



COPE Seminar 2021

Ethical authorship versus fraudulent authorship

Thursday 30 September, 15:00-16:00 (BST)



Evan D Kharasch



Sam Oakley



Trevor Lane
(Moderator)



#COPE2021



PROMOTING INTEGRITY IN SCHOLARLY
RESEARCH AND ITS PUBLICATION

MODERATOR



Trevor Lane
COPE Council Member
Chair, Education Subcommittee

Trevor Lane is a publishing and education consultant based in Hong Kong. He was the managing editor of several general and specialist medical journals in Asia and the senior editor of two social science journals in the United States. From 2005 to 2015, he headed a knowledge exchange unit at the Faculty of Dentistry, the University of Hong Kong, where he taught research communication and publishing ethics to postgraduate students and helped staff publish and publicise their research.



PROMOTING INTEGRITY IN SCHOLARLY
RESEARCH AND ITS PUBLICATION

Ethical authorship versus fraudulent authorship

Agenda

- Introduction
- Institutional perspective
- Journal perspective
- Q & A session



PROMOTING INTEGRITY IN SCHOLARLY
RESEARCH AND ITS PUBLICATION

PRESENTERS



Sam Oakley

Researcher Development & Integrity Specialist,
University of Glasgow

Sam Oakley is Researcher Development and Integrity Specialist at the University of Glasgow. Since 2019, Sam has developed and run the university's research integrity training, and has been promoting and supporting research integrity more widely within the institution. She has a keen interest in research integrity, research culture, open research, and how to create enjoyable and effective online learning.



Evan D Kharasch

Editor in Chief, Anesthesiology;
Vice-Chair for Innovation, Department of Anesthesiology,
Duke University

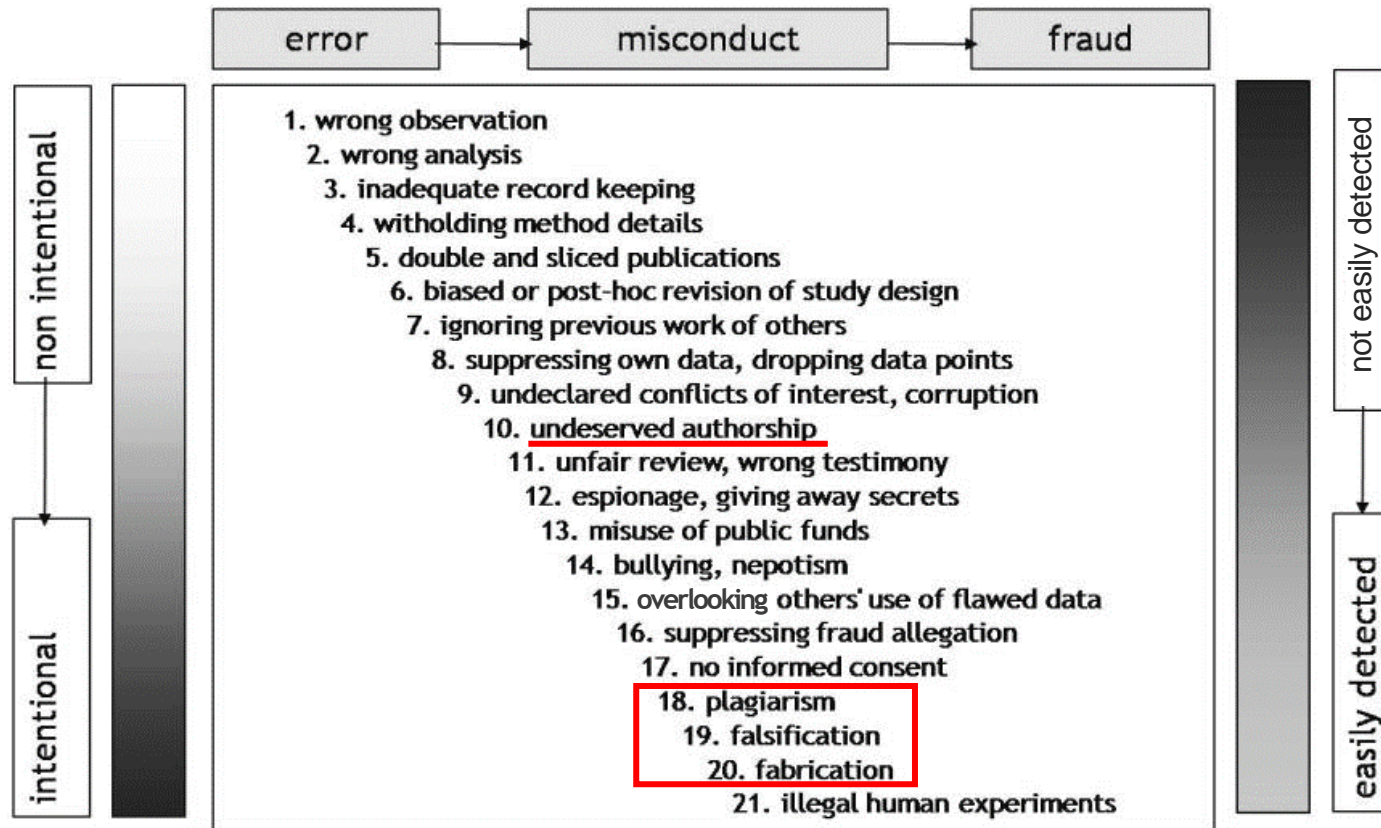
Evan D Kharasch is the editor in chief of Anesthesiology and is also the Merel H Harmel Professor of Anesthesiology and Vice-Chair for Innovation in the Department of Anesthesiology, Duke University. He has authored more than 300 peer reviewed articles, as well as numerous book chapters, and is the editor of two major textbooks on anesthetic pharmacology.



