

An introduction to research integrity

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‘Research integrity’ = good practice



“Most people say that it is the intellect which makes a great scientist. **They are wrong: it is character.**”

Albert Einstein

“In general terms, responsible conduct in research is simply good citizenship applied to professional life... **However, the specifics of good citizenship in research can be a challenge to understand and put into practice.**”

US ORI *Introduction to the Responsible Conduct of Research* (2007)

But what has this go to do with me?



- Key elements of research integrity are:
 - Honesty, Rigour, Transparency and Open Communication, Care and Respect, Accountability
UK Concordat to Support Research Integrity (2019)
- Key themes:
 - All disciplines
 - All career stages
 - All elements of your research: from beginning to end
 - **Enabling research, not restricting it**
 - **Safeguarding trust in research**

Problems are rare?

- Fanelli, D., 2009. [How Many Scientists Fabricate and Falsify Research? A Systematic Review and Meta-Analysis of Survey Data:](#)
 - On average, 1.97% of respondents admitted to have **fabricated, falsified or modified data or results** at least once.
 - Up to 33.7% admitted to **questionable research practices**.
- **What about mistakes?**
 - Studies looking at the causes of retractions suggest that **c.12% - c.19% are caused by honest errors** (e.g. [Moylan, E.C., and Kowalczyk, M.K., 2016](#) and [Fanelli, D., 2016.](#))

Can problems be prevented?



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- A recurring theme from UKRIO: 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.**

What is 'good' 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)

- Also: 'No such thing as failures, only setbacks'
- **What do all of the above traits look like in different types/disciplines of research?**

Research culture: 'Publish or perish' vs. ethics & reflection



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

Strongly positive perceived impact:

Data sharing policies and requirements

Open access publishing

Interdisciplinary research

Professional development and training opportunities

Research leadership and management

Positive and negative perceived impact:

Media coverage and public perception of research

Research leadership and management

How funding for specific projects is awarded

How researchers are assessed for promotion during their careers

Institutional research strategy

Strongly negative perceived impact:

Incidents of bullying and harassment

Use of journal impact factor (JIF), h-index and other metrics

League tables of institutions

Institutional workload models

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

Research during a pandemic

- Considerable effects on how research is designed, funded, conducted, managed, monitored and disseminated.
- Huge impact on health, wellbeing and working practices of researchers and of society as a whole.
- How to best support researchers during these times?
- **Are there any new working practices which we should try to retain long term?**



UKRIO [Recommended Checklist for Research Communities During the COVID-19 Pandemic](#)
(2020)

Questions and discussion

- **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. institutions, funders, publishers, etc?
- **How do we want to improve research culture:** what changes, and how? What shouldn't be changed?