Research integrity and research culture

Honesty

In all aspects of research, including:

- Planning
- Methods
- Data collection
- Credit
- Reporting
- Interpretation

Rigour

In line with disciplinary norms, including in:

- Appropriate methods
- Following protocols
- Interpreting data
- Drawing conclusions
- Disseminating results

Transparency

Promoting trust and confidence, including by:

- Reporting full methods
- Publishing all results
- Sharing data, code and materials
- Declaring conflicts of interest

Research Integrity

Respect

For everyone & everything involved in research, including:

- Colleagues
- Other researchers
- Participants
- Animals
- The environment

Accountability

Of everyone involved in research, including:

- Researchers
- Institutions
- Funding bodies
- Publishers

Source: Graphical representation of research integrity based on the core areas described in *The Concordat to Support Research Integrity* 2019. Image created by UK Research Integrity Office: https://ukrio.org/about-us/what-is-research-integrity/

What does 'good' look like?

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Research:

- Rigorous
- Accurate
- Original
- Honest/ transparent
- Collaborative

- Multidisciplinary
- Open
- Creative
- To the benefit of society

The Culture of Scientific Research in the UK Nuffield Council on Bioethics (2014)

Culture:

- All stages of research: from beginning to end
- All disciplines and all career stages
- *'No such thing as failures, only setbacks'*
- **Inclusive**
- **Enabling research, not restricting it**
- **Safeguarding trust in research**

Rules exist but much is unwritten…

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sity of Memphis to SBF and JAK. All authors contributed equally to this paper so the order of authorship was determined by rock, paper, scissors.

Kupfera, J., Webbeking, A. and Franklin S. B. (2004), *Forest fragmentation affects early successional patterns on shifting cultivation fields near Indian Church, Belize.* Agriculture, Ecosystems & Environment, 103.

[1] Manuscript received 7 December 1990; revised 13 June 1991; accepted 28 June 1991.
[2] Order of authorship determined by brownie bake-off.

Young, H. J. and Young, T. P. (1992), *Alternative Outcomes of Natural and Experimental High Pollen Loads.* Ecology, 73.

Can problems be prevented?

- A recurring theme from UKRIO's Advisory Service: problems occurring because of **overconfidence, bad habits or a failure to get help.**

- Awareness and training: researchers need to be encouraged to **be self-critical** and there should be **no stigma attached to asking for assistance.**

- Organisations need to **support their researchers** in this.

- A key lesson from UKRIO's unique experience: **serious problems could have easily been avoided with a bit of foresight.**

'Publish or perish' vs. ethics and reflection

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TOP FIVE INCENTIVES FOR EACH CATEGORY AS RATED FOR THEIR POTENTIAL IMPACT ON RESEARCH INTEGRITY*

Strongly positive perceived impact:	Positive and negative perceived impact:	Strongly negative perceived impact:
Data sharing policies and requirements	Media coverage and public perception of research	Incidents of bullying and harassment
Open access publishing	Research leadership and management	Use of journal impact factor (JIF), h-index and other metrics
Interdisciplinary research	How funding for specific projects is awarded	League tables of institutions
Professional development and training opportunities	How researchers are assessed for promotion during their careers	Institutional workload models
Research leadership and management	Institutional research strategy	How researchers are assessed for promotion during their careers

- **Source:** *Research Integrity: a landscape study*, June 2020. Vitae, UKRIO and UKRN, on behalf of UKRI.
- Also have a look at *What Researchers Think About the Culture They Work In*, 2020. Wellcome Trust.

What is UKRIO doing?

UK RIO
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Vision

UKRIO's vision is that:

Through our activities, the UK research community is supported to produce work of the highest integrity, quality and efficacy.

- Established 2006
- Registered charity
- Supported by 110+ research organisations

1 Education –

guidance and support through publications on research practice, training activities and a comprehensive events programme.

2 Sharing best practice –

clear and honest development for the research community through facilitated discussions about key issues, informing national and international initiatives, and working to improve research culture.

3 Expert guidance –

confidential and expert advice and guidance, as a proactive service for both institutions and individual researchers, as well as in response to requests for assistance.

- **Have a look at** our research culture resources and practical toolkit, our research integrity champions guidance and book a place at our free online annual conference 24th May.

Lessons learned by UKRIO: 2006 - 2023

1. **Adopt a positive message:** focus on fraud can be counterproductive. Researchers more interested in *'how to get it right'*. Mistakes/ questionable practices more insidious and more common than major fraud.

2. **Focus on what is relevant to researchers**: address issues which matter to them and respect disciplinary norms/ needs.

3. **Encourage self-reflection:** standards for research perceived as self-evident but in practice can be challenging to meet.

4. **Prioritise culture/ leadership** and recognise this is long-term work! Don't micro-manage, be proportionate.

5. **Improve systems and incentives:** they must promote high quality and ethical research, rather than impede it.

6. **These issues have been studied time and time again. Time for action!**

Closing thoughts:

- **What challenges do you face** when trying to do high quality, ethical research?

- **What do you need to help you** overcome these challenges?

- **What can you do** yourselves? **What role should others play** – e.g. employers, funders, publishers, etc.?

- **What are the priorities in improving research culture:** what changes, and how? And what *shouldn't* be changed – what's working well?