PROMOTING INTEGRITY IN SCHOLARLY
RESEARCH AND ITS PUBLICATION

INTRODUCTION

ETHICAL ISSUES IN SCHOLARLY PUBLISHING



- & ...inappropriate / insufficient sampling
 - inappropriate / biased analysis (P-hacking, confounder bias)
 - biased / selective reporting
 - not correcting errors
 - **authorship misattribution (gift, guest & ghost authors)**
 - citation manipulation (inaccurate / fake citations, citation stacking, citation cartels, coercive/coerced citation)
 - reviewer misconduct (delay, bias, stealing data, plagiarism)
 - fake review & reviewer identity fraud
 - knowingly publishing in predatory journals
 - unauthorised data use / reporting / sharing
 - unregistered clinical trials
 - no ethics board approval / waiver
- etc...

COPE CORE PRACTICES

Policies and core practices required to reach the highest standards in publication ethics:



Allegations
of misconduct



Authorship and
contributorship



Complaints
and appeals



Conflicts of interest/
Competing interests



Data and
reproducibility



Ethical
oversight



Intellectual
property



Journal
management



Peer review
processes



Post-publication
discussions and
corrections

COPE CORE PRACTICES

Policies and core practices required to reach the highest standards in publication ethics:



Allegations of misconduct



Authorship and contributorship



Complaints and appeals



Conflicts of interest/ Competing interests



Data and reproducibility

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



PROMOTING INTEGRITY IN SCHOLARLY
RESEARCH AND ITS PUBLICATION

COPE RESOURCES

Examples for authorship and contributorship

Flowcharts

- Changes in authorship
- [How to recognise potential authorship problems](#)

Guidelines

- [How to handle authorship disputes: a guide for new researchers](#)

Discussion document: [Authorship](#)

Case / Case discussion

- [Inconclusive institutional investigation into authorship dispute](#)
- [Gift authorship](#)

Seminar

- [WCRI 2019: Responsible authorship](#)



AUTHORSHIP?

NOW SHOWING

MARJO MALIČKI ANA JERONČI MATKO MARUŠIĆ ANA MARUŠIĆ

W H Y

DO YOU THINK YOU SHOULD BE THE AUTHOR ON THIS

Manuscript?

