

Are questionable practices always detrimental?

On the context dependency of
ethical assessments of academic
practices

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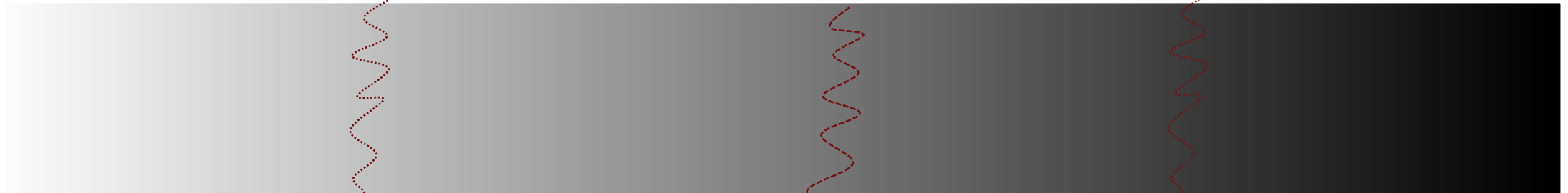


Main argument

- In research, codes and regulations “questionable practice” and “detrimental practice” are often used interchangeably.
- This reflects a tendency to neglect the context dependence of the ethical evaluation of some practices.
- This negligence has created uncertainty in research and hampered effective education.
- We advice:
 - Researchers to take the context into account in their research methodology
 - Teachers to help students navigate questionable practices

Questionable and detrimental practices

Good scientific practice



??

Compliant

Non-compliant

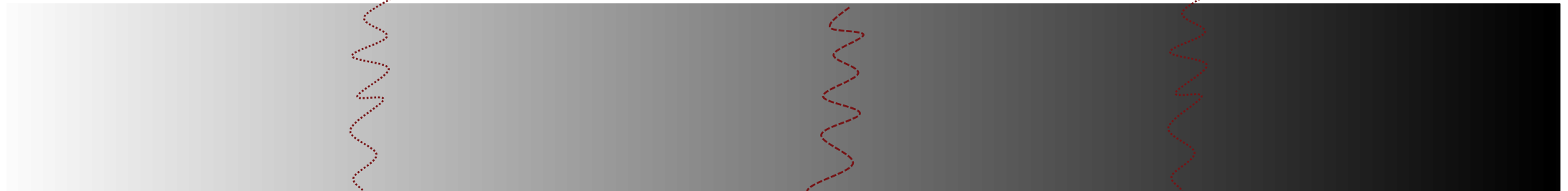
Misconduct

Questionable and detrimental practices

Good scientific practice

Questionable practices!

Misconduct



Compliant

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Questionable and detrimental practices

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COMMENTARY

Scientists behaving badly

To protect the integrity of science, we must look beyond falsification, fabrication and plagiarism, to a wider range of questionable research practices, argue **Brian C. Martinson**, **Melissa S. Anderson** and **Raymond de Vries**.

Science and Engineering Ethics (2006) 12, 53-74

Fostering Integrity in Research: Definitions, Current Knowledge, and Future Directions

Nicholas H. Steneck
University of Michigan, Ann Arbor, Michigan, USA

Keywords: Research Integrity, Research Misconduct, Responsible Conduct of Research, Research Behavior, Questionable Research Practices

