Ranking Misconduct and QRP's: An informal survey among Ph.D.-students

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Objective

Objective: Investigate how PhD-students in the natural and health sciences rank various types of research misconduct and question-able research practices according to their perceived severity.

Note: This investigation is an *exploratory study* conducted as an exercise in an RCR-course for Ph.D.-students at the UCPH. It does not claim to have any scientific rigor other than being an aggregate snapshots of student perceptions. Thus, results may be subject to all kinds of confounders and biases not controlled for in the exercise.
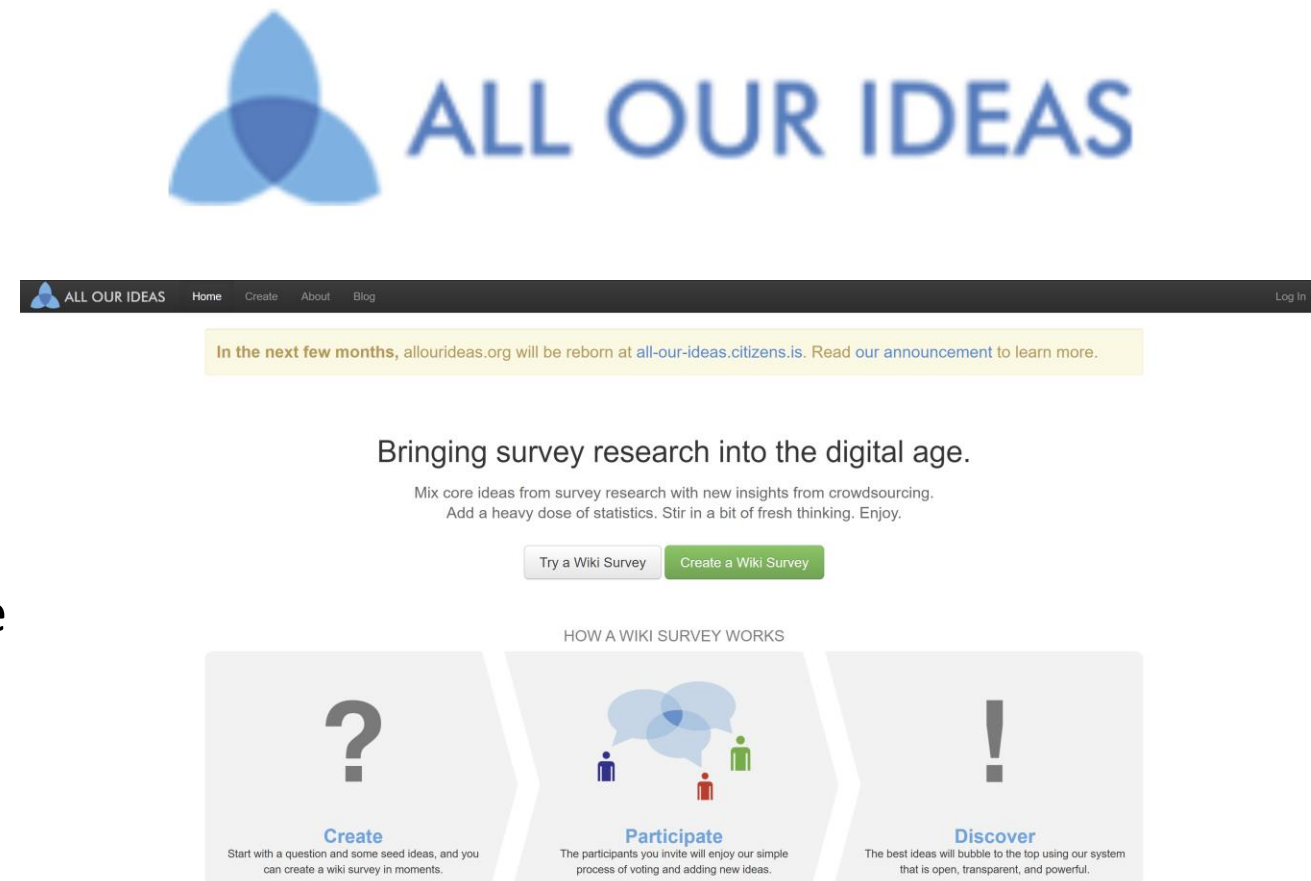
Method

Tool: https://www.allourideas.org/rcr, an open source online 'wiki-survey' developed by Matthew Salganik & Karen Levy[1]. It allows users to create and vote on pairwise competing ideas and/or questions.