CRediTs

Conceptualization	RESEARCHERS1,2,3
Data curation	RESEARCHER2
Formal Analysis	RESEARCHER1, ANOTHER2
Funding acquisition	AN OTHER1, ANOTHER2
Investigation	RESEARCHERS2,3
Methodology	AN OTHER2
Project administration	RESEARCHER1
Resources	RESEARCHERS1,3
Software	AN OTHER2
Supervision	RESEARCHER3
Validation	RESEARCHERS1,2,3
Visualization	AN OTHER3
Writing – original draft	RESEARCHER1
Writing – review & editing	RESEARCHERS1,2,3, AN OTHER3

CITATION: CC BY; DOI:10.1186/1471-2288-12-189
 MALIČKI ET AL. WHY DO YOU THINK YOU SHOULD BE THE AUTHOR ON THIS MANUSCRIPT? ANALYSIS OF OPEN-ENDED RESPONSES OF AUTHORS IN A GENERAL MEDICAL JOURNAL
 BMC MEDICAL RESEARCH METHODOLOGY 2012:12:189
 © TREVOR LANE. CC BY-NC-ND ILLUSTRATION BASED ON PIXABAY (CC0) IMAGES

No animals were harmed during this production.
 CRediT items based on credit.niso.org

- Need clear contributions, eg, Contributor roles taxonomy (CRediT)
- Need clear authorship criteria, inc. accountability & responsibility
- Need clear policies, practices, procedures, guidelines for submission, checking, case management

UNETHICAL OR FRAUDULENT AUTHORSHIP?



- Misrepresentation, impersonation, grant fraud; usually involves plagiarism
- Unjustified authorship is considered research misconduct in South Korea
(Nature News 12 Nov 2019: More South Korean academics caught naming kids as co-authors, <https://www.nature.com/articles/d41586-019-03371-0>)
- “Legal remedies for medical ghostwriting: Imposing fraud liability on guest authors of ghostwritten articles”
Stern S, Lemmens T (2011), PLoS Med 8(8): e1001070. doi:10.1371/journal.pmed.1001070. (<https://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1001070>)



