A journey through the publication ethics landscape

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Education and support: Committee on Publication Ethics

• COPE began in 1997 as an informal forum for a small group of editors to discuss ethical issues relating to research and publication in biomedical journal publishing.

• Membership of COPE started with a few medical journals.
Who is COPE?

- Charity
- Elected council
- Officers (Chair, Secretary, Treasurer…)
- Day-to-day management staff
In 2015 COPE:

- Has over 10,000 members

- Is now international in scope and fully inclusive in subject matter

- Covers all academic disciplines for example:
  - Biomedicine
  - Pure and applied sciences
  - Engineering and technology
  - Arts, humanities and social sciences
What does COPE do?

- Leadership in thinking in publication about ethics
- Practical resources to educate and support
- A neutral, professional voice

- advises and educates editors and publishers on all aspects of publication ethics
- guides editors and publishers in how to handle cases of research and publication misconduct
- provides a forum for its members to discuss individual cases
What does COPE offer?

• Talks - Forums – Seminars – Workshops
• Database of cases
• Flowcharts (e.g., what to do if you suspect plagiarism in a submitted manuscript)
• Discussion documents (e.g., on anonymous whistle-blowers)
• eLearning (e.g., on conflict of interest)
• Best practice guidelines (e.g., retraction guidelines)
• Codes of conduct (e.g., for journal editors)
• Sample letters
Find out more about COPE

Committee on Publication Ethics

Promoting integrity in research publication

COPE is a forum for editors and publishers of peer reviewed journals to discuss all aspects of publication ethics. It also advises editors on how to handle cases of research and publication misconduct. Read more about COPE...

All Latest


The latest issue of COPE Digest: Publication Ethics in Practice is now available on the COPE website.

News

COPE is recruiting for a part-time, freelance Membership...
21st Jan 2015

CASE

Possible self-plagiarism and/or prior publication
10th Jan 2015

CASE

Possible omission of information essential for conclusions in a...
10th Jan 2015

CASE

Institutional review board approval required?
10th Jan 2015
All of the cases COPE has discussed since its inception in 1997 have been entered into a searchable database now contains over 500 cases together with the advice given by COPE. Following on from this, COPE also includes follow-up information and about outcome, and podcasts are available. We hope this database will provide a valuable resource for editors and those researching in this area.

You can search by classification or keyword using either the search field (top left) or the list of years and classifications/keywords listed below. A more detailed explanation of the classifications can be found on the COPE Case Taxonomy page.
Flowcharts

The flowcharts are designed to help editors follow COPE’s Code of Conduct and implement its advice when faced with cases of suspected misconduct. They can be downloaded individually or as a complete set.

The complete set of 17 is here (Download PDF, 476 kb).

Translations

Some or all of the flowcharts have been, or are the process of being, translated by COPE members into:

- Croatian
- Japanese
- Korean
- Farsi (Persian)
- Turkish
- Arabic
- Brazilian Portuguese
- Italian
- Spanish
- French
- Chinese

Italian, Spanish, French, and Chinese are now available here on the website.

We are currently reformatting the remaining translated versions but if you would like a PDF, please contact the COPE Administrator.

We are always looking for new translations. If you are able translate the flowcharts into a language not yet represented, please contact the Administrator here.

Individual flowcharts

What to do if you suspect redundant (duplicate) publication

1. Suspected redundant publication in a submitted manuscript (Download PDF, 60 kb)
2. Suspected redundant publication in a published article (Download PDF, 84 kb)

What to do if you suspect plagiarism

1. Suspected plagiarism in a submitted manuscript (Download PDF, 80 kb)
2. Suspected plagiarism in a published article (Download PDF, 76 kb)

What to do if you suspect fabricated data

1. Suspected fabricated data in a submitted manuscript (Download PDF, 84 kb, revised May 2011)
2. Suspected fabricated data in a published article (Download PDF, 84 kb, revised May 2011)
What to do if you suspect plagiarism

(a) Suspected plagiarism in a submitted manuscript

Reviewer informs editor about suspected plagiarism

Thank reviewer and say you plan to investigate
Get full documentary evidence if not already provided

Check degree of copying

Clear plagiarism (unattributed use of large portions of text and/or data, presented as if they were by the plagiarist)

Contact corresponding author in writing, ideally enclosing signed authorship statement (or cover letter) stating that submitted work is original/the author’s own and documentary evidence of plagiarism

Minor copying of short phrases only (e.g., in discussion of research paper from non-native language speaker)
No misattribution of data

Contact author in neutral terms/expressing disappointment/explaining journal’s position
Ask author to rephrase copied phrases or include as direct quotations with references
Proceed with review

