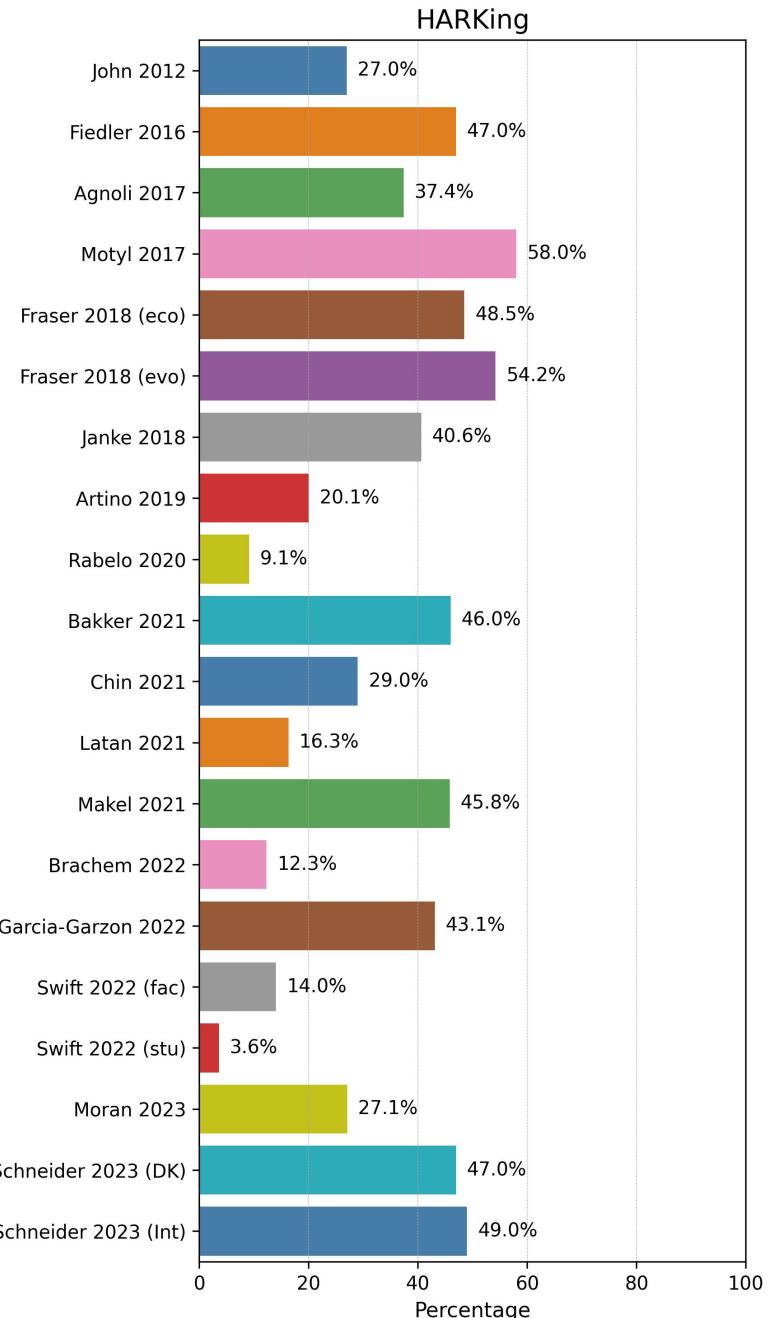
95% CONFIDENCE INTERVAL

Non-significant  
results



# HARKing

- **HARKing** stands for “Hypothesizing After the Results are Known”.
- **Examples:** 1) Reporting of an unexpected finding as having been predicted from the start; 2) Failing to report an initial hypothesis that is unsupported by the final results. 3) Finding a hypothesis from a post hoc literature search and then reporting it as a priori hypothesis.
- **Detrimental consequences:** It prevents the research community from identifying already falsified hypotheses; tends to bias results, and ultimately deceives readers.



Adapted from Lakens, 2024

# Exercise

## Go to:

<https://all-our-ideas.citizens.is/group/803/>

[About this project](#)[Vote](#)[Results](#)[AI-generated analysis](#)

## What is the most severe form of research misbehavior?

Unreported conflicts of interest



or

Selectively reporting performed analyses (reporting a set of results as the complete set of analyses when other analyses were also conducted...)

[Explain](#)[Skip](#)[Add your own answer](#)

0 votes of 30 Target (Level 1)

How bad can it get?

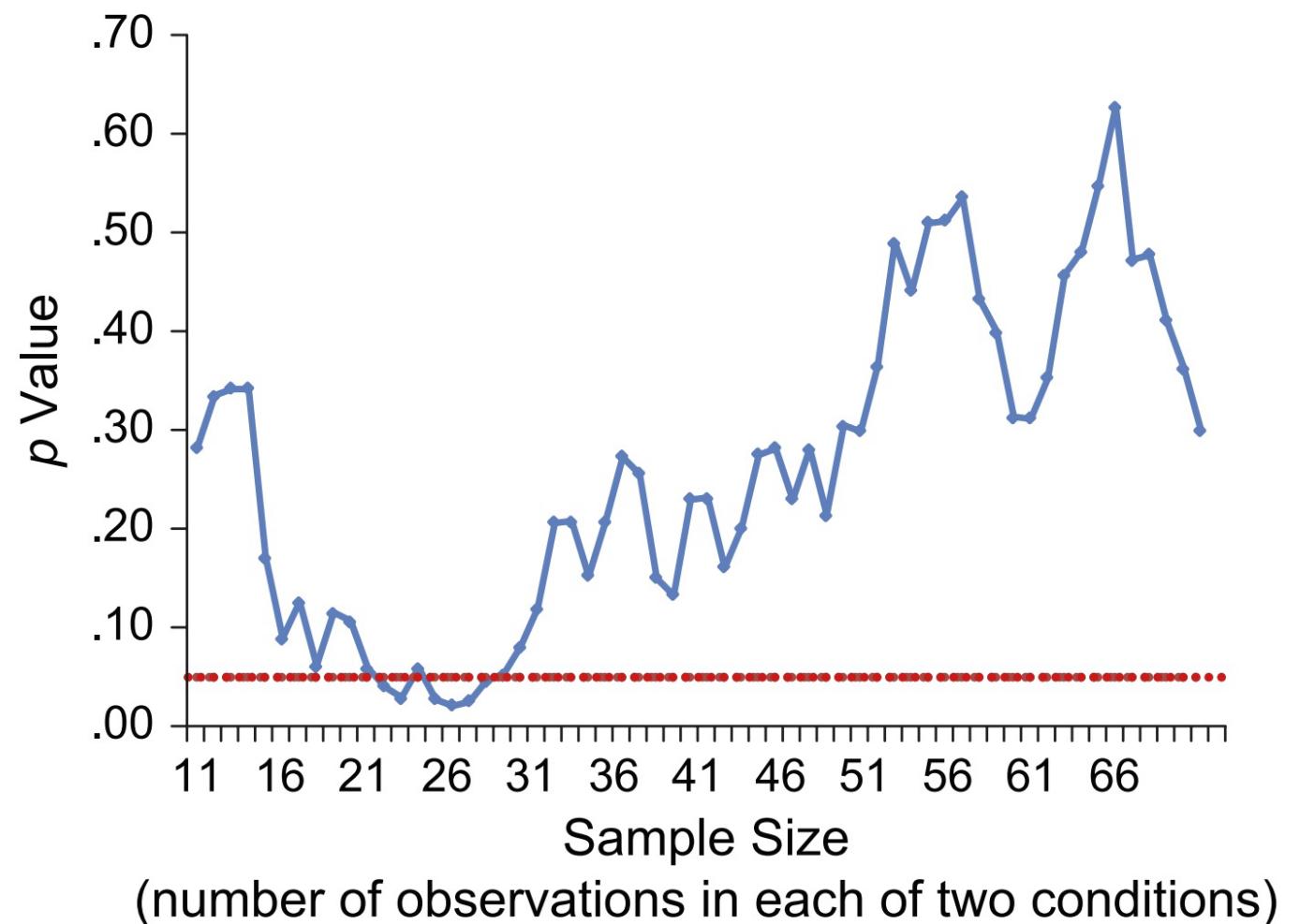


Credits: Dirk-Jan Hoek

# Combining QRP's increases the false positive rate

- A. Assessing more than one dependent variable (DV), but reporting only those which “worked”:
  - Two DVs, e.g., nearly double the false positive rate (**from 5% to 9.5%**), because it gives you two chances to find an effect (depends on the correlation between the DVs).
  - 66% of researchers admit having done this (John, Loewenstein and Prelec, 2012)
- B. Collect an initial sample, analyze the results, add additional participants if not significant, stop when significance is found.
  - Increase once:  $\alpha=7.7\%$ . But with enough looks it can be pushed to 100% !!
  - 70% of researchers admit having continued or stopped data collection based on looking at the interim results (John et al., 2012).