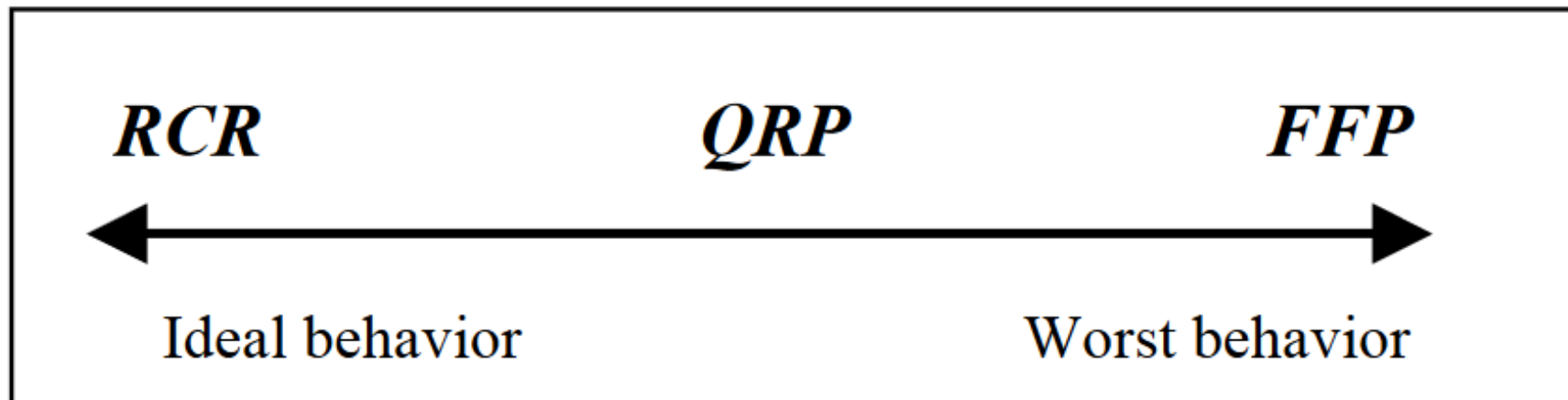


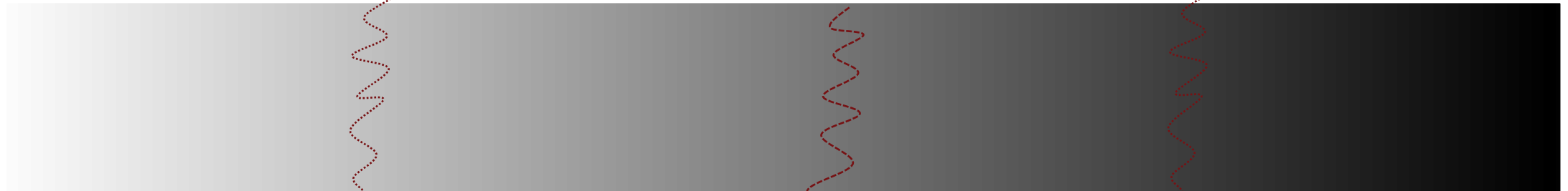
Fig. 1. Current framework for Defining Research Behaviors

Questionable and detrimental practices

Good scientific practice

Questionable practices!

Misconduct



Compliant

Non-compliant

Detrimental \neq questionable

If misconduct is strictly FFP, the following are 'questionable' practices :

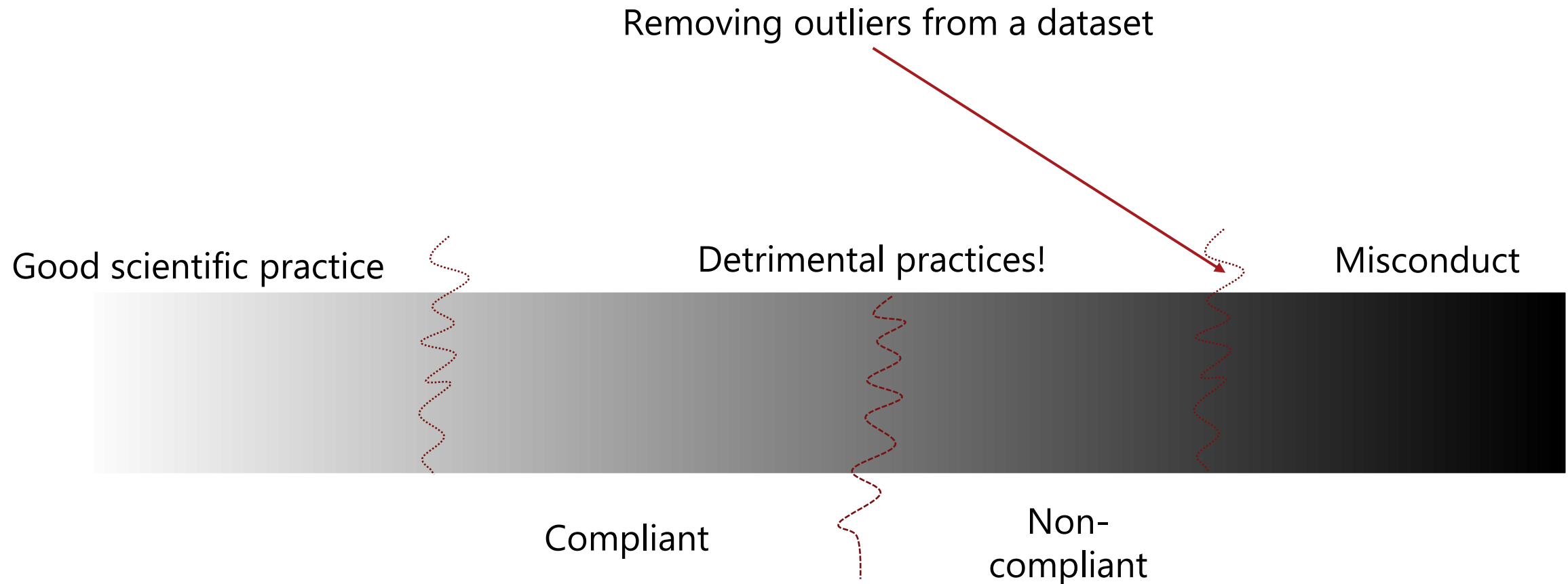
- Guest authorship
- p-hacking
- Secrecy about methods and data