Redundancy (i.e., copying from author’s own work)—see flowchart on redundancy

No problem

Discuss with reviewer

Author responds

Unsatisfactory explanation/admits guilt

Write to author (all authors if possible) rejecting submission, explaining position and expected future behaviour

Consider informing author’s superior and/or person responsible for research governance and/or potential victim

Satisfactory explanation (honest error/journal instructions unclear/very junior researcher)

Write to author (all authors if possible) rejecting submission or requesting revision, explaining position and expected future behaviour

If no response, keep contacting institution every 3–6 months
If no resolution, consider contacting other authorities, e.g., ORI in US, GMC in UK

No response

Attempt to contact all other authors (check Medline/Google for emails)

Contact author’s institution requesting your concern is passed to author’s superior and/or person responsible for research governance

Inform author(s) of your action

Inform reviewer of outcome/action
Reviewer informs editor about suspected plagiarism

Thank reviewer and say you plan to investigate
Get full documentary evidence if not already provided

Check degree of copying

Clear plagiarism (unattributed use of large portions of text and/or data, presented as if they were by the plagiarist)

Contact corresponding author in writing, ideally enclosing signed authorship statement (or cover letter) stating that submitted work is original/the author's own and documentary evidence of plagiarism

Minor copying of short phrases only (e.g. in discussion of research paper from non-native language speaker)
No misattribution of data

Contact author in neutral terms/expressing disappointment/explaining journal's position
Ask author to rephrase copied phrases or include as direct quotations with references
Proceed with review

Redundancy (i.e. copying from author's own work) – see flowcharts on redundancy

No problem

Discuss with reviewer

Author responds

No response
Guidelines and eLearning

Guidelines for peer reviewers

COPE Ethical Guidelines for Peer Reviewers

[COPE Ethical Guidelines for Peer Reviewers (PDF, 145 KB)]

Guidelines for authors

How to handle authorship disputes: a guide for new researchers

[How to handle authorship disputes: a guide for new researchers (PDF, 64 KB)]

Available Modules

- Reviewer Misconduct
- Plagiarism
- Introduction to Publication Ethics
- Falsification
- Fabrication
- Corrections, retractions and expressions of concern
- Conflict of Interest
- Authorship
Why publish?

Science and medicine increase by iteration

Scientific and medical publishing is not an exact process – its job is to document, record, archive, interpret, provoke discussion, but not be the final word
Conflicting priorities in publishing?

We all want literature we can trust.

**BUT**, there are sometimes conflicting priorities

- Readers (public & professional) – authoritative information
- Editors – to publish “good” papers
- Journalists – to get a story
- Authors – to get published and funded
- Institutions – to have a large publication record
What is publication ethics?

• Part of research ethics more widely
• Ensuring the integrity of the scientific literature
• Important in ensuring the literature is trusted

Medicine has often driven publication ethics but no scientific discipline is immune.
What does publication ethics cover?

- Authorship
- Plagiarism
- Data falsification and fabrication
- Research subject violations
- Conflicts of interest
- Redundant publications
- Reviewer misconduct
- Bias

...
Issues in publication ethics

1. Carelessness

Includes: Citation bias, understatement, negligence

Examples: Faulty statistical analyses, research methods incomplete, selective citation, unread references

Consequences: Request for correction, letter to editor
Issues in publication ethics

2. Plagiarism

Includes: Undisclosed sources

Examples: Copying of text without references, unattributed data

Consequences: Rejection or retraction of article, notification of institution
Issues in publication ethics

3. Redundancy

Includes: Salami publications, self-plagiarism

Examples: Publish several papers with minimal data from one study

Consequences: Rejection of manuscript, copyright infringement
4. Unfair authorship (ghost and guest authors)

Includes: Failure to include eligible authors, honorary authors

Examples: Head of department

Consequences: Angry colleagues, complaints to editor or institution
5. Undeclared conflicts of interest

**Includes**: Personal, professional and financial

**Examples**: Stock or share ownership, payment for lectures or travel, board membership

**Consequences**: Notification in the journal, possibly retraction of the article, mistrust among readers
6. Subject violations

Includes: Human and animal

Examples: No ethical review board approval for study

Consequences: Rejection of manuscript, notification of institution, legal case
Issues in publication ethics

7. Fraud

Includes: Fabrication and falsification

Examples: Selective reporting, altering or fabricating data

Consequences: Retraction of manuscript, notification of institution, funding ban
The staircase of misconduct

1. wrong observation
2. wrong analysis
3. inadequate record keeping
4. withholding method details
5. double and sliced publications
6. biased or post-hoc revision of study design
7. ignoring previous work of others
8. suppressing own data, dropping data points
9. undeclared conflicts of interest, corruption
10. undeserved authorship
11. unfair review, wrong testimony
12. espionage, giving away secrets
13. misuse of public funds
14. bullying, nepotism
15. overlooking others' use of flawed data
16. suppressing fraud allegation
17. no informed consent
18. plagiarism
19. falsification
20. fabrication
21. illegal human experiments

Just one example from the top of the list of misconduct...