Gift author



Guest author



Ghost author



Fake / false author



Publication not authorised



Forged co-authors



Paper mill

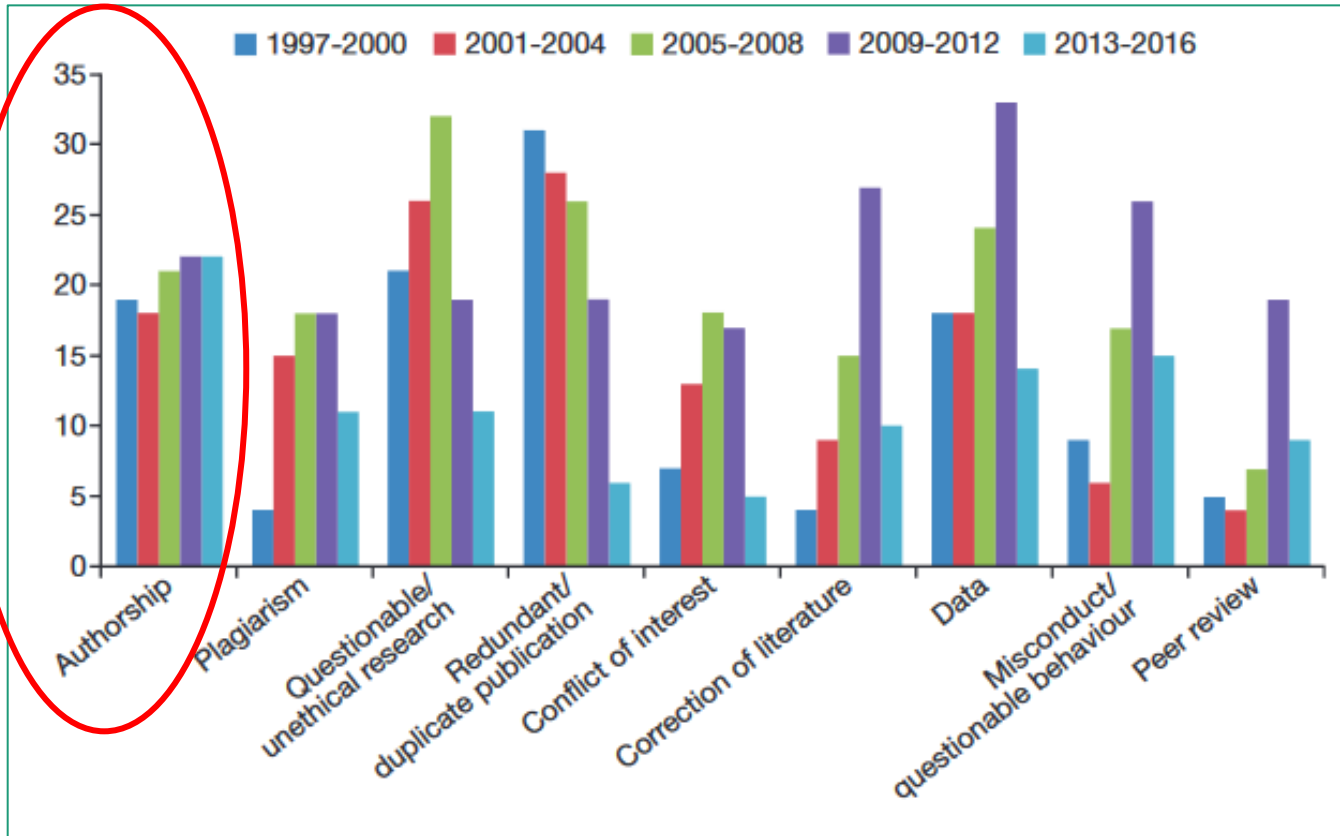


Paper broker



Knowingly publishing in predatory journal

COPE FORUM CASES 1997-2016



- Of [134 authorship cases](#):
 - questionable changes to author list after submission (27%)
 - claims of unacknowledged authorship (21%)
 - ghost, guest, or gift authors (19%)
 - submission without knowledge of one or more authors (19%)
 - disputed authorship order (7%)
 - forged paperwork (7%)
- often involve other problems (duplication, salami, IP theft, Cols)
- Eg, [Case 15-17](#), [Case 06-13](#), & [Case 11-24](#) suggest institutionalised gift authorship for senior researchers

→ Usually requires author / institution action

EXTENT & NATURE OF PROBLEM

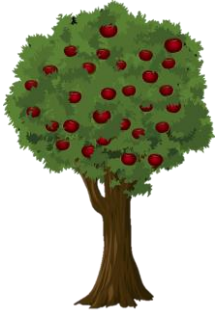
- 21% of articles in 6 medical journals in 2008 had undeserved +/- ghost authors (<https://www.bmj.com/content/343/bmj.d6128>)
- 41% of first-authors of Cochrane reviews, 2016-2018, reported gift authorship (<https://doi.org/10.1016/j.jclinepi.2020.08.004>)
- 35.5% of respondents reported adding an undeserving author (<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0187394>)



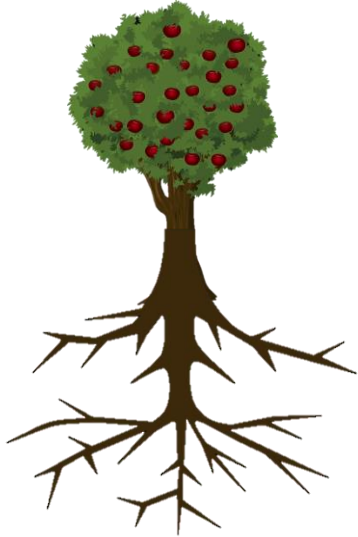
Bad apples



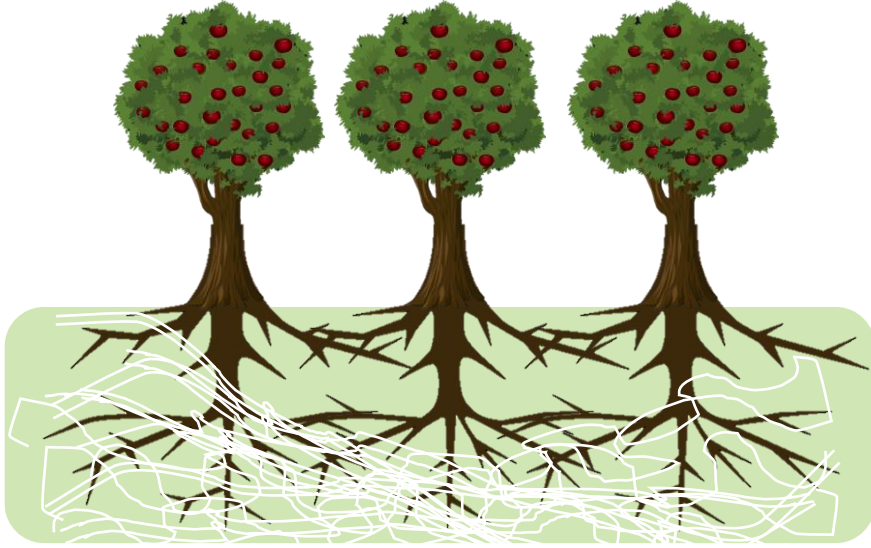
Bad barrels



Bad tree



Deep-rooted systemic problem



Orchard problem
Network, community, environment
Underlying culture & ecosystem

Based on pixabay.com images (CC 0)