But what's questionable here? Why not call these practices 'detrimental'?

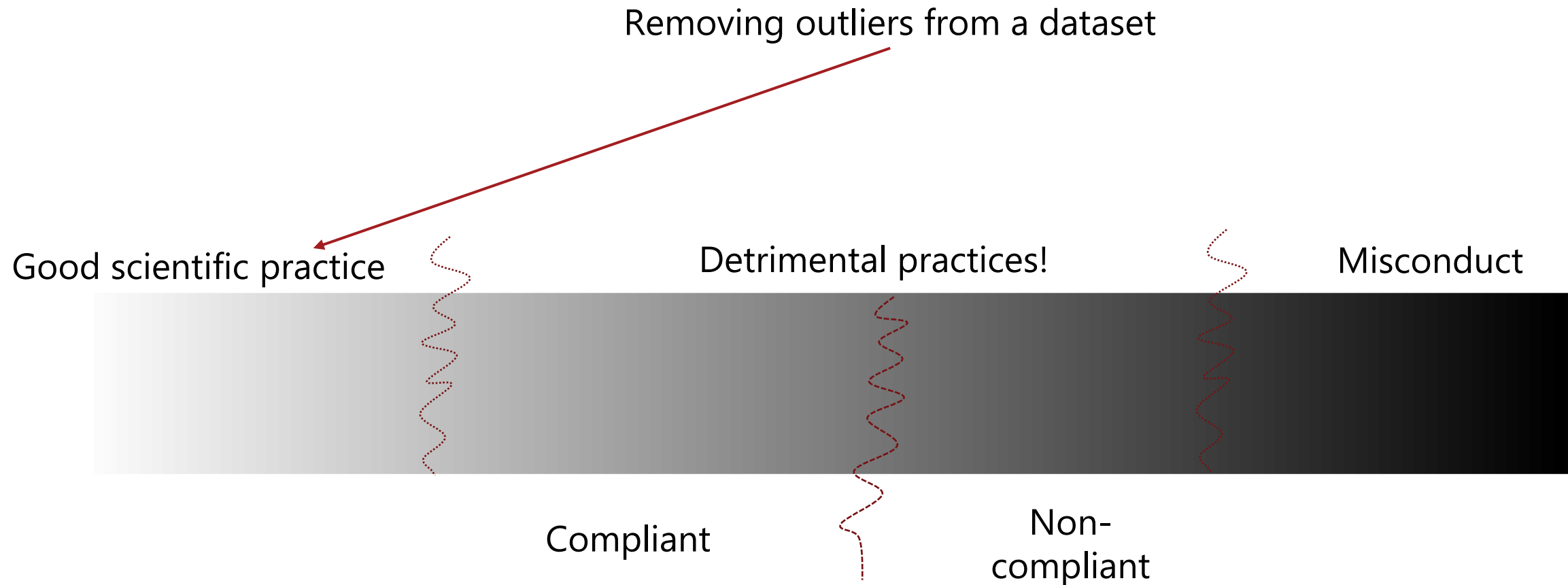
Other practices are truly questionable; you have to understand the context before you can determine if they are detrimental and unethical:

- Outlier management
- Freeriding in group work
- Getting help with assignments

Are questionable practices always detrimental



Are questionable practices always detrimental



Implications: research

- Research on perception and prevalence of certain practices is often done through surveys.
- Such surveys often (rightly), include questionable practices.
- However, the context dependence of these practices makes the answers hard to interpret.



