Who should take responsibility for integrity in research?

Reflecting on comparisons with the US and the results of the recent <u>International</u> <u>Research Integrity Survey (IRIS)</u>, **George Gaskell**, **Nick Allum**, **Miriam Bidoglia** and **Abigail-Kate Reid** argue that robust research integrity cultures depend on support from different institutions across the research ecosystem.

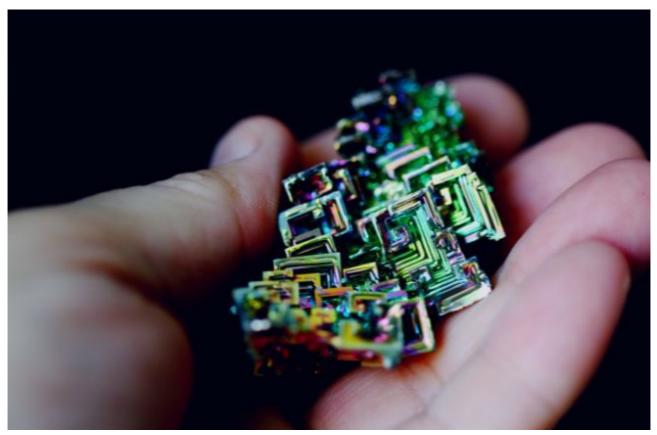
The journal Nature has in recent years featured hundreds of pieces on research integrity. To summarise, the current high-pace, hyper-competitive nature of research leads to threats to the quality and credibility of scientific research, notably through a reproducibility crisis, unreflective reliance on quantitative performance metrics, unreliable and biased peer review, falsification and fabrication. As such, Robert Merton's idealised image of science as organised scepticism has been challenged by the irrational scepticism of right-wing extremism, religious bigotry, populism and absurd conspiracy theories.

Research integrity has been in focus in the USA for 30 years. The National Science Foundation takes a dirigiste approach, setting out protocols on research integrity and requiring institutions to provide training and oversight in the ethical conduct of research. This is supported by official bodies that can investigate reports of scientific misconduct. The All European Academies (ALLEA) took up the cause of research integrity in the early 2000s. Its current European Code of Conduct for Research Integrity defines four fundamental principles of research integrity: reliability, honesty, respect and accountability. The European Union's €95.5 billion research fund (Horizon Europe) now stipulates that to be awarded research funding, applicants must confirm compliance with the ALLEA Code of Conduct and have appropriate procedures, policies and structures in place to foster responsible research practices.

Against this background, the International Research Integrity Survey (IRIS), funded by the European Commission, mapped the opinions and reported behaviours of 2,300 active researchers in the US and 45,000 in Europe and how they assess their institutions' support for research integrity. The findings of the survey point to deficits in

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research environments, research activities and organisational practices. At the same time, we find encouraging signs of concerns about research integrity and a willingness to adopt research and organisational practices that support research integrity.



With the experience of thirty years of RI policy, 80% of US researchers are confident about the integrity of their work; the same is true for 60% in Europe, falling to just 40% for Europe's early career researchers. Confidence in their organisations' support for research integrity is expressed by fewer than 50% of researchers in the US and less than 30% in Europe.

The most prevalent admissions of questionable research practices in both Europe and the US concern inappropriate attribution of authorship, inadequate peer review and poor supervision of junior researchers. Selective reporting and researching without ethical approval, are not uncommon but are more frequent in Europe. US and Europe differ most noticeably for carrying out research without ethical approval and failing to disclose conflicts of interest. In both cases, the rate of admission is twice as high for European researchers. In some instances, this may be indicative of sloppier practice in Europe, but it may also reflect variability in the formal requirements for ethical approval and

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declarations of interest in different national and institutional contexts.

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Asked whether their organization has high standards on nine integrity-related topics, while agreement is higher in the US than Europe and among the medical science disciplines, overall, half of researchers say their organization does not have high standards.

There are, however, positive indications regarding the development of individual competences and organizational policies and practices. Researchers value the 'intrinsic' benefits of research integrity, in terms of delivering greater research quality and trustworthiness far more than the 'extrinsic' benefits of promotion and salary. Most researchers recognise that responsibility for research integrity is shared between them and their organization. In Europe a majority say they are willing to engage in integrity training, consider that such activities are well intentioned and should improve research quality. A non-trivial percentage of both European and American researchers would welcome additional support across the nine areas of RI.

What are the lessons of the IRIS survey for researchers and their organizations? While there is concern about the current state of integrity in research conduct and a recognition of its benefits, the findings from the US and Europe show that there are no quick fixes. After decades promoting ethics and integrity in research conduct in the US, we still find integrity deficits in both researchers' behaviours and in how they judge their organization's practices.

A cornerstone of research integrity is that it is the responsibility of multiple actors – researchers, their organizations, research funders, professional associations and academies. And this is exactly what our study shows. Researchers rely on multiple channels of communication, and amongst these, the opinion of their scholarly community, is the most valued.

Policies must be developed to reinforce best practice rather than being seen as an irrelevance to the real business of research. The <u>SOPs4RI project</u> has published guidelines for 'Research integrity Promotion Plans' which organizations may find useful

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in achieving a healthy research culture and delivering trustworthy scientific research.

Ultimately, the pro-active commitment of the National Science Foundation in the US shows that funding organizations have a vital role in setting the agenda and for monitoring institutional compliance. The European Commission, through Horizon Europe, is in a unique position to make similar demands of research institutions and researchers.

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