PROMOTING INTEGRITY IN SCHOLARLY
RESEARCH AND ITS PUBLICATION

INTERNATIONAL GUIDELINES & INITIATIVES

[RePAIR Guidelines](#) (Responsibilities of Publishers, Agencies, Institutions, and Researchers in Protecting the Integrity of the Research Record)

[CLUE Guidelines](#) (Cooperation & Liaison between Universities & Editors)

[COPE Guidelines](#): Cooperation between research institutions and journals on research integrity cases



DORA

San Francisco Declaration on Research Assessment
<https://sfdora.org/>

**THE HONG KONG
PRINCIPLES
FOR ASSESSING RESEARCHERS**



Hong Kong Principles for Assessing Researchers
<https://journals.plos.org/plosbiology/article?id=10.1371/journal.pbio.3000737>
<https://wcrif.org/guidance/hong-kong-principles>

Leiden Manifesto for Research Metrics
<http://www.leidenmanifesto.org/>

Singapore Statement on Research Integrity
<https://wcrif.org/statement>

Montreal Statement on Research Integrity in
Cross-Boundary Research Collaborations
<https://wcrif.org/montreal-statement/file>



PROMOTING INTEGRITY IN SCHOLARLY
RESEARCH AND ITS PUBLICATION

INSTITUTIONAL PERSPECTIVE & JOURNAL PERSPECTIVE



University
of Glasgow

Promoting Ethical Authorship for a Positive Research Culture

Sam Oakley | Researcher Development & Integrity
Specialist | **University of Glasgow**

 @rscsam

COPE Seminar *30 Sep 2021*





Context

Researchers:

- Highly independent professionals
- May experience extreme pressures that affect decisions

Institutions:

- Governance / Reputation
- Staff wellbeing
- Costs





Context

Researchers:

- Highly independent professionals
- May experience extreme pressures that affect decisions

Institutions:

- Governance / Reputation
- Staff wellbeing
- Costs

What can institutions do to promote ethical publication?



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Research Policy @ UofG

“Code of Good Practice in Research” ([PDF](#))

- Responsibilities for publication
- Authorship guidance (including CRediT)
- Where to publish
- Open Access / Research








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Research Policy @ UofG

- PGR Code of Practice
 - Plagiarism
 - Misconduct Policy and Process
 - Responsible Metrics statement
- + Local good practice handbooks / protocols



Case study: the University of Glasgow's digital preservation journey 2017-2019

Spence, A. , McCutcheon, V.  and Mahon, M.  (2019) Case study: the University of Glasgow's digital preservation journey 2017-2019. *Insights*, 32(10), pp. 1-9. (doi: [10.1629/uksg.461](https://doi.org/10.1629/uksg.461))



Text
182450.pdf - Published Version
Available under License [Creative Commons Attribution](#).
448kB

Abstract

This case study documents the University of Glasgow's digital preservation journey during 2017 and 2018. The University recognized that access to its records was required to ensure the long-term preservation of key corporate records and archival material. Staff from the University's Digital Preservation Working Group were therefore tasked with identifying the University's priorities and requirements for preserving its key records, with the aim of producing recommendations for a preservation programme. Knowledge and skills were enhanced by participating in a national digital preservation pilot project and learning from practitioners through workshops and information exchange. The case study shares our reflections on the questions which emerged about metadata, workflows and integrating systems. A key priority will be to engage the support of key decision makers within the University, as it was emphasized repeatedly that successful digital preservation depends as much on resources and organisational support as on technology. Two of the authors have a particular interest in terminology and we share our work to examine digital preservation's often obscure vocabulary. We conclude that transforming digital preservation into standard practice within organizations can only be achieved through continued collaboration within the digital preservation community.

