UK Research Integrity Office

An introduction to research integrity

James Parry, Chief Executive, UKRIO

A clear message:
Good practice = research quality

"If we are to maintain our position at the very forefront of research and scholarship, then we must be sure that the work of our research community is underpinned by common values of rigour, respect, and responsibility.

Excellence and integrity are inextricably linked."

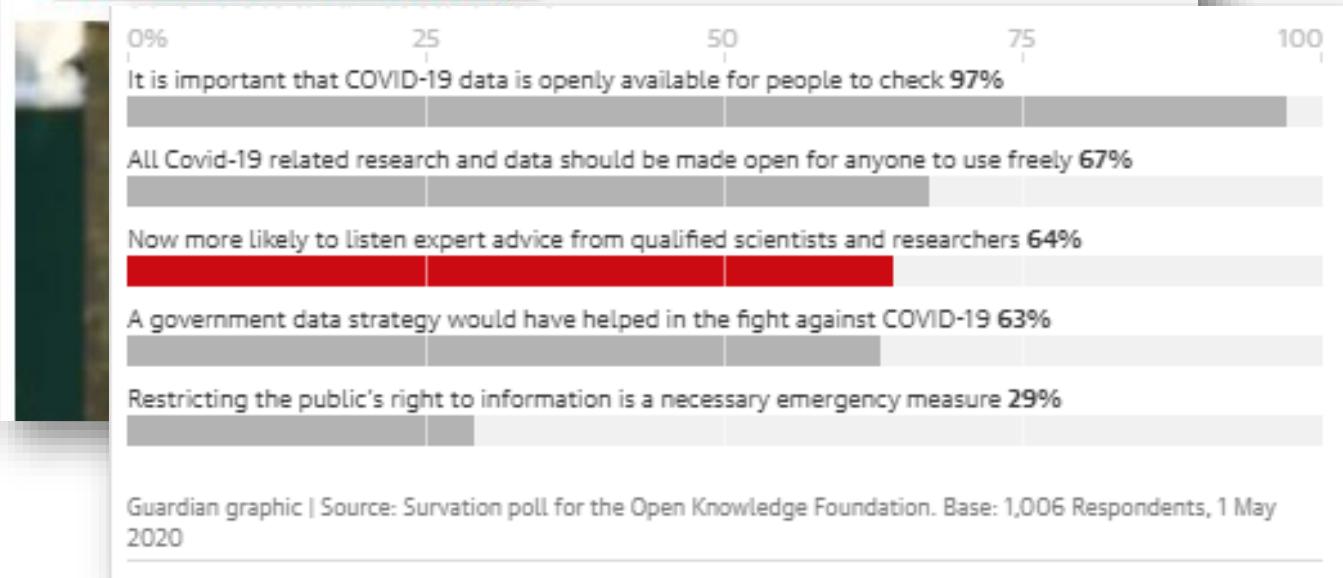*The Concordat to Support Research Integrity (2012)*

Good practice = trustworthy & open

Trust in scientists grows as fake coronavirus news rises, UK poll finds

Poll finds 64% of voters more likely to listen to expert advice as 51% say they have seen fake news about virus

- Coronavirus - latest updates
- See all our coronavirus coverage

It is important that COVID-19 data is openly available for people to check **97%**

All Covid-19 related research and data should be made open for anyone to use freely **67%**

Now more likely to listen expert advice from qualified scientists and researchers **64%**

A government data strategy would have helped in the fight against COVID-19 **63%**

Restricting the public's right to information is a necessary emergency measure **29%**

Guardian graphic | Source: Survation poll for the Open Knowledge Foundation. Base: 1,006 Respondents, 1 May 2020

Source: *The Guardian*, 05/05/20

But what has this go to do with me?

'Good research practice' by another name

- Key elements of research integrity are:
  - Honesty, Rigour, Transparency and Open Communication, Care and Respect, Accountability

  The 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**

Isn't this stuff obvious?

'Rules' exist but much is unwritten…

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.

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 Kowalczuk, M.K., 2016 and Fanelli, D., 2016.)

Can problems be prevented?

- 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

UKRIO

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

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. universities, funders, publishers, etc?

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