Time for an evidence-based approach to research integrity

Further to its oral evidence on 24 October, Meta-Lab would like to add the following points to the Research Integrity Inquiry.

In response to Q35, Meta-Lab confirms that it recently registered a meta-analysis of the effect of financial conflicts of interests on reported outcomes in policy evaluations. This registration is available at: https://osf.io/y27qk/. The study will be pre-printed in January 2018.

In response to Q34, Meta-Lab would like to call the attention of the Committee to a number of key studies. The first study, by John P.A. Ioannidis (one of the most-cited scientists across the scientific literature), lists a number of research characteristics considered to be correlated with low scientific credibility (and, to some extent, with lower integrity). These are:

1. “The smaller the studies conducted in a scientific field, the less likely the research findings are to be true”.
2. “The smaller the effect sizes in a scientific field, the less likely the research findings are to be true”.
3. “The greater the number and the lesser the selection of tested relationships in a scientific field, the less likely the research findings are to be true”.
4. “The greater the flexibility in designs, definitions, outcomes, and analytical modes in a scientific field, the less likely the research findings are to be true”.
5. “The greater the financial and other interests and prejudices in a scientific field, the less likely the research findings are to be true”.
6. “The hotter a scientific field (with more scientific teams involved), the less likely the research findings are to be true”.

The second study provides qualitative information on attitudes and experiences of European researchers at early career stages on research integrity [2].

The third study examines how working scientists understand, conceptualize, apply, and communicate norms and standards for good research practice.

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Supplementary written evidence submitted by Meta-Lab (RES0021)

References