1. wrong observation
2. wrong analysis
3. inadequate record keeping
4. withholding method details
5. double and sliced publications
6. biased or post-hoc revision of study design
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8. suppressing own data, dropping data points
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16. suppressing fraud allegation
17. no informed consent
18. plagiarism
19. falsification
20. fabrication
21. illegal human experiments
“Dear Editor

In xxx, yyy published my colleagues’ and my article. Since the manuscript’s publication, we have been working on other, unrelated studies using the same database. When results in these new, unrelated studies were implausible, I undertook an intensive, several weeks-long investigation ... I found we had failed to load 8 files of data into the dataset. This mistake resulted in the under-reporting of xxx ... this mistake occurred despite the intensive quality checks we have in place to ensure data quality and accuracy.

We sincerely apologize for these data issues and are committed to correcting the article...”
...and one from the bottom
...and one from the bottom

- Hwang Woo-suk, South Korean Scientist
- 1999 First claimed to have cloned a cow
- 2004 Claimed to have created pluripotent human embryonic stem cell line using somatic cell nuclear transfer method “used 242 eggs to create a single cell line.”
- Then 11 further lines
- Concerns raised over methodology after publication in Science in 2004
- All lines subsequently found to be fabricated
Serious consequences

Retraction Watch

Former Tokyo Tech materials researcher sanctioned after bringing forward evidence of data fabrication

with 20 comments

A materials researcher faced three months without salary, retired from his research position and may have to return a portion of a grant worth $1 million US as punishment after a postdoc in his lab was caught fabricating data.

Seizo Miyata, formerly a materials researcher at the Tokyo Institute of Technology, headed a group that worked on carbon alloy catalysts. Last year, Miyata told Retraction Watch, he found evidence that postdoc Wu Libin had fabricated data.

Reached by Retraction Watch by phone, Miyata didn’t say who uncovered the evidence,

http://bit.ly/PzhCKK
Retractions

- Most serious consequence by journals
- Correcting the literature not punishment
- Retractions cover both honest errors and misconduct
- Standards of retraction of mixed quality
In the news

The New York Times
Harvard Finds Scientist Guilty of Misconduct
By NICHOLAS WADE
Published: August 20, 2010

BBC NEWS
Viewpoint: The spectre of plagiarism haunting Europe
By Debra Weber-Wulff
Professor of Media and Computing, University of Applied Sciences, Berlin

SPIEGEL
Gefälschte Studien
Fachblatt kritisiert Chinas mangelnde Forschungskontrollen
Is misconduct on the rise?

Retractions On the Rise
A study of the PubMed database found that the number of articles retracted from scientific journals increased substantially between 2000 and 2009.

- Fraud or fabrication: 196 total
- Scientific mistake: 235 total
- Other: 311 total

Figure 2  Retractions expressed as a percentage of the total number of publications listed in Medline 1980—2009.

Source: Journal of Medical Ethics

How common is misconduct?

Systematic review (screened 3207 papers)
Meta-analysis (18 studies)

- surveys of fabrication or falsification
- **NOT** plagiarism

**2%** admitted misconduct themselves
(95% CI 0.9-4.5)

**14%** aware of misconduct by others
(95% CI 9.9-19.7)

Yet infrequently detected

<table>
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<tr>
<th>Category</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>PubMed retractions</td>
<td>0.02%</td>
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<tr>
<td>US Office of Research Integrity (ORI)</td>
<td>0.01-0.001%</td>
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<td>(1 in 10,000 / 100,000 scientists)</td>
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<tr>
<td>Image manipulation in <em>J Cell Biology</em></td>
<td>1%</td>
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<td>(8/800)</td>
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<td>FDA audit – investigators guilty of serious scientific misconduct</td>
<td>2%</td>
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COPE cases

The chart above shows the number of COPE cases reported between 1997-00, 2001-04, 2005-08, and 2009-12 for various types of cases:

- Authorship
- Plagiarism
- Questionable/unethical research
- Redundant/duplicate publication
- Conflict of interest
- Correction of the literature
- Misconduct/questionable behaviour
- Peer review

The bars represent the number of cases for each category over the specified periods.
COPE cases
Is it getting more complicated?