A common misnomer among scientists is that if we find a significant result with small sample sizes, we necessarily also will find significance at higher sample sizes. This is not true.



**Fig. 2.** Illustrative simulation of  $p$  values obtained by a researcher who continuously adds an observation to each of two conditions, conducting a  $t$  test after each addition. The dotted line highlights the conventional significance criterion of  $p \leq .05$ . Simmons, Nelson, and Simonsohn (2011)

## Combining QRP's increases the false positive rate

- C. Show flexibility in controlling for gender, or for an interaction between gender and the independent variable:
  - Such flexibility leads to a false positive rate of **11.7%**.
- D. Assessing more than two conditions (and leave out conditions that are not significantly different, e.g. testing "high", "medium" and "low" conditions and reporting only the results of a "high" versus "medium" comparison.)
  - Gives you more than one chance to find an effect and increases the false positive rate to **12.6%**.
  - 27% of researchers admit having done this (John et al., 2012).

# Likelihood of Obtaining a False-Positive Result

<b>Researcher degrees of freedom</b>	<b>Significance level</b>		
	$p < .1$	$p < .05$	$p < .01$
Situation A: two dependent variables ( $r = .50$ )	17.8%	9.5%	2.2%
Situation B: addition of 10 more observations per cell	14.5%	7.7%	1.6%
Situation C: controlling for gender or interaction of gender with treatment	21.6%	11.7%	2.7%
Situation D: dropping (or not dropping) one of three conditions	23.2%	12.6%	2.8%
Combine Situations A and B	26.0%	14.4%	3.3%
Combine Situations A, B, and C	50.9%	30.9%	8.4%
Combine Situations A, B, C, and D	81.5%	60.7%	21.5%

# Analogy to worst case scenario



# Simple solution to the problem of false-positive findings

## Requirements for authors

1. Authors must decide the rule for terminating data collection before data collection begins and report this rule in the article.
2. Authors must collect at least 20 observations per cell or else provide a compelling cost-of-data-collection justification.
3. Authors must list all variables collected in a study.
4. Authors must report all experimental conditions, including failed manipulations.
5. If observations are eliminated, authors must also report what the statistical results are if those observations are included.
6. If an analysis includes a covariate, authors must report the statistical results of the analysis without the covariate.

# How are violations of RCR are handled in Denmark?

## Institutional structure:

- Individual level: **Named Persons**. Provides advice and mediation in disputes.
- University level: **Practice Committee**. Deals with questionable research practices (QRP's). One in each university. It clarifies rules of what is good research practice, and facilitates discussions on issues of good research practice.
- National level: **Danish Committee on Research Misconduct**. Deals with cases of research misconduct (FFP: falsification, fabrication and plagiarism).
- University level: **Whistleblower protection system** at KU (since 2022). Deals with bribery, corruption, misuse of financial means, theft, fraud, conflicts of interest, embezzlement, sexual harassment, etc.

# Named Persons



Professor [Nils Billestrup](#) and Clinical Professor [Lise Lotte Gluud](#) are the Named Persons at SUND. The Named Persons are independent and work to strengthen and secure the responsible conduct of research at the faculty.

The Named Persons are assigned these areas of responsibility:

- focus on responsible conduct of research at the faculty
- advise on responsible conduct of research
- handle allegations of breaches of the rules on responsible conduct of research
- educate research leaders and researcher managers.



All SUND employees and students can contact Nils Billestrup and Lise Lotte Gluud with questions relating to these issues.

# Cases

## Case 1: Removed observations

I have learned that a senior colleague discarded several observations from a dataset we both use. She did this after finding that the full data set did not support her hypotheses. When I ask her about the procedure she tells me she will come back to me about it. A few days later she tells me that the reason for removing these observations was that the subjects did not complete the survey carefully because they didn't report demographic information. I really think she made up that argument. What do I do?

- A. I leave it at that.
- B. I mention it informally to the professor who is the supervisor of us both.
- C. I ask her some more difficult questions about the research to let her know how I think of her behaviour. I ask her to do something about it.
- D. I wait for her to present the paper in our seminar series, and then confront her with my findings.

## Case 2: Enticing application

I am applying for a grant to fund my research on a very specific subject. One of my colleagues is known for being very good at writing convincing applications. I ask him for help, as I really need the grant. He is very willing to offer me a hand and rewrites my application. When reading his changes I get the feeling that it is too 'enticing' and that it promises more than I will actually be able to deliver. However, I have to admit that the application is really impressive. The deadline for handling the application is tomorrow, what do I do?

- A. I compliment my colleague and submit the application the way it is.
- B. I decide to rewrite the application so that it is more realistic and less impressive even though I have to work through the night and it may decrease my chances.
- C. I use my original draft and tell my colleague that his conduct is bad.
- D. I ask another colleague to read the application and let it depend on her opinion.

## Case 3: Smoke screen

I am an Associate Professor in neuro-imaging. The Professor of my team has received a grant from an independent, non-profit organization called the '**Foundation for a Smoke-Free World**' in order to investigate the influence of nicotine and breathing techniques on brain stem activation. The grant has no further strings attached. I am asked to be in charge of the experimental design using fMRI. Should I take the job?

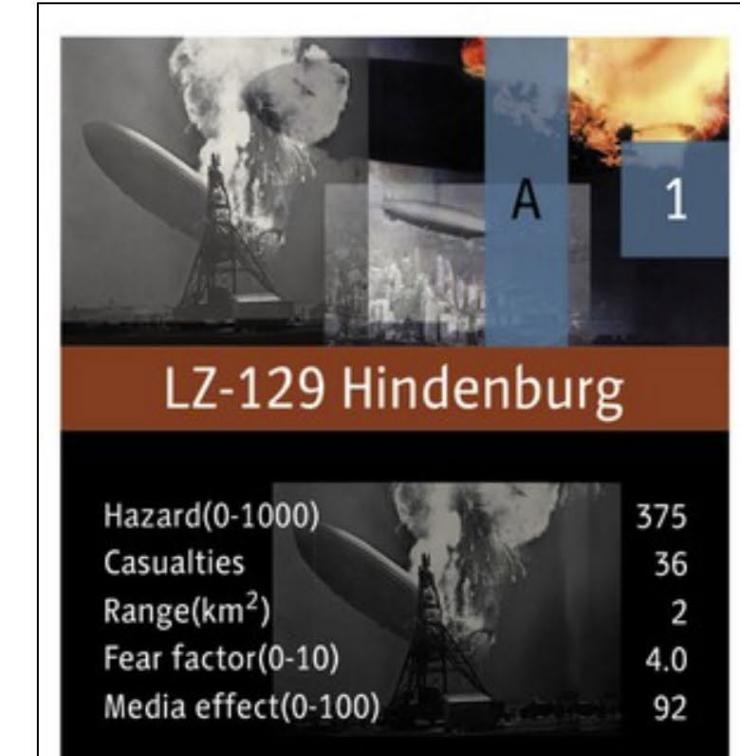
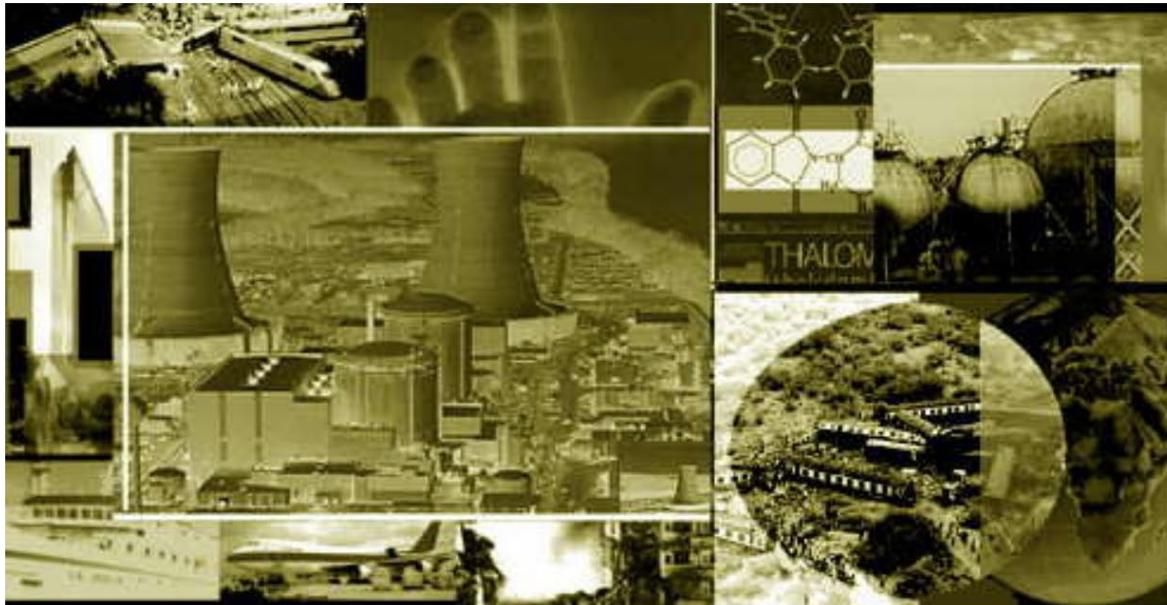
- A. Yes, of course I take the job.
- B. Yes, I take the job, but I decline to be listed as an author in the resulting paper.
- C. I say thanks, but no thanks. I do not wish to collaborate with this company.