Ethics & Behavior

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Grey zones and good practice: A European survey of academic integrity among undergraduate students

Mads Paludan Goddixsen, Mikkel Willum Johansen, Anna Catharina Armond, Mateja Centa, Christine Clavien, Eugenijus Gefenas, Roman Globokar, Linda Hogan, Nóra Kovács, Marcus Tang Merit, I. Anna S. Olsson, Margarita Poškutė, Una Quinn, Júlio Borlido Santos, Rita Santos, Céline Schöpfer, Vojko Strahovnik, Orsolya Varga, P. J. Wall, Peter Sandøe & Thomas Bøker Lund

Implications: research

- Q10: Have you experienced that a teacher encouraged you to remove an outlier from a data set only based on a feeling that there was a fault in the measurement?
 - Yes: 28, No: 60
- Q11: Describe the last occurrence, where a teacher encouraged you to remove an outlier from a data set only based on a feeling that there was a fault in the measurement.

Science and Engineering Ethics
<https://doi.org/10.1007/s11948-020-00206-4>

ORIGINAL RESEARCH/SCHOLARSHIP

Handling Anomalous Data in the Lab: Students' Perspectives on Deleting and Discarding

Mikkel Willum Johansen¹  · Frederik Voetmann Christiansen¹

Implications: research

"A long series of measurements were made, where the first were discarded because they showed presence of oxygen in an oxygen-free mixture. Even though it can't be proved, I am not in doubt that the mistake was due to oxygen in the tubes (even though they had been "flushed" with nitrogen), which is why I think it is correct to exclude data from an experiment that has been tested lots of times."

"A report was written about an experiment and the report was delivered to the lab instructor. Some of the results fitted badly, and no good reason could be given for it. The instructor suggested to delete the results, so data fitted better and the report could be accepted."

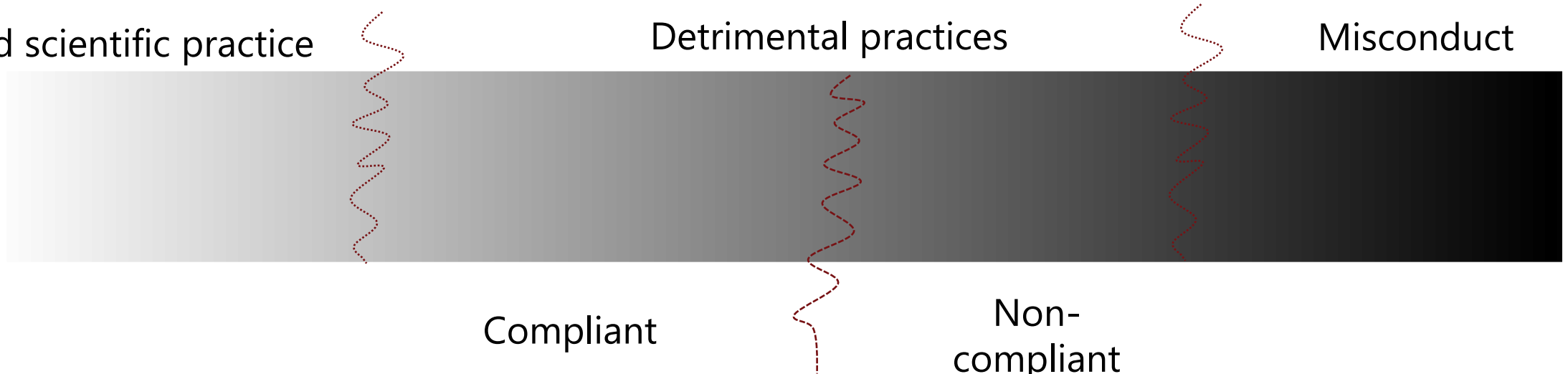
Good scientific practice

Detrimental practices

Misconduct

Compliant

Non-compliant



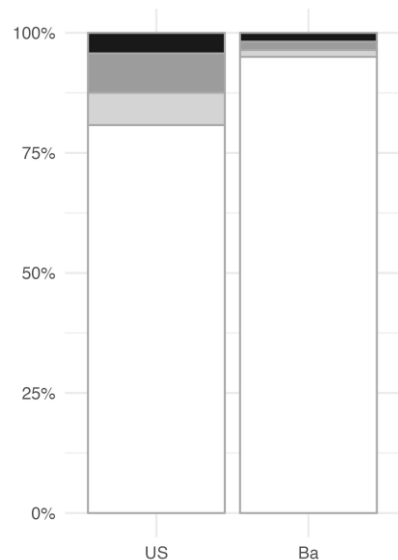
Implications: Teaching and regulation

- Are students aware of questionable practices? – No!