- Pressure to publish
- Blogs, tweets
- Big datasets
- Multi-center collaborations
- Citizen science
- Predatory journals
Out of 304 submissions, the fake manuscripts were accepted by 157 journals and rejected by 98.
Predatory and bogus journals

- Internet has facilitated scams
- Damages in particular open access journal reputation
- Beall’s black list
- DOAJ/OASPA/COPE white list
- **BUT** it’s not all black and white
- Background checks and colleagues’ recommendations
Whitelisting, rather than blacklisting journals

Principles of Transparency and Best Practice in Scholarly Publishing

Introduction

The Committee on Publication Ethics (COPE), the Directory of Open Access Journals (DOAJ), the Open Access Scholarly Publishers Association (OASPA), and the World Association of Medical Editors (WAME) are scholarly organizations that have seen an increase in the number, and broad range in the quality, of membership applications. Our organizations have collaborated in an effort to identify principles of transparency and best practice for scholarly publications and to clarify that these principles form part of the criteria on which membership applications will be evaluated.

These criteria are largely derived from those developed by the Directory of Open Access Journals. Note that additional membership criteria may also be used by each of the scholarly organizations. The organizations will not share information about applications received. We do not intend to develop or publish a list of publishers or journals that failed to demonstrate they met the criteria for transparency and best practice.
Publication and Research Ethics:
We need multiple strategies

Accept there is a problem and that addressing it requires time / money / people/ different thinking

1. Improving detection
   • Use of technology

2. Education and support
   • eg COPE, Institutions, professional bodies

3. Tackle the root causes
   • Culture change
Publication and Research Ethics: We need multiple strategies

1. Improving detection
   • Use of technology
     • Screening for plagiarism & figure manipulation
     • Authenticity of identity and contribution
     • Version of record
Better detection?
Screening for plagiarism & figure manipulation

• Any technological solution requires human interpretation
• Can only screen for specific issues
  • eg plagiarism screening does not pick up appropriation of ideas
  • Figure manipulation screening is complex
Measurements of Four-Lepton Production at the Z Resonance in pp Collisions at sqrt(s)=7 and 8 TeV with ATLAS.

A classification of contributions
A classification of the diverse roles played in the work leading to a research publication includes, but is not limited to, traditional authorship roles. When there are multiple people serving in these roles, they can be further specified as either 'lead', 'equal', or 'supporting'. Roles are intended to be inclusive and it is recommended that, if possible, all contributors be listed, where intended that multiple roles be assigned to a single contributor.

#1 conceptualization

Ideas; formulation or evolution of overarching research goals and aims.

#2 methodology

Development or design of methodology; creation of models.

#3 software
Measurements of Four-Lepton Production at the Z Resonance in pp Collisions at \( \sqrt{s} = 7 \) and 8 TeV with ATLAS.

Authenticity of contribution

I am:
Mirjam Eckert
MJ Eckert
M Curno
Mirjam J Curno
...

For attribution, need identification

<table>
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<tr>
<th>ORCID iD</th>
<th>First name</th>
<th>Last name</th>
<th>Other names</th>
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<tr>
<td>0000-0001-8641-8763</td>
<td>Mirjam</td>
<td>Curno</td>
<td>M Curno, M Eckert, MJ Curno, MJ Eckert, Mirjam Curno, Mirjam Eckert, Mirjam J Eckert</td>
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Unique Author ID

Mirjam J Curno

**ORCID ID**
orcid.org/0000-0001-8641-8763

Also known as
M Curno, M Eckert, MJ Curno, MJ Eckert, Mirjam Curno, Mirjam J Eckert

Other IDs
Scopus Author ID: 54683693300

- **Gender-sensitive reporting in medical research**
  - Journal of the International AIDS Society
  - 2012 | journal-article
  - DOI: 10.1186/1758-2652-15-11, EID: 2-s2.0-84857973851
  - URL: http://www.scopus.com/inward/record.url?eid=2-s2.0-84857973851&partnerID=M
  - Source: Scopus to ORCID

- **PIDD orchestrates translesion DNA synthesis in response to UV irradiation.**
  - 2011-06 | journal-article
  - PMID: 21415862, PMC: PMC3131944, DOI: 10.1038/cdd.2011.19
  - URL: http://europepmc.org/abstract/med/21415862
  - Source: Europe PubMed Central

- **Regulation of PIDD auto-proteolysis and activity by the molecular chaperone Hsp90.**
  - 2011-03 | journal-article
  - PMID: 20966961, PMC: PMC3131991, DOI: 10.1038/cdd.2010.124
  - URL: http://europepmc.org/abstract/med/20966961
  - Source: Europe PubMed Central

- **Absence of evidence is not evidence of absence: Encouraging gender analyses in scholarly publications**
The Effect of Dosing Regimens on the Antimalarial Efficacy of Dihydroartemisinin-Piperaquine: A Pooled Analysis of Individual Patient Data

Published: December 03, 2013 • DOI: 10.1371/journal.pmed.1001564

Corrections

Updates are available for this document.