## Case 3: The bright side

We have agreed on external funding from a company to do research on the physical and psychological effects of certain light and sound effects. These effects are used in the design of some of their consumer products. The company representative makes clear he does not want to influence the results in any way. Before we start the project the only thing he would like to see is that we rephrase our research question. The rephrasing places the focus more on possible positive effects rather than on negative effects. What do I do?

- A. I agree with these changes.
- B. I act as if I had not heard him.
- C. I stop the collaboration with the company.
- D. I let the head of my department decide on the matter.

# Short break



New Jersey, 6 May 1937

The hydrogen borne zeppelin had crossed the Atlantic from Frankfurt to New Jersey in three days. During the

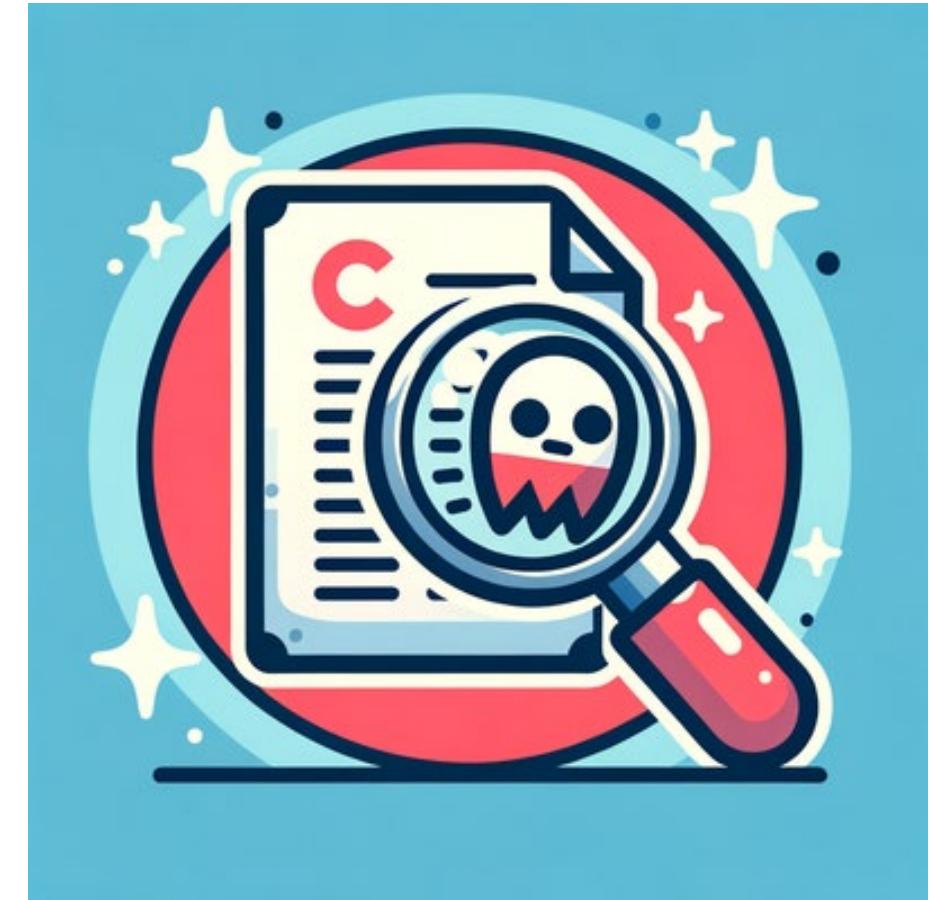
# Module 2

# Authorship issues

---

# Outline for module 2

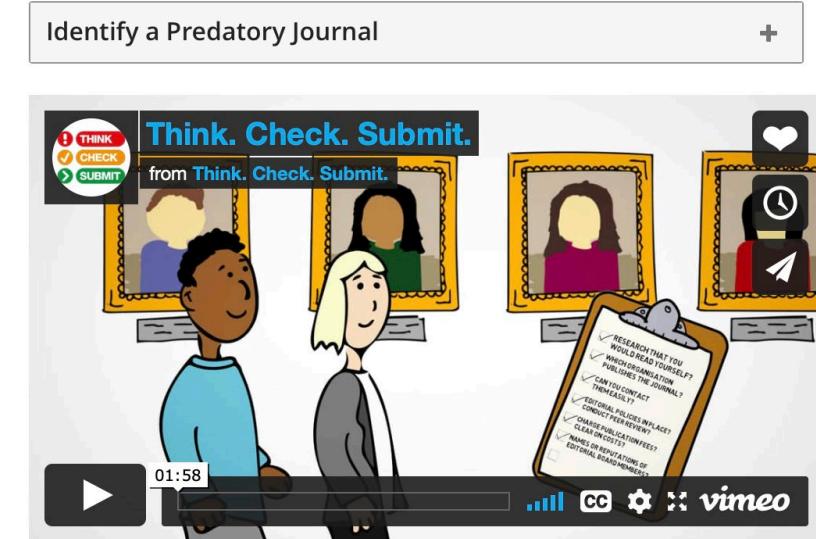
- Predatory journals and grey zones
- Open access requirements
- Exercise: Who should be an author?
- The Vancouver Recommendations
- Prevalence of questionable authorship behavior
- Discussion about what you would do
- Plagiarism and the use of AI
- The exam



# Predatory journals? Where to publish?

When seeking an appropriate journal for your paper, consider the following:

- Does the journal publish research that you would read yourself?
- Is the editorial board validated?
- Does the journal conduct appropriate peer review? Are prices transparent?
- What do others say about the journal?
- Do you know/have you heard of any of the editorial board members?
- Talk to your supervisor about where to publish.



See more at:

[https://kunet.ku.dk/arbejdsomraader/forskning/publicering/predatoryjournals\\_dk/Sider/default.aspx?searchHitHighlight=predatory%20](https://kunet.ku.dk/arbejdsomraader/forskning/publicering/predatoryjournals_dk/Sider/default.aspx?searchHitHighlight=predatory%20)

# Grey Zones

"As of Feb. 2023, MDPI publishes 413 journals and 9 conference journals. Based on a series of information published [here](#), [here](#) and [here](#), we decided to include the MDPI journals on the predatory publications list."



 [Jeffrey Beall](#) @Jeffrey\_Beall · Oct 18  
OA publisher Frontiers added to list of questionable publishers, following wide disapproval from scientists. [wp.me/P280Ch-u #OA](#)

 **PUBPEER**  
The online Journal club

Home / Selected

The PubPeer database contains all articles.

Search for DOI, PMID, arXiv ID, keyword, author, etc.  q advanced search

To leave the first comment on a specific article, paste a unique identifier such as a [DOI](#), [PubMed ID](#), or [arXiv ID](#) into the search bar.

Selected commented publications (665) (you can still see all recent comments here)

Time Ago	Publication	Comments
24 minutes ago	<a href="#">Excess mortality across countries in the Western World since the COVID-19 pandemic: 'Our World in Data' estimates of January 2020 to December 2022</a> Saskia Mostert, Marcel Hoogland, Minke Huibers, Gerjan Kaspers <a href="#">BMJ Public Health (2024)</a>	<span>6 comments</span>
3 days ago	<a href="#">Irreproducibility of transgenerational learned pathogen-aversion response in <i>C. elegans</i></a> Daniel Patrick Gainey, Andrey V Shubin, Craig P Hunter <a href="#">bioRxiv (2024)</a>	<span>2 comments</span>
3 days ago	<a href="#">A peptidoglycan-recognition protein orchestrates the first steps of symbiont recruitment in the squid-vibrio symbiosis</a> Caleb-Matthew Olaso, Joani Vilunas, Margaret McFall-Ngai <a href="#">Symbiosis (2022)</a>	<span>1 comment</span>
3 days ago	<a href="#">Testing the evolving efficiency of Arab stock markets</a> Waleed Abdenourah	

# Open access requirements

- At UCPH researchers are encouraged to publish as Open Access in CURIS, but the invitation must not block for researchers publishing in journals that do not allow Open Access publishing.
- Published scientific articles, resulting from research fully or partially publicly funded (and some private funds, e.g. Carlsberg), must be made freely available to everybody via Open Access insofar the journal allows it.
- Rebates and waivers for Open Access-publishing (APC):  
<https://kunet.ku.dk/arbejdsomraader/forskning/publicering/openaccess/apc/Sider/default.aspx>

Check the journal for:

- Embargo (typically 6 months)
- Can author archive pre-print?
- Can author archive post-print?
- Can author archive publisher's version?