Item Type:	Articles
Additional Information:	This work was supported by funding from Jisc award number 4811.
Status:	Published
Refereed:	Yes
Glasgow Author(s) Enlighten ID:	Spence, Miss Alison and McCutcheon, Miss Valerie and Mahon, Mr Matt
Creator Roles:	Spence, A. Investigation, Writing – original draft McCutcheon, V. Project administration, Supervision, Funding acquisition, Writing – review and editing Mahon, M. Investigation, Writing – review and editing



CRediT (Contributor Roles Taxonomy) is high-level taxonomy, including 14 roles, that can be used to represent the roles typically played by contributors to scientific scholarly output. The roles describe each contributor's specific contribution to the scholarly output.

14 Contributor Roles

- | | |
|------------------------|----------------------------|
| Conceptualization | Resources |
| Data curation | Software |
| Formal Analysis | Supervision |
| Funding acquisition | Validation |
| Investigation | Visualization |
| Methodology | Writing – original draft |
| Project administration | Writing – review & editing |

MYGLASGOW NEWS

News Archive

2019

- 19 August 2019
- 5 August, 2019
- 24 June, 2019
- 23 July 2019
- 17 June 2019

GIVING CREDIT FOR CONTRIBUTIONS TO RESEARCH OUTPUTS

Research outputs are increasingly the result of a team effort. We currently capture the varied contributions that colleagues make to an output either alongside the author list or in the acknowledgments section. However, an easier and more consistent way of highlighting who did what in a research study is by listing, in the output itself, the individual contributions that each author has made. There is a straightforward way of doing this, by selecting from the 14 standard role descriptors included in the [CRediT taxonomy](#). Roles include drafting or revising an article, analysing and interpreting data, or programming.

We invite you to browse the CRediT taxonomy and consider how it applies to the roles that you fulfil in your collaborations.



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Web pages & Comms @ UofG

University of Glasgow → STAFF LOGIN → STUDENT

Home / MyGlasgow / Research and Innovation Services / ... / Research Integrity

RESEARCH AND INNOVATION SERVICES

RESEARCH INTEGRITY

Research excellence at the University of Glasgow is undermined by research integrity. This website sets out the policies, procedures, and resources to support research integrity.

WHO IS THIS GUIDANCE FOR? Research staff (Principal Investigators, postdocs, research technicians); research students (PhD, EdD, DFA, EngD and Masters by Research) and research administrators (science writers, public engagement officers, research managers).

Begin by visiting our 'About' section below to get an overview of research integrity at the University and information on Research Integrity training. To understand how this work fits within the bigger picture of Research Culture and to find out about other projects in this area, you may also wish to visit our Research Culture webpages.

About research integrity

Find out what we mean by research integrity, your responsibilities, and information on Research Integrity training.

Areas of conduct

Plagiarism & Self-plagiarism | Image manipulation | Publication & Authorship | Intellectual property | Reproducibility, stats and research design | Ethics and governance | Data management & Open Research | Open access | Communicating research | Collaboration | Peer Review

UofG Research Integrity @UofGIntegrity - Aug 23

Ways to promote and foster collaborative research "Top tips for principal investigators to help junior scientists navigate the travails of teamwork." buff.ly/2PMVHaa #ResearchIntegrity



8 12

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Home / MyGlasgow / Open Access / ... / Choosing where to submit your manuscript

OPEN ACCESS

How do I make my publications Open Access?

- Open Access Process
- UK Research and Innovation
- Other Funds for Open Access
- Information for Managers and Administrators
- Publisher Arrangements
- RFF
- European Funding
- Choosing where to submit your manuscript
- Before submitting your manuscript
- After your manuscript has been accepted
- Europe PMC

CHOOSING WHERE TO SUBMIT YOUR MANUSCRIPT

+ How do I identify the correct journal for my work?

- How can I identify trusted journals?

Researchers seeking to publish their work can choose from a wide range of journals.

However, please note that some publishers do not deliver the rigour of academic scrutiny expected of scholarly publishing. Publishing your paper in these "predatory" journals may also limit the visibility of your publication, as these journals are not indexed in major databases.

To be clear, it is not in your interest to publish your research findings in these journals.

Recommended approaches.

Use expert knowledge of the field. We recommend that researchers use their disciplinary knowledge — or that of a trusted colleague — to check the editorial board for names of known and respected researchers in their field.