Collaboration

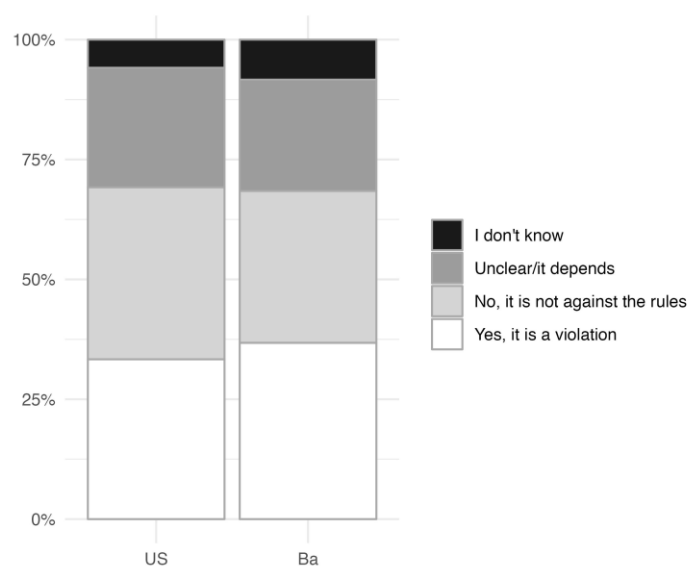
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Paying someone to write an assignment for you



Questionable

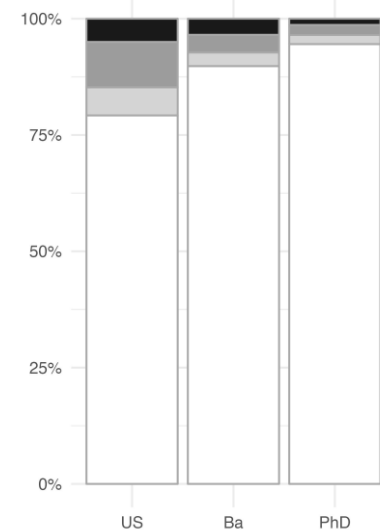
Let one member of a group do all the writing on a group project while the other members contribute to analysis and literature search



Citation

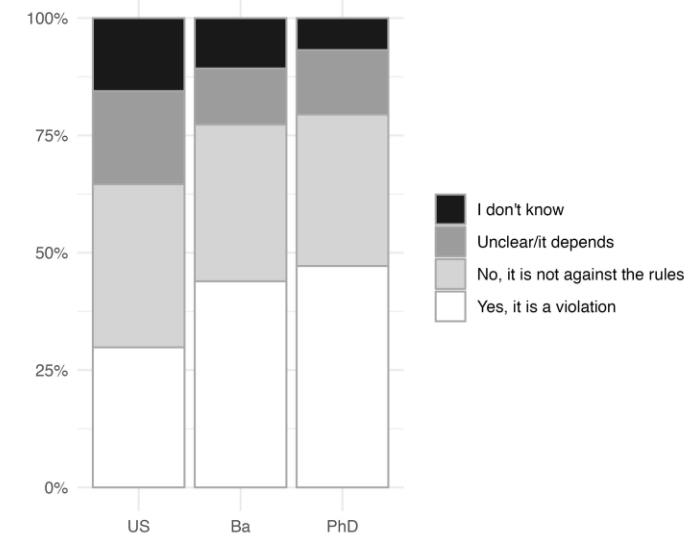
Non-compliant

Copying an entire page stating a central point from an external source into your own text without quotation marks but including a reference



Questionable

Copying a central point formulated in half a sentence from an external source without marking it with quotation marks but including a reference



(Johansen et al., in prep)

Implications: Teaching and regulation

- Students who believe there is always a clear answer are ill equipped to handle dilemmas when they occur.
- First step: Explicitly addressing questionable practices in teaching at all levels.

The image shows a composite of two screenshots. The left screenshot is the desktop website for 'INTEGRITY GAMES'. The top navigation bar includes 'Home', 'Key terms', 'Dilemmas', 'For teachers', 'About', and 'My cases'. Below the navigation is a large image of a person's hands typing on a laptop. The main content area has a heading 'Welcome to the Integrity Games!' followed by introductory text and a 'Go to the QUIZ' button. A sidebar on the right lists case categories: 'The Collaboration case', 'The Plagiarism Case', 'The Qualitative Data Case', and 'The Quantitative Data Case'. The right screenshot shows the Erasmus University Rotterdam website with a dropdown menu open for 'About EUR'. Below the navigation is a large image of a hand holding a smartphone displaying the 'Dilemma Game' app interface. The app screen shows a search bar, a 'Filter' button, and a list of dilemmas, including one titled 'A mild cough' with a 'Credibility' rating.

Thank you for your attention

- Questions or comments?