For easy check, see:

<https://v2.sherpa.ac.uk/romeo/>

Do still check the relevant journal!

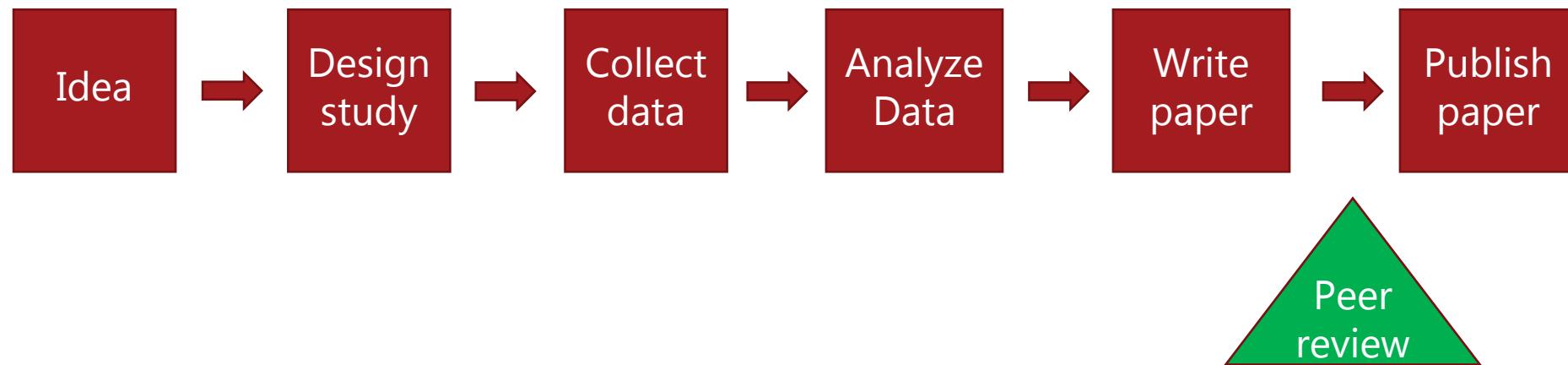
# Discussion

Ask each other the following questions:

- In what journal do you aim to publish your next paper?
- Why is that journal (not) a predatory journal?
- Are there any potential conflicts between open access requirements/encouragements (from UCPH or your funder) and the policy of the journal? You may help each other finding out.

# Registered reports

**Idea:** Reviewers decide on research plan (hypotheses, experimental procedures, methods) before data collection, in order to exclude the possibility of *a posteriori* modification.



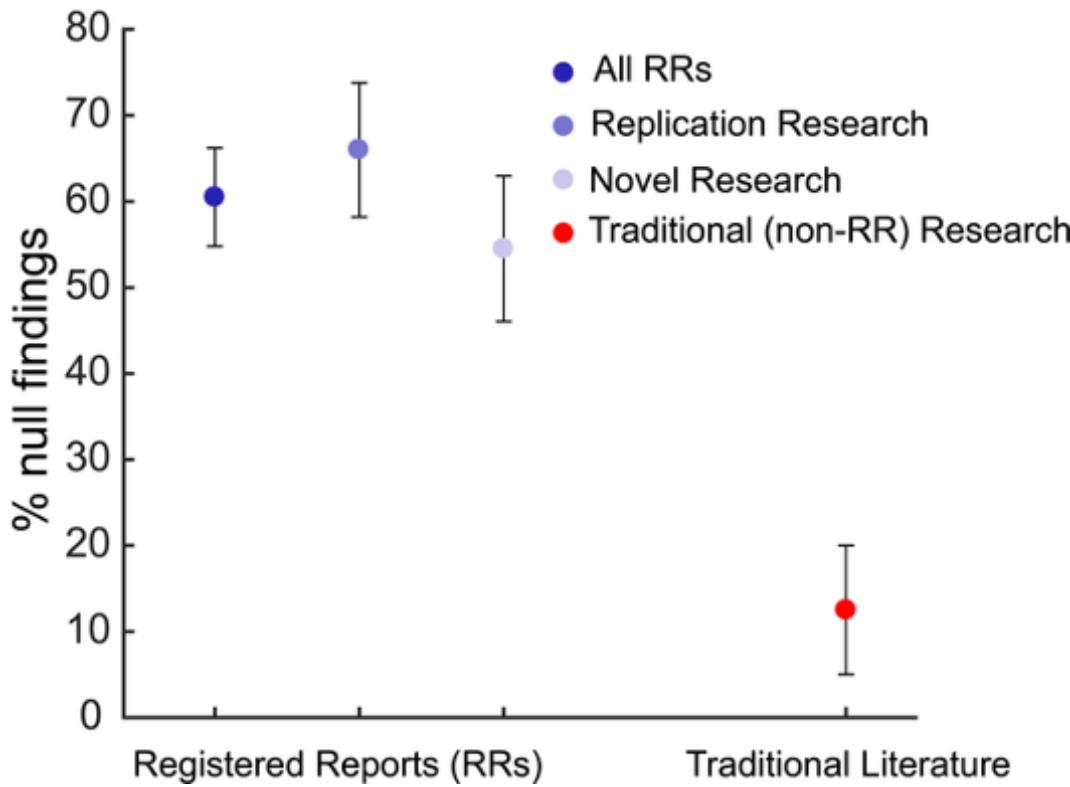
“IPA” (in-principle acceptance)

**Advantage:** More focus on getting it right than on getting it published. Improves research questions, focus on correct experimental procedures and methods. Promotes transparency and reproducibility. Reduces HARKing, p-hacking (if there is a pre-analysis plan (PAP)), and publication bias.

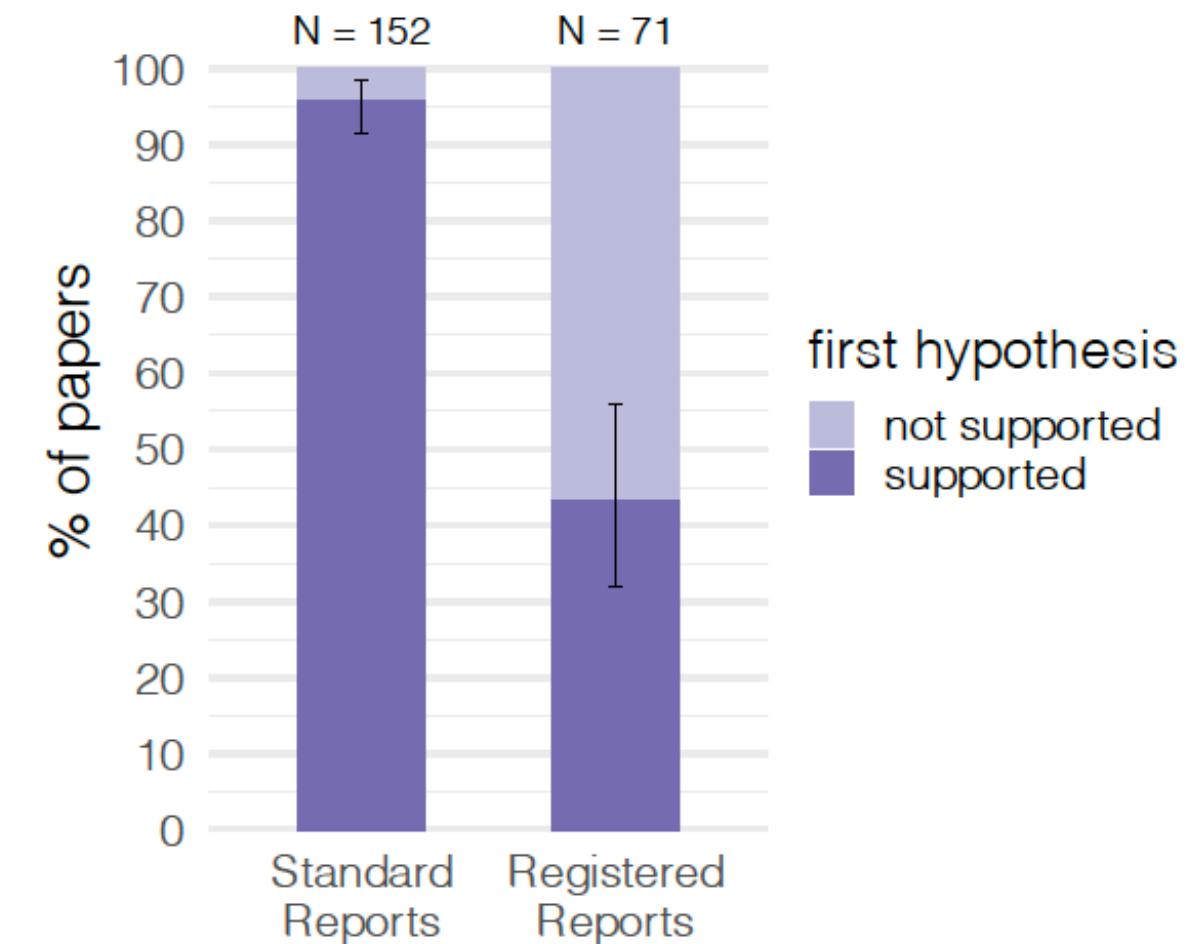
**Limitations:** Need large sample sizes, time consuming, not suitable for exploratory research

