Lessons from an analysis of 150 real-life cases of research misconduct

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1. Introduction

- Misconduct: not a new phenomenon

- *Before the 1980s*
  - No formal policies on misconduct

- *1980s*
  - First responses
  - Procedures for responding to allegations of misconduct *(Steneck,1999)*

How is misconduct in research addressed in real-life?

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2. Aim of the study

- *Which criteria are used to qualifying a case as misconduct?*

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3. Methods

- **_3.1. Inclusion criteria for selection of countries/cases:_**
  - ✓ Countries with different systems addressing misconduct

National Commissions based on legislation	National advisory commissions	Local/ Institutional level
Denmark	Netherlands	Belgium (Flanders)
Sweden		

  - ✓ Full reports of misconduct
  - ✓ English, French, Dutch
  - ✓ 2007 – 2017

- **_3.2. Data collection_**
  - _E- mail_
  - _Internet_

- **_3.3. Data analysis_**
  - _Inductive content analysis (Elo & Kyngas, 2008, 2014)_

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4. Results

4.1. Number of cases

- *150 misconduct files from 4 European countries*

Country	Cases retrieved
The Netherlands	82
Denmark	42
Belgium	23
Sweden	3
	n = 150

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4. Results

4.2. Criteria to qualify a case as misconduct

1) OBJECTIVE FINDING OF MISCONDUCT   Misleading information

> ✓ Assessment of the **content of the scientific work** concerned (e.g. scientific article, PhD dissertation)
> ✓ Decision whether the content is consistent with **the way research was conducted**

- *Illustrations from misconduct files:*
  - i. *'… documentation was found for the existence of 5 mice. According to the article, at least 8 – 12 mice should be included in the study' (case 5)*

  - ii. *The decision is based primarily on the PhD thesis, in which large parts have been plagiarized …' (case 3)*

- The research is not performed/reported in a credible way
- Misleads the reader of the scientific work concerned

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4. Results

4.2. Criteria to qualify a case as misconduct:

1) OBJECTIVE FINDING OF MISCONDUCT

2) SUBJECTIVE INTENT

✓ Assessment of parties' claims
✓ Decide the extent to which violation was committed consciously

- Different degrees of intentionality:
  - Intent:
    - *'The mice described in the article could not have existed… The Committee finds serious violation of good research practices **committed willfully** when reporting…' (case 5)*

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4. Results

4.2. Criteria to qualify a case as misconduct:

1) OBJECTIVE FINDING OF MISCONDUCT

2) <u>SUBJECTIVE INTENT</u>

> ✓ Assessment of parties' claims
> ✓ Decide the extent to which violation was committed consciously

- Different degrees of intentionality:
  - o Intent
  - o Gross negligence
  - o Negligence

*'… the Petitioner should have inserted a direct reference to the Complainant's paper.That was **negligent** of him. Since his dissertation contained repeated instances of negligence, the Petitioner can be deemed to have acted with **gross negligence** and consequently to have violated the principles of research integrity'. (Case 10)*

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4. Results

4.2. Criteria to qualify a case as misconduct:

1) OBJECTIVE FINDING OF MISCONDUCT

2) SUBJECTIVE REQUIREMENT

3) CIRCUMSTANCES

AGGRAVATING CIRCUMSTANCES

Experienced researcher

i. *'Expected to have knowledge of good scientific practice' (case 8)*
ii. *Example to others (case 14)*

EXTENUATING CIRCUMSTANCES

Junior researchers

i. *'The … has some degree of understanding for the more junior researchers who have been in a position of dependency on (…) (Case 11)*

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5. Discussion

1) *Objective finding of misconduct*
   - Importance of RAW DATA and data management
     (Singapore Statement, 2010)

2) *Subjective intent*
   - Challenge to distinguish intentional fraudulent behavior from sloppiness, rushed work or incompetence
   - Same categorization of intentionality in the literature
     (Anderson, 2007; Fanelli, 2011)
   - ≈ Culpability in criminal law

3) *Difficult to collect full misconduct reports*
   - Plea for more TRANSPARENCY of misconduct files
     - 'Share practices and learn from experiences'
       (the Bonn PRINTEGER Statement, 2018)

- [1] Andersen, H. (2007). Demarcating Misconduct from Misinterpretations and Mistakes. First Biannual SPSP Conference. Twente.

- [2] Fanelli, D. (2011). The black, the white and the grey areas - towards an international and interdisciplinary definition of scientific misconduct. *Promoting Research Integrity in a Global Environment*, 77–87.

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