Spot the Manipulation
COPE: Resources for what to do if you suspect fraud or fabrication

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About COPE
- Began in London (1997) as a small, informal group of journal editors to discuss issues related to publication ethics.
- Registered Charity and Corporation under UK law.
- We currently have >12,000 members from over 100 countries.
- As an organization, COPE’s role is to assist editors of scholarly journals and publishers/owners in their endeavour to preserve and promote the integrity of the scholarly record through policies and practices that reflect the current best principles of transparency as well as integrity.

12 Trustees
Members of Council with legal responsibilities for COPE

30+ Council members
Lead all the work of COPE, Subcommittees, Working groups

12,000+ members
What does COPE do?

• Provide leadership in thinking about publication ethics.
• Offer a neutral professional voice in current debates.
• Provide practical resources to educate and advise editors and publishers on all aspects of publication ethics.
• Guide editors and publishers in how to handle cases of research and publication misconduct.
• Provide a forum for its members to discuss individual cases.

What does COPE offer?

https://publicationethics.org
COPE assists editors of scholarly journals and publishers - as well as other parties, such as institutions - in their work to preserve and promote the integrity of the scholarly record through policies and practices. COPE describes these in 10 “Core Practices”. COPE’s Core Practices should be considered alongside specific national and international codes of conduct for research.

1. Allegations of misconduct
   Journals should have a clearly described process for handling allegations, however they are brought to the journal’s or publisher’s attention. Journals must take seriously allegations of misconduct pre-publication and post-publication. Policies should include how to handle allegations from whistleblowers.

2. Authorship and contributorship
   Clear policies (that allow for transparency around who contributed to the work and in what capacity) should be in place for requirements for authorship and contributorship as well as processes for managing potential disputes.

3. Complaints and appeals
   Journals should have a clearly described process for handling complaints against the journal, its staff, editorial board or publisher.

4. Conflicts of interest
   There must be clear definitions of conflicts of interest and processes for handling conflicts of interest of authors, reviewers, editors, journals and publishers, whether identified before or after publication.
5. Data and reproducibility
Journals should include policies on data availability and encourage the use of reporting guidelines and registration of clinical trials and other study designs according to standard practice in their discipline.

6. Ethical oversight
Ethical oversight should include, but is not limited to, policies on consent to publication, publication on vulnerable populations, ethical conduct of research using animals, ethical conduct of research using human subjects, handling confidential data and of business/marketing practices.

7. Intellectual property
All policies on intellectual property, including copyright and publishing licenses, should be clearly described. In addition, any costs associated with publishing should be obvious to authors and readers. Policies should be clear on what counts as prepublication that will preclude consideration. What constitutes plagiarism and redundant/overlapping publication should be specified.

8. Journal management
A well-described and implemented infrastructure is essential, including the business model, policies, processes and software for efficient running of an editorially independent journal, as well as the efficient management and training of editorial boards and editorial and publishing staff.

9. Peer review processes
All peer review processes must be transparently described and well managed. Journals should provide training for editors and reviewers on diverse aspects of peer review, especially with respect to adoption of appropriate models of review and processes for handling conflicts of interest, appeals and disputes that may arise in peer review.

10. Post-publication discussions, corrections
Journals must allow debate post publication either on their site, through letters to the editor, or on an external moderated site, such as PubMed Commons or PubPeer. They must have mechanisms for correcting, revising or retracting articles after publication.
Data and Reproducibility

- Guidelines
  - Declaration of Interests: Guidance for the Researcher
  - Funding Information for Authors: Guidance for the Researcher
- Image Manipulation

- Image manipulation as a general practice
  - Case number: 0024
  - Year: 2014
  - Resolution: Case Closed
  - Case type: 2014 Case Study
  - Title: Image manipulation

publicationethics.org
As managing editor, I view all manuscripts before they are assigned to an editor. Within a 4 week period, I have detected five manuscripts where photographs of either gels or plant materials were used twice or three times in the same manuscript. These manuscripts were immediately rejected.

However, we are not convinced that these are cases of deliberate misleading of the scientific community. It rather seems to us that many laboratories consider photographs as illustrations that can be manipulated, and not as original data. Thus gels are often cleaned of impurities, bands are cut out and photographs of plant material only serve to show what the authors want to demonstrate, and the material does not necessarily originate from the experiment in question.

When the editor-in-chief rejected such a manuscript, a typical response was: “I am surprised by the question and problem you pointed out in our manuscript. I checked the pictures you mentioned and I agree that they are really identical. But please be reminded that the purpose of these gel pictures was only to show the different types of banding pattern, and the gels of a few specific types were not very clear, so my PhD student repeatedly used the clearer ones. This misleading usage does not have an influence on data statistics or the final conclusion.”

Question(s) for the COPE Forum

- What can be done to ensure that all gels and all photographs originate from the experiment and that they should never be tampered with?
- How can the scientific community of some particular countries be taught correct scientific publishing standards?
The advice from the forum was for journals to strengthen their guidance on this issue. Journals should provide clear guidelines in their instructions to authors on what is acceptable. Original data, such as gels, should not be used as illustrations, without an explanation. Line drawings, for example, can be used to illustrate a point, but if original data are being used just to illustrate a point, this should be accompanied by a very clear statement in the manuscript telling the reader this and explaining what is being demonstrated.

The forum advised looking at the guidance published in other journals. Some journals have very good guidance on this issue and editors may wish to incorporate such guidance into their instructions to authors (with full attribution and after obtaining permission).
Final Thoughts

COPE aims to

• Produce practical resources to educate and advise editors on issues on all aspects of publication ethics.

• Provide leadership in thinking on publication and research ethics.

• Serve as a neutral, professional voice in current debates.