# Registered Reports reduce publication bias

Percentage of null findings

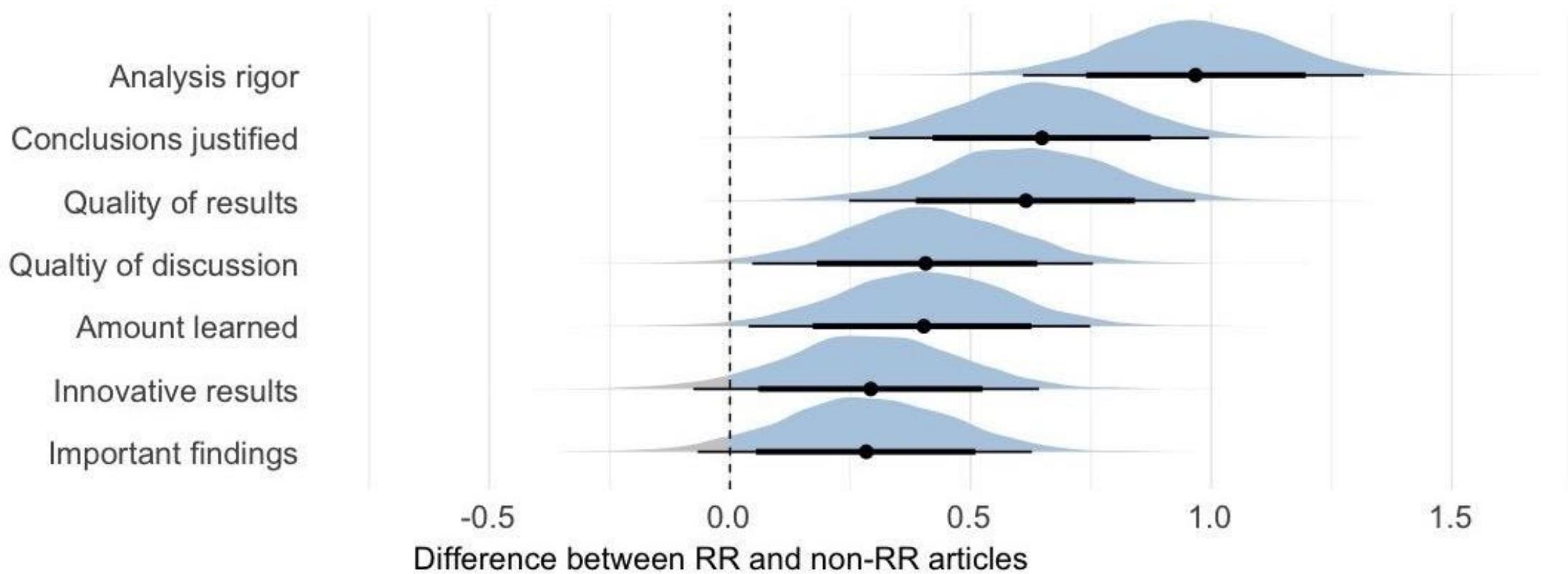


Allen & Mehler, 2019



Scheel et al., 2021

# Evaluation after knowing study outcomes



# Exercise

RCR1 SUND - 03.10.2024 > Files

Search for files

0 items selected

+ Folder

Name	Date created	Date modified	Modified by	Size	Actions
authorcase.pdf	15:03	15:03		307 KB	
course_image	14 Mar 2022			--	
curriculum.pdf	24 Sep 2024	24 Feb 2022		920 KB	
Panum_DK (1).pdf	24 Sep 2024	10 Aug 2021		145 KB	
RCR assignment IFRO edition 2023.pdf	24 Sep 2024	11 Aug 2023		168 KB	
RCR programme 3rd October.pdf	24 Sep 2024	24 Sep 2024	Hanne Teilmann M...	191 KB	
RCR1 Introduction_General_uden_dato_recording.mp4	24 Sep 2024	30 Oct 2023		516.2 MB	
RCR1 Introduction.pdf	24 Sep 2024	7 Oct 2023		2.4 MB	

~~to honor their request. "Our publication will be much stronger," he says, "if we incorporate their data into our analysis."~~

- ~~What should they do?~~
- ~~Is it ethical to name someone as an author for providing data?~~

#### **Case 5**

~~Three economists, Stroud, Jones, and Wicket, published a paper describing a mathematical model for representing collective bargaining. The following year, Stroud and two other authors, Weinberg and Smith, published a paper that applied the model to a collective bargaining dispute between a teacher's union and a school district. The paper included two paragraphs in the methods section that were identical, word for word, to two paragraphs in the methods section of the paper published by Stroud, Jones, and Wicket. The paper by Stroud, Weinberg, and Smith did not mention or even cite the paper by Stroud, Jones, and Wicket.~~

- ~~Is this unethical?~~
- ~~Is this plagiarism? Self plagiarism? A possible copyright violation?~~

#### **Case 6**

Dr. Gumshoe is a family physician specialist conducting a clinical trial on a new treatment for foot wounds for people with diabetes. The treatment is a cream she developed. Although all of the compounds in the cream have been approved by the U.S. Food and Drug Administration (FDA), the treatment itself has not. The FDA has classified it as an investigational combination therapy. Dr. Gumshoe has completed the clinical trial, which has demonstrated that the new treatment is twice as effective as current therapy for diabetic foot wounds. She is getting ready to publish a paper and needs to decide (a) who should be an author and (b) the order of authorship. The following people have worked on the project:

Dr. Gumshoe developed the cream, designed the experiments, interpreted the data, and wrote the paper.

Dr. Wainwright is a pharmacist who helped Dr. Gumshoe develop the cream, interpret the data, and edit the paper.

Dr. Sabrunama is a biostatistician who helped to design the experiments and analyze and interpret the data and who read the paper but did not edit it for content.

Ms. Stetson is a nurse who provided treatment to patients in the study and collected data and who read the paper but did not edit it for content.

Ms. Williams is a medical student who provided treatment to patients in the study and collected data and who read the paper but did not edit it for content.

Mr. Gumshoe is Dr. Gumshoe's husband. He has been providing legal assistance to Dr. Gumshoe concerning her FDA and institutional

review board applications and patents on the treatment. He read the paper and edited it for style and grammar.

Mr. Jensen is a pharmacy technician who works for Dr. Wainwright who helped to prepare the treatment.

Dr. Chu is a colleague of Dr. Gumshoe's. He has discussed the project with her several times over lunch. He encouraged her to initiate the clinical trial and has given her critical feedback.

Dr. Rogers is a diabetic foot specialist. He has provided Dr. Gumshoe with tissue samples and data that she has used in her study.

- Who should be an author?
- Who should receive an acknowledgment?
- What should be the authorship order?

# The Vancouver Recommendations

- A. Substantial contributions to the conception or design of the work; **OR** the acquisition, analysis, or interpretation of data for the work.
- B. Drafting the work or revising it critically for important intellectual content.
- C. Final approval of the version to be published.
- D. Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

<http://www.icmje.org/icmje-recommendations.pdf>

(PS: The University of Copenhagen uses the Vancouver Guidelines as reference, and The Danish Code of Conduct for Research Integrity uses them as the standard.)

## Explications by the UCPH (in the 'Code of Authorship') (1)

"The most important factor in describing authorship is for the author to have provided a **significant (substantive) contribution** to the research on which a publication is based. When establishing the criteria for this factor, the **traditions of the individual scientific areas must be respected.**"

- The criteria for authorship should **not be used to exclude** individuals that in some other way satisfy the criteria A. and therefore should be **given the opportunity** to satisfy criteria B.-D.
- Important work and intellectual contributions [...] that have influenced the research but do not satisfy the criteria for authorship should be properly recognized, for example under **acknowledgements**.
- It is recommended that the contributions made by the various individuals should be **specified** either in the actual publication or in a document associated with it.

