Strengths and weaknesses of current policies and practices

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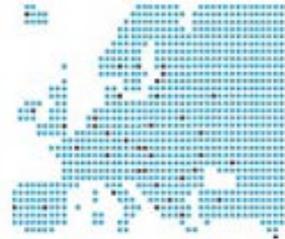
Scientific Integrity

- Presentation includes results of a modest survey among ALLEA's member Academies, the 53 national Academies of Sciences and Humanities in Europe

- Questions were asked on: prevalence of misconduct, shared values for responsible conduct of research, types of misconduct, national Codes of Conduct, rules and procedures, possible role of Academies and ALLEA, international research.
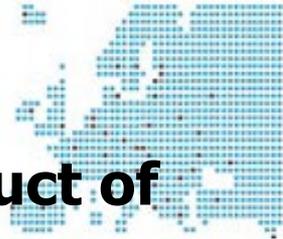
Shared positive values for responsible conduct of research

- **Honesty** and **scrupulousness** (precision, conveying information truthfully)

- **Reliability** (accuracy in performing research and reporting results)

- **Objectivity** (based on facts, transparency, verifiability)

- **Inpartiality** and **Independence** (from commissioning or interested parties)

- Additional:
  - **Efficiency** (proper use of resources, avoid waste)
  - **Justified goals** (ethically sound objectives, aim at common knowledge)

Prevalence

- Difficult to get hard data; there is indirect evidence.

- Impressions academies: Mostly an increase

- Due to:
  - Increasing pressure to produce and publish
  - Commercialisation
  - Tougher competition for funds
  - Diminishing esteem/prestige of science
  - Opportunities (internet)
  - Inadequacy of peer review system to detect misconduct (in increasingly complex projects)

Misconduct: definition, domain (I)

- Central are big three: Fabrication, Falsification, Plagiarism

- Other forms should not be neglected:
    - Bad data practices (storage, data management)
    - Bad research practices (informed consent, animal research, privacy protection)
    - Publication related misconduct (authorship, salami slicing)

- QRP: needs special attention; is a dangerous and difficult to detect virus

- Suggestion: Code of Conduct for big three, Institutional guidelines for Best Practices?

Misconduct: definition, domain (II)

- *There are still debatable questions*;

- Too much emphasis in individual; focus on whole science system

- Demarcation lines between acceptable and unacceptable conduct not always clear, e.g.
  - Selective use of data/citations as part of scientific debate (Lombok)
  - Plagiarism in popular publications
  - Not all 'corrections' dishonesty (Mendel)
  - Sliding scale : forgery – 'improvement' - fudge – QRP

- Possible conflict scientific morals and
  - Professional ethics
  - Employers interests
  - National security

- Do'nt forget 'psychology of determined researcher'

Code of Conduct (I)

- Do they exist at national level?
  - In a number of (mostly Western European) countries: yes
  - In many (most CEE) countries: no
  - In some: being developed
  - In many countries: no national CoC, but standing committees at level of institutions or professional organisations

- Should there be a CoC? General consent: yes

- Should it be national or international?
  - ¾ European or international
  - ¼ National (too much cult./leg. differentiation)

Code of Conduct (II)

- Who should develop CoC?

- **National level:** Most preferred: cooperation between National Research Councils, National Academies of Sciences and National Association of Universities

- **European level:** European Commission, European Council. Advisory role ESF, EuroHorcs, ALLEA

- **World level:** UNESCO, OECD, ICSU, IAP (advisory, assitance in drafting, coordination)
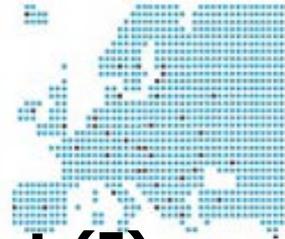
Dealing with cases/allegations of misconduct (I)

- Large majority: Responsibility with institutes/universities (often standing ethical committees)

- Few cases: Central national body (ethical c'tee of Academy of Sciences, or independent national body)

- Many countries: Some national body (of Academy of Sciences, or of National Research Council, or on behalf of universities, or combination of these): advisory, board of appeal, ombudsfunction

- Rare cases brought to legal court
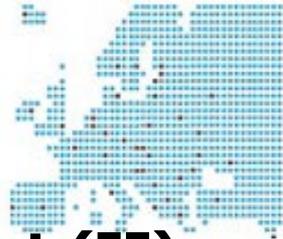
Dealing with cases/allegations of misconduct (II)

- All agree on : Due and fair process, rapid handling, proper penalty, clearly defined and well published rules

- Cases of misconduct kept secret or made public?
  - Majority; public
  - Often: depends on case
  - Few: secret, or only public if media find out

- In long run positive approach / prevention (education, development of scientific responsibility) more effective than negative approach / deterrence (threats, sanctions, science courts)

International research projects (I)

- Particularly difficult if principles, definitions, procedures differ between countries, or if CoC is non-existent

- Yet common and non-discriminating approach is needed

- Levels of further development:
  - Share information
  - Promote national CoC's
  - Harmonise national arrangements
  - Develop and have accepted international CoC, comprising two levels:
    - Principles (universal): positive values and FFP
    - Rules of procedure, with options recognising legitimate national differences

International research projects (II)

For the time being:

- In sponsored research: Follow clearly defined rules of (national, European or international) sponsor. If Code of Practice for Research does not yet exist within system of sponsor: this should be designed and formulated

- With multiple or no external funding: reach agreement in advance, to be stated in a Memorandum of Understanding (MoU). Such an agreement could follow general rules to be suggested/developed by OECD Science Forum.