Ph.D.-students make repeated pairwise comparisons of various research malprac-tices. The aggregate of opinions enables the survey to establish a collective ranking of malpractices in terms of their severity.

Allourideas is currently hosting 27,620 wiki surveys with more than 1.5 million ideas and 60.5 million votes.

1: https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0123483

ALL OUR IDEAS

Cast Votes   View Results   About this page

What is the most severe form of research misbehavior?

| Unreported conflicts of interest | Inadequately handle or store data or materials |

I can't decide

8179 votes on 50 ideas

Add your own idea here...

ALL OUR IDEAS

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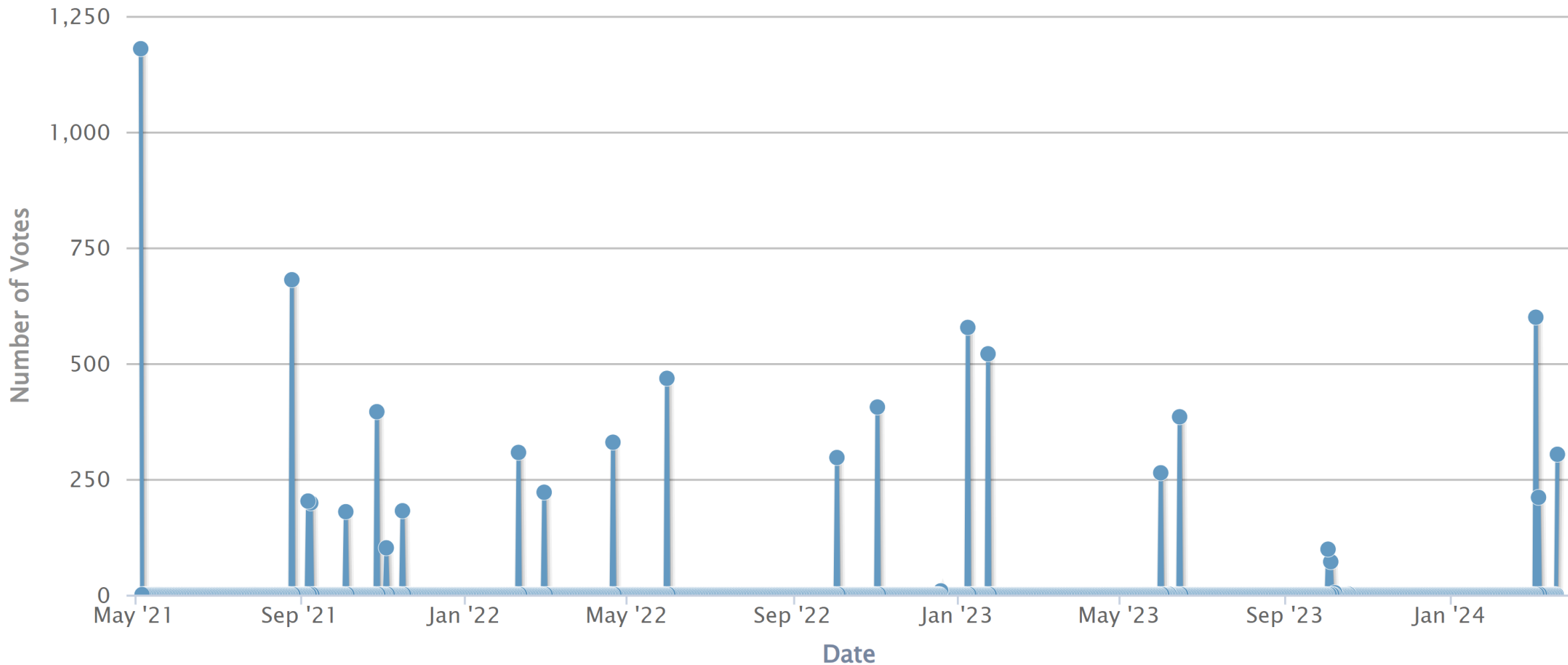|	
Failed to report important study details in publication	Unfairly reviewed manuscripts, grant applications or colleagues

I can't decide

8179 votes on 50 ideas

Add your own idea here...