# Specifying contributions

## Contributor Roles Taxonomy (CRediT)

Conceptualization	Ideas; formulation or evolution of overarching research goals and aims.
Data curation	Management activities to annotate (produce metadata), scrub data and maintain research data (including software code, where it is necessary for interpreting the data itself) for initial use and later re-use.
Formal analysis	Application of statistical, mathematical, computational, or other formal techniques to analyze or synthesize study data.
Funding acquisition	Acquisition of the financial support for the project leading to this publication.
Investigation	Conducting a research and investigation process, specifically performing the experiments, or data/evidence collection.
Methodology	Development or design of methodology; creation of models.
Project administration	Management and coordination responsibility for the research activity planning and execution.
Resources	Provision of study materials, reagents, materials, patients, laboratory samples, animals, instrumentation, computing resources, or other analysis tools.
Software	Programming, software development; designing computer programs; implementation of the computer code and supporting algorithms; testing of existing code components.
Supervision	Oversight and leadership responsibility for the research activity planning and

## Sample CRediT author statement:

**P. S.: Conceptualization, Software, Methodology; J.H.: Data curation, Writing, Original draft preparation; W. W.: Visualization, Investigation. J. J.-V.: Formal Analysis, Supervision; A. K.: Software, Validation; M. W.: Writing, Reviewing, and Funding Acquisition.**

# What is **not** sufficient for authorship?

- Supervision, admin support, management of research group
- Technical help with the writing such as proof reading, figures & tables, etc.
- Routine services by labs and colleagues such as equipment, tissue samples, data (f.i. the well-known 'black-mail': "Yes, provided I become a co-author, I will send you the tissue requested")
- Attributing authorship solely on the basis of an individual's non-scientific contributions, for instance guest or honorary authorships.
- The omission of individuals who have made a substantive contribution (ghost authorship), motivated for example by a desire to conceal financial interests.

# Acknowledgements

- It does **not cost you anything** to thank those who one way or another have helped you.
- But it may cost you a lot of good-will **not to acknowledge** such people.
- So it is not only rude not to acknowledge anyone who deserve to be acknowledged – it is **plain stupid.**
- “Because acknowledgement may imply endorsement by acknowledged individuals of a study’s data and conclusions, editors are advised to require that the corresponding author **obtain written permission** to be acknowledged from all acknowledged individuals.”

Vancouver Guidelines, ICMJE

## From RCR1 assignments

”..my supervisor asked me to add 2 more authors, that are involved in the project.  
..[...] I agreed, because my supervisor told me that it will make the impact of the paper stronger, and it would be easier to publish.” ...

They ”did not contribute at all and they have not seen the last version of the manuscript...”

”... my PI has gifted the authorships just for political reasons and to be able to publish in the higher impact journal, which is not correct. I have reflected on this situation a lot, because it caused me many concerns along the way, since I did all the work.”

”... a bit difficult to establish the line between what is a culture and what is a misconduct ...”

”As a woman, I believe I have only been asked to perform the additional analysis and thereby be added as an author, to improve the gender-bias of the paper.”

# Two recent papers

Journal of Academic Ethics

<https://doi.org/10.1007/s10805-022-09465-1>

## Misuse of co-authorship in Medical PhD Theses in Scandinavia: A Questionnaire Survey

Gert Helgesson<sup>1</sup>  · Søren Holm<sup>2</sup> · Lone Bredahl<sup>3</sup> · Bjørn Hofmann<sup>4,5</sup> · Niklas Juth<sup>1,6</sup>

Accepted: 14 November 2022

© The Author(s) 2022

**Methods** Those who defended their PhD thesis at a medical faculty in Scandinavia during the second half of 2020 were offered, by e-mail, to participate in an online survey. Survey questions dealt with experiences of violations of the first three of the ICMJE authorship criteria and misuse of authorship order in the thesis articles, as well as respondents' attitudes to these matters. Both questions with fixed response alternatives and questions with free text responses were included.

**46% reported that the ICMJE authorship criteria were not fully respected in at least one paper**



“The person in power told me to” - European PhD students’ perspectives on guest authorship and good authorship practice

Mads Paludan Goddiksen<sup>1,\*</sup>, Mikkel Willum Johansen<sup>2</sup>, Anna Catharina Armond<sup>3,4</sup>, Christine Clavien<sup>5</sup>, Linda Hogan<sup>6</sup>, Nóra Kovács<sup>4</sup>, Marcus Tang Merit<sup>7</sup>, Anna Olsson<sup>8</sup>, Una Quinn<sup>9</sup>, Júlio Borlido Santos<sup>8</sup>, Rita Santos<sup>8</sup>, Céline Schöpfer<sup>5</sup>, Orsolya Varga<sup>4</sup>, P. J. Wall<sup>10</sup>, Peter Sandøe<sup>1</sup>,  
<sup>11</sup>, Thomas Bøker Lund<sup>1</sup>

**PlosOne, in press**

Data for the study were collected in a survey of European PhD students. The final dataset included 1,336 participants from five European countries (Denmark, Hungary, Ireland,

Portugal, Spain) and 11 medical faculties.

**34% indicated they had awarded at least one guest authorship to a person in power. 6,7% had done it “many times”**

# Differences across faculties and data type

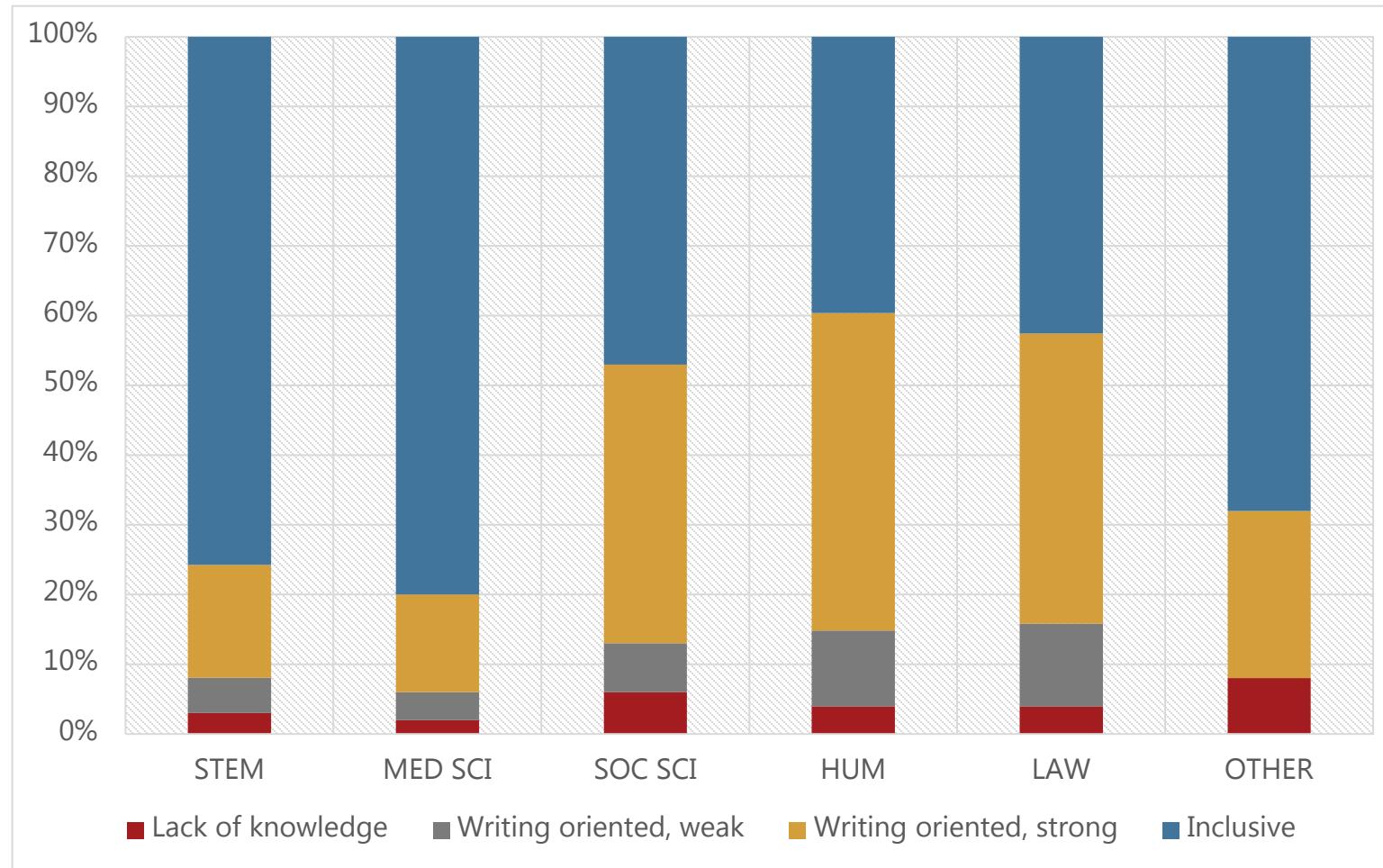
**Share of PhD students that stated they had allowed guest authorship (n=1096). Per faculty**

Faculty	Share* (in %)
Medical sciences	49%
STEM	42%
Social sciences	27%
Humanities	17%
Law	10%

\*Shares are calculated on basis as predicted probabilities (using Stata's margins command).