Correction dated 2013-12-24:
http://dx.doi.org/10.1371/annotation/3db421e4-3e27-4442-8092-2ad1b77...

This document is maintained by the publisher.

Document: The Effect of Dosing Regimens on the Antimalarial Efficacy of Di...

Publication: PLoS Medicine

Published: 3 December, 2013

CrossRef DOI Link to Publisher-Maintained copy:
http://dx.doi.org/10.1371/journal.pmed.1001554

CrossMark Policy: Public Library of Science

Learn more about the CrossMark System
Publication and Research Ethics: We need multiple strategies

2. Education and support
   • eg COPE, Institutions, professional bodies
Prevention is better than cure

Retraction Watch

Chemistry papers retracted for “lack of objectivity.” The authors did their own peer review

with 11 comments

Synthesis and Reactivity in Inorganic, Metal–Organic, and Nano–Metal Chemistry is retracting three articles for duplication — redundancy the authors, chemical engineers at Islamic Azad University, in Shahreza, Iran, appear to have gotten around by reviewing their own manuscripts. But, if they did say so themselves, those papers were really something!

Here’s the retraction notice for two of the papers, both of which appeared in 2012 and which were cited seven times and once, respectively, according to Thomson Scientific’s Web of Knowledge:

COPE Ethical Guidelines for Peer Reviewers

Irene Hames on behalf of COPE Council
March 2013, v.1

Peer review in all its forms plays an important role in ensuring the integrity of the scholarly record. The process depends to a large extent on trust, and requires that everyone involved behaves responsibly and ethically. Peer reviewers play a central and critical part in the peer-review process, but too often come to the
Prevention is better than cure
Publication and Research Ethics:
We need multiple strategies

3. Tackle the root causes
   • Culture change
The elephant(s) in the room

- Increasing numbers of papers
- Authors are increasingly chasing publication in high impact journals
- Increased evidence of misconduct
- Reviewers are overwhelmed
- Increased criticism of the published literature
  - anonymous whistleblowers
- Increase in retractions yet few corrections
- Complaints against journals
- Confusion about what authorship means
- Clinical Trial registration not an accepted norm
  ...many more examples
The evolution of the scientific record

• Now: “final product” of individual scientists’ work over many years
  • Little acceptance of being “wrong”

• Should be: something that can be built on/a place for debate?
  • Being “wrong” is OK
We’ve become very bad at correcting

“There is increasing concern that most current published research findings are false.”

Ioannidis 2005 doi: 10.1371/journal.pmed.0020124
Fundamental problems

Current academic incentives reward gaming

Current model of peer review is not sustainable

Publication is a parallel process with different aims to the science it reports
Contributing issues

• Science is now a regular job for many
  • yet basic training often neglects ethics/good practice
• Science is a global enterprise, yet managed locally
• Easier ways to manipulate text & figures
  • with few accepted standards
• New business models in publishing are changing all the norms
Current solutions are dealing with symptoms, but not causes

- Screening for problems pre-publication
- Codes of conduct
- Sanctions of individuals by institutions
- Naming and shaming on blogs and twitter
There are solutions
“Modifications need to be made in the reward system for science…”
“...scientists feel tempted or under pressure to compromise on research integrity and standards ... Suggested causes include high levels of competition in science and the pressure to publish.”
“the government should also consider ways of improving the employment conditions of researchers so they do not feel pressured by harsh competition to use unethical methods in their research in the hopes of gaining an edge on the competition.”
“We need to radically raise the level of integrity in day-to-day research activities as well as to encourage greater respect for rules and morals amongst individual researchers”
We need a culture of responsibility for the integrity of the literature...it’s not just the job of editors
Sources of information on publication/research ethics

- COPE www.publicationethics.org/
- Council of Science Editors www.councilscienceeditors.org/
  - White Paper on Promoting Integrity in Scientific Journal Publications
- World Congress on Research Integrity www.wcri2013.org/
  - Singapore Guidelines on Responsible research publication: international standards for authors
- WAME www.wame.org/
- ICMJE www.icmje.org/