Number of Votes per day Overall total – 8179

What is the most severe form of research misbehavior?

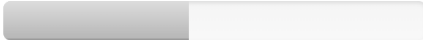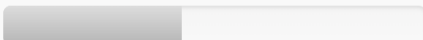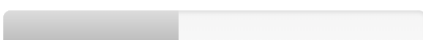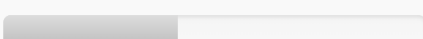| Ideas	Score (0 - 100) ❓
Falsification of data (manipulation of materials or processes as well as changing or omitting data in order to mislead)	93
Fabrication of data (undisclosed construction of data or substitution with fictitious data)	93
Ignore substantial safety risks of the study to participants, workers or environment	79
Plagiarism (appropriation of others' ideas, processes, results, or texts without rightful crediting)	78
p-hacking (selective reporting and other misuse of data analysis to find patterns that can be presented as statistically significant)	75
Changing the design or methodology or results of a study in response to pressure from a funding source	74
Unauthorized use of confidential information	65
Not adhere to pertinent laws and regulations	64
Failed to report important study details in publication	61
Use published ideas or phrases of others without referencing	61
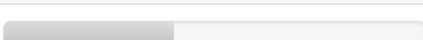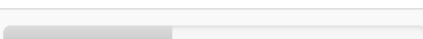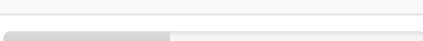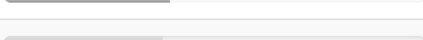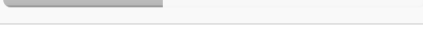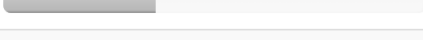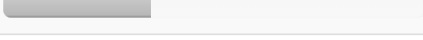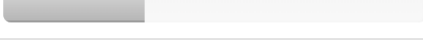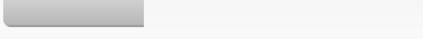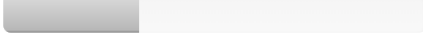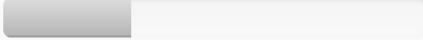
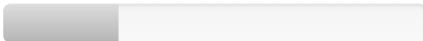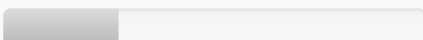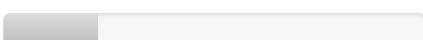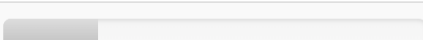|	
Lack of inferential reproducibility (i.e. inability to draw the same conclusions from a similar, or the same, study)	44
Handle existing conflicts of interest inadequately	42
Inadequate research designs or unsustainable measurement instruments	41
Inappropriate or lack of citation	41
Lack of results reproducibility (i.e. inability to obtain the same results from a independent but similar study)	40
Ghost authorship	40
Selectively cited references to enhance findings or convictions	39
Conclusions not sufficiently substantiated	38
Gift authorship	36
Improper referencing of source	35
Inadequate record keeping	33
Re-use parts of your own publications without referencing	33
Add an author who doesn't qualify for authorship	32
Remove an outlier	30
Self-plagiarism (recycling or reusing one's own specific words from previously published texts)	27
Inadequate notes of research process	27
Insufficiently supervise or mentor junior coworkers	22
Salami publishing (a publication of two or more articles derived from a single study)	22
Excessive self-citation	20

Findings

- The **collective opinion** among Ph.D.-students agrees well with the established norms for RCR by ranking the three main types of research misconduct (fabrication, falsification, and plagiarism) in the top 4 with a win rate of 93%, 93% and 78%, respectively.

- However, we find the malpractice of "**Ignoring Substantial Safety Risks to Participants, Workers or the Environment**" to be comparable with plagiarism with a win rate of 79%.

- At the **bottom of the rankings**, we find insufficient supervision, salami publishing, and excessive self-citation with a win rate of 22%, 22%, and 20%.

- **In conclusion**: Ph.D.-students agree that fabrication, falsification, and plagiarism are the worst malpractices in research. However, they also see the neglect of substantial safety risks as highly problematic, suggesting that safety risks could be given more weight in the discussions and definitions of research misconduct.