**Based on results from the two papers it is possible to argue that there is a large problem, and that the problem is larger at SUND and SCIENCE than at other faculties.**

# Distribution of views across faculties



# Discussion: deciding who is an author?

Consider the following scenario:

- You are writing a paper largely based on your work. The paper will serve as a central part of your dissertation, and there is no doubt that you will be first author.
- A collaborator, who is not your supervisor, has indicated that (s)he expects to be stated as a co-author of the paper.
- Although the collaborator did contribute to the work presented in the paper you had not originally considered him/her as worthy of authorship mention.

Discuss:

1. How would you handle the situation from here?
2. Who has the final say on who is to be a co-author?
3. How could such situations be avoided in the future?

# Plagiarism and self-plagiarism

**Plagiarism** shall mean the “Appropriation of other people’s ideas, processes, results, texts or specific concepts without giving due credit.”

- **Willful plagiarism** of major importance or extent → research misconduct
- Accidental **plagiarism** of major importance or extent → research misconduct
- Accidental **plagiarism** of minor importance or extent → questionable research practice
- **Self-plagiarism** (recycling) → questionable research practice

## Puzzle time:

The Danish Committee on Research Misconduct (“Nævnet for Videnskabelig Uredelighed”) decided in 2018 that text duplication from co-authored articles is to be considered plagiarism. Why?

ERGO: you can not copy without quotes and citation any text/tables/images from your paper in your dissertation, even if you have written it yourself.

# How do I make sure that I'm not plagiarizing?

## 1. Maximize transparency

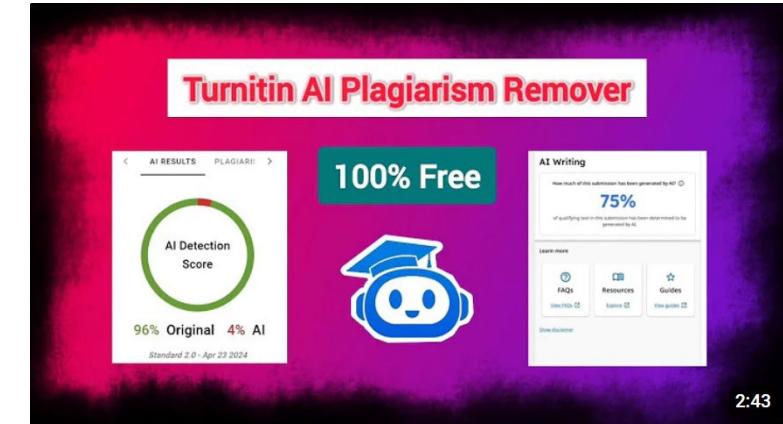
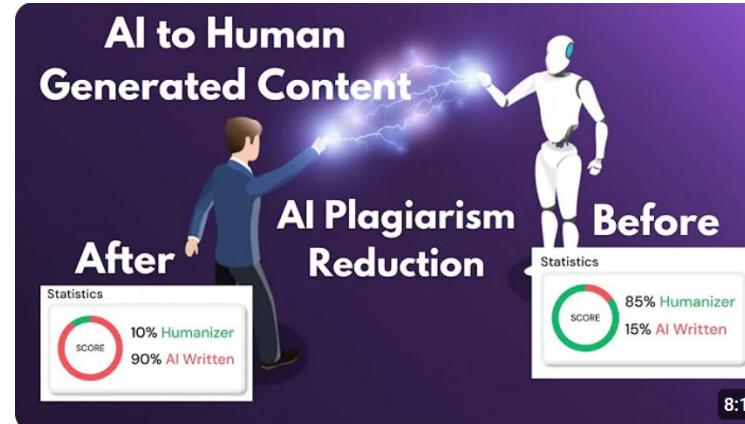
Have I remembered to make all the references? Are they in the right places? Do they help the reader or not? Does my reader know exactly what is going on? Does my reader know what idea, fact, or argument comes from where, from whom and from when? Have I remembered to make quotation marks when quoting? Would reviewers and editors be able to correctly trace my references?

## 2. Never write with another text in front of you

Never use another paper as a backbone/template for my own writing. Not even something I have published myself. Instead, start with a blank sheet of paper. Read and make notes, use keywords/mind maps/flow charts/whatever to construct my own text. Remember to make references every time an idea, an argument, or a factual contribution comes from someone else.

## 3. Rewrite, rewrite, and rewrite

# 6 first hits on youtube 29. April 2024: “plagiarism AI”



# AI journal policies

**JAMA:** Disclosure of use. No AI co-authors.

**Science:** No text, image, data, or graphics generation by an AI program without explicit permission from the editors. No AI authors or co-authors. Any other use has to be made transparent in the Methods or Acknowledgements sections.

**PloS One:** Requires detail about what AI program was used, how it was used, and how the output was validated.

**Elsevier:** Declaration of use. Can only be used to improve readability. No AI text generation, no AI written analysis, interpretation, or conclusion. No AI authors or co-author, nor any citation of an AI as an author.

**Taylor and Francis:** No AI authors. Use of AIs must be acknowledged and documented appropriately.

# UCPH HEALTH rules on AI

"The Graduate School of Health and Medical Sciences expects PhD students to demonstrate independent work, using their own words and phrases to communicate their research. Both in the thesis itself, in scientific publications and in other forms of communication.

The policy of the Graduate School of Health and Medical Sciences is that AI-assisted technologies should be used with caution as described in the Vancouver guidelines chapter 2 section 41. This means that if you use AI-assisted technologies in your thesis it must be clearly disclosed and described how it was used. The AI-assisted technology cannot be listed as an author and therefore you are solely responsible for the accuracy, integrity, and originality of the work.

Be aware that using AI-assisted technologies comes at a risk since you as the author might not know how the AI-assisted technologies will mix and reuse the input data, and you, the author, should be able to assert that there is no plagiarism or copyright infringement in the output text.."

# CEUR-WS Policy on AI assisting tools

**Insignificant.** Activities like: i) paraphrasing and refining the manuscript content (using Grammarly or other spell checkers), and ii) smart composition (via predictive keyboards) are widely accepted and do not need any acknowledgement.

**Low.** The use of AI tools for searching and generating literature review is acceptable upon authors' checks. Authors must review the content and adjust/add references to line up with the narrative of their manuscript. In case of generating unoriginal content (i.e., definition, or description of well-known concepts) may be acceptable provided that the authors have checked it to be accurate and included proper references to the original content.

**Substantial.** Using AI assistants for generating new ideas as well as new text is unacceptable. Most of the generated content may derive from existing work. Potential issues with such practice are related to originality, plagiarism, ownership, and authorship, whose consequences and impact are not yet clear.

# The Exam

---

UNIVERSITY OF COPENHAGEN  
DEPARTMENT OF FOOD AND RESOURCE ECONOMICS (IFRO)

