

ICSU and Research Integrity

Strengthening international science for the benefit of society

ICSU: Who and what?

- Founded in 1931
- Non-governmental
- A membership organization with:
115 National Members, and
29 International Scientific Unions
- Represents the global science community
- Science for policy and policy for science

Strategic Themes

Three inter-related themes:



Research Integrity and ICSU's interest



A global perspective for a global issue
1999 - World Conference on Science calls for a 'hippocratic oath' for scientists
Post 11/9/01 - Bio-security concerns lead to increased regulation and oversight
2006 - ICSU establishes new policy committee on Freedom and Responsibilities in Science
2007 - co-sponsor 1st World Conference on Research Integrity with ORI and ESF

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National Member survey



Questionnaire on mechanisms and institutional roles, re research integrity, in late 2007
19 (~15%) of Members responded
In many countries (N and S) not perceived as a major issue
Few countries have formal national oversight mechanisms/structures
Major responsibility lies with Universities as employers
Academies can play a role and are developing this in a few countries

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Differing perspectives: Don't worry



- There always has and will be some cheating;
- Science is self-correcting and self-policing;
- There are isolated cases but the system as a whole is fine
- Talking about it will attract unnecessary attention

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Differing perspectives: Do worry



- Science is more public than ever before
- The pressure and incentives for scientists encourage questionable practices
- Science has no borders - high profile cases damage the whole of science
- If the scientific community doesn't act then policy-makers and the public will

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ICSU actions



1. Policy statements and advice to Members:
July 08 – Publication practices and indices and the role of peer review in research assessment
September 08 – Promoting the integrity of science and the scientific record
2. Publications:
October 08 – Freedom Responsibility and the Universality of Science
3. Partnerships with other international organisations e.g. ESF and ORI for World Conferences

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Indices and research assessment



- Concern at uncritical use of metrics as replacement for independent peer-review
- Impact factors and citation indices open to bias, manipulation and misinterpretation
- Pressure to publish can induce misconduct
- Variable and questionable practices regarding ghost authorship and co-authorship

Propose:

- Strengthen peer review and only use indices cautiously
- Should no. of publications per author per annum be 'capped' ?
- Need to share options and strategies across countries and disciplines.

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Integrity of science and the scientific record



- Current mechanisms for identifying and correcting errors in the scientific record are inefficient

Recommend:

- The establishment of national monitoring and advisory mechanisms for research integrity
- Strengthen practices by journals to improve detection and facilitate correction of published errors
- Responsible institutions work closely with scientific editors and publishers to identify and investigate cases of deliberate research misconduct

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Freedom, responsibility and Universality of Science



Booklet developed by ICSU-CFRS in consultation with all ICSU Members

A brief reference document for all stakeholders of the global scientific community

Makes explicit the responsibilities inherent in the Principle of Universality

Not a 'hippocratic oath' or pledge but a consensus document on freedoms and responsibilities

A framework for reflection and debate

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The booklet contents



1. The nature of science
2. The Principle of Universality
3. Freedoms of scientists (movement, association, expression and communication)
4. Responsibilities of Scientists (internal and external)
5. Balancing freedoms and responsibilities (current dilemmas)
6. Suggested roles for various institutions

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On the conduct of science



- Conduct work with **honesty** and **integrity**
- Report on work in an **accurate, orderly, timely** and **open** fashion
- Assess work (including one's own) **impartially** and **fairly**
- Be **respectful** and **considerate**, re human subjects, animals and the environment
- Duty to expose misconduct (**whistle-blowing**)

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On responsibilities to society: collective



- Contribute to the wealth of shared human knowledge and experience
- Generate and promote the use of science to improve human welfare and sustainable dev.
- Ensure the benefits and minimise the potential dangers of applications of science
- Support good, evidence based, policy-making
- Promote public engagement in science
- Concern for the greater common good

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On responsibilities to society: individual



- Uphold the principle of universality (non-discrimination and equity)
- Respect for human rights, animals and environment
- Acknowledge scientific risk and uncertainty
- Be accountable in any advisory capacity
- Communicate responsibly and honestly
- Place social benefits before personal gain

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Looking to the future



The overall aim:
to promote an honest research culture.

Challenges:

- What is the true scale of misconduct and questionable practice?
- Need appropriate rules, regulations and enforcement/investigation mechanisms
- Also need to address systemic issues e.g. are the incentives for career progression/measures of scientific success appropriate?
- Need to simultaneously tackle issues at multiple scales – local to global
- How best to integrate into formal and informal science education, training and mentoring?

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