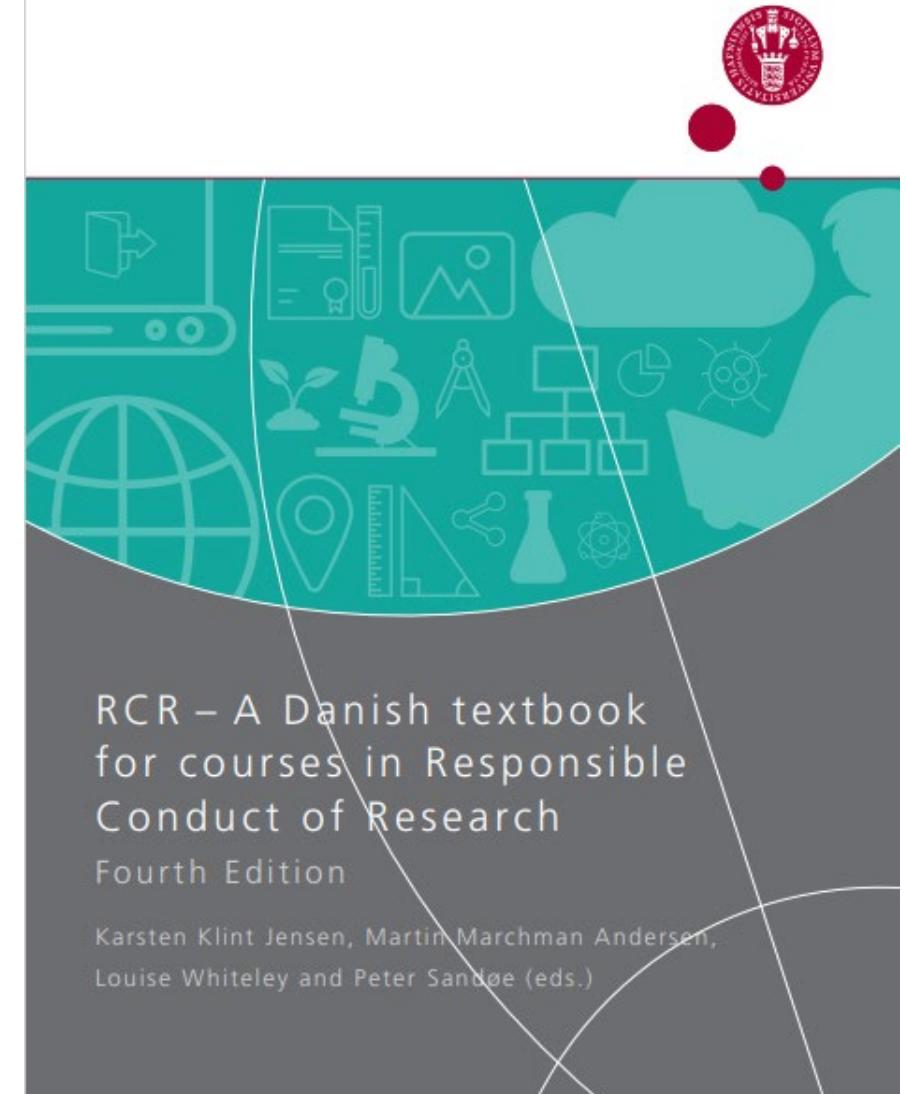
# Written Assignment on Responsible Conduct of Research

## Why a written assignment?

In order to complete the course in responsible conduct of research (RCR) and to improve your learning outcome, as a PhD student, you must submit an assignment in which you **describe and discuss 1-2 RCR concepts or areas presented in the course curriculum in relation to your own research project.**

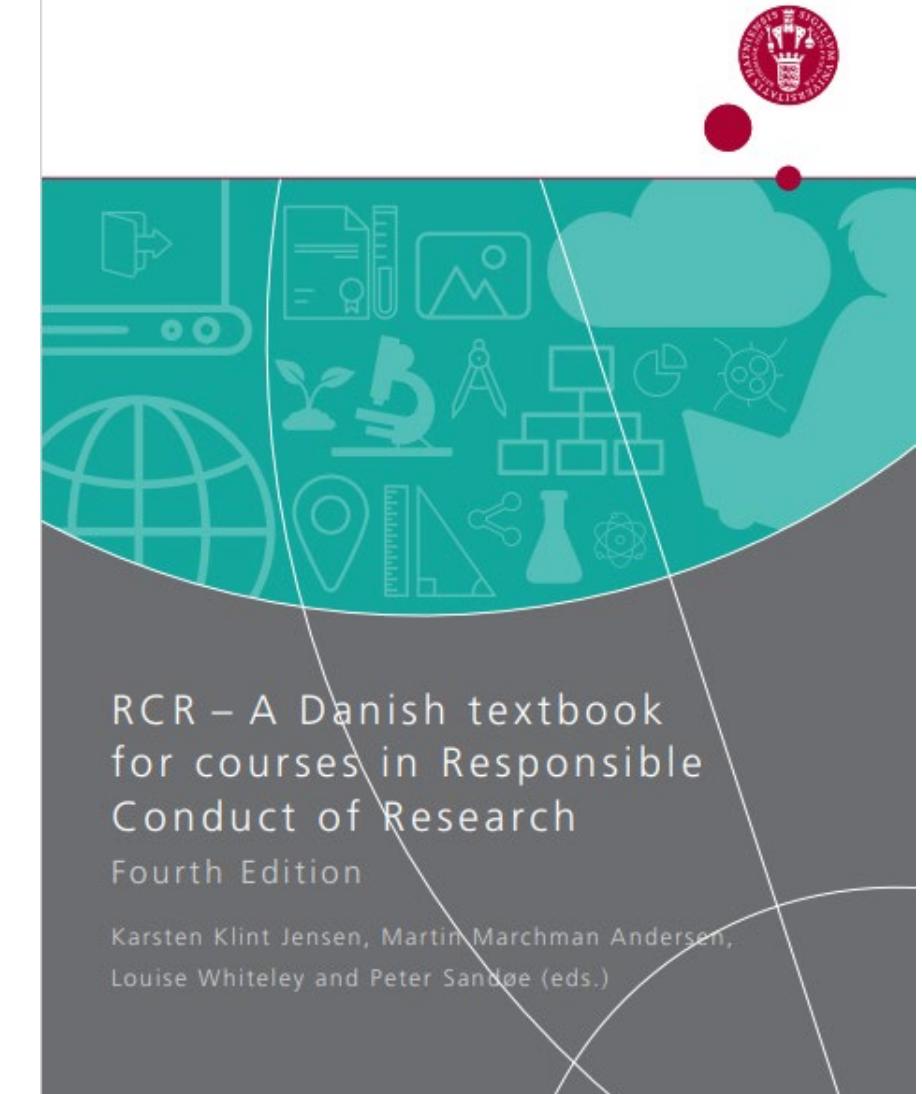
# Format

- 2 pages max on an aspect of your work that touch upon one or more of the issues on Responsible Conduct of Research that have been covered during the course and in the curriculum
- Grade: Pass/Fail



# How to pass

- **DESCRIBE**
  - Your own work
    - Briefly
  - 1-2 central concepts of RCR based on the textbook (**with page specific references**)
    - Thoroughly
    - You are welcome to include additional literature
- **DISCUSS**
  - The concepts as they could be relevant to your own work
  - The grey areas
- **PROPOSE RESOLUTIONS / ACTIONS**
  - If possible



## List of possible subject matters (not exhaustive)

- Authorship conflicts about co-authorships
- Inappropriate handling of data
- Academic freedom in relation to publication of results
- Communication to a wider public
- Sharing data and/or results with other researchers
- Reporting possible breaches of research integrity (whistleblower)
- Collaboration with external partners
- Etc..

# How to fail

- Missing the deadline for submission (**14 days from today**).
- Mistakes that could easily be avoided e.g.:
  - You forget to include specific references to the curriculum (remember to include page numbers and reference list)
  - You haven't bothered to read the guidelines, which means that
    - Your discussion is too general
    - You don't connect to your own project
  - You forget to discuss, and instead simply describe the rules.

Read the instructions carefully before submitting your assignment. Write to me if you are in doubt.

# References

- Course Curriculum: [www.ifro.ku.dk/rkr.pdf](http://www.ifro.ku.dk/rkr.pdf)
- Rules and guidelines: [https://praksisudvalget.ku.dk/english/rules\\_guide/](https://praksisudvalget.ku.dk/english/rules_guide/)
- Madsen & Aagaard (2020) Fordeling af forskningsbevillinger i Danmark, Danish Centre for Studies in Research and Research Policy, AU.
- Martinson, B. et al. (2005): Scientists behaving badly. *Nature*, 435: 737-385
- Fanelli, D. (2018). Opinion: Is science really facing a reproducibility crisis, and do we need it to? *Proceedings of the National Academy of Sciences*, 115(11), 2628-2631.
- Silberzahn, R., Uhlmann, E. L., Martin, D. P., Anselmi, P., Aust, F., Awtrey, E., ... & Nosek, B. A. (2018). Many analysts, one data set: Making transparent how variations in analytic choices affect results. *Advances in Methods and Practices in Psychological Science*, 1(3), 337-356
- Johansen, MW., Christiansen, FV (2020) Handling Anomalous Data in the Lab: Students' Perspectives on Deleting and Discarding, *Science and Engineering Ethics* 26:1107–1128
- Ref: Head ML, Holman L, Lanfear R, Kahn AT, Jennions MD (2015) The Extent and Consequences of P-Hacking in Science. *PLoS Biol* 13(3): e1002106. <https://doi.org/10.1371/journal.pbio.1002106>
- Simmons, J. P., Nelson, L. D., & Simonsohn, U. (2011). False positive psychology: Flexibility in data collection and analysis allows presenting anything as significant. *Psychological Science*, 22(11), 1359–1366.
- John, L. K., Loewenstein, G., & Prelec, D. (2012). Measuring the prevalence of questionable research practices with incentives for truth telling. *Psychological science*, 0956797611430953.