Research Integrity training @ UofG

Staff:

- Asynchronous, interactive Moodle course
- Reflective; acknowledged

PGRs:

- Asynchronous, interactive Moodle course
- Webinar facilitated by research staff

“Everyone...needs a developed understanding of how authorship is decided, that IT MATTERS to get it right and that senior staff (or supervisors) ACTIVELY CARE about getting it right”



James Bartlett
@JamesEBartlett

There is a seriously impressive mandatory training programme for research integrity at [@UofGlasgow](#) [@UofGPsychNeuro](#). Great delivery and covers under-appreciated topics like author contributions, image manipulation, and plagiarism.

10:21 AM · Sep 16, 2021 · Twitter Web App



Research Integrity training @ UofG

Questionable Research Practices

“...accumulated evidence indicates that there is substantial room for improvement with regard to research practices to maximize the efficiency of the research community's use of the public's financial investment in research”

(Munafo et al, 2017)

“Review the list and consider which of these are of greatest impact for your subject area”



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“A better research culture is not an alternative to excellence but rather it is what will enable more of us to excel”





Research Culture @ UofG

“A positive research culture is one in which colleagues...

- Are recognised and valued for their **varied contributions** to research,
- Support **each other's careers**,
- Are supported to produce work that meets the highest standards of **academic rigour.**”

The Guardian
University Award 2020
Winner

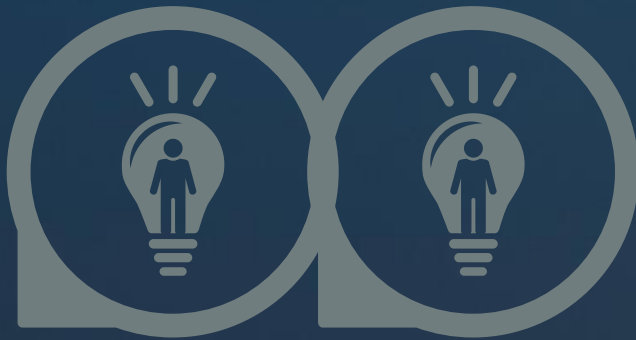
The
Guardian

Where do we want to get to?

A change in what we value in research outcomes



Outputs



People



Societal
impact



UKRI CEO
23 November 2020



UK Research and Innovation · 11h

"I've become very committed to the notion of one's net contribution to the research system: there's the research you've done, and there's the research you've enabled others to do."

@UKRI_CEO #RRAConference



1



8



10





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Change is more likely when actions align

Support what we value

Reward what we value

Celebrate what we value

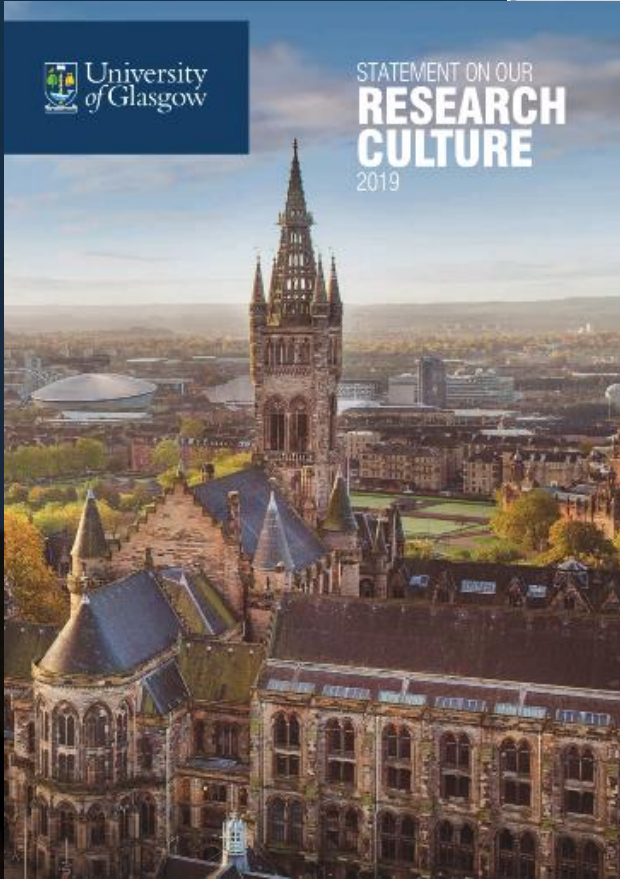
Monitor how we are doing





University of Glasgow

Change needs actions, not just policies



UofG Action Plan for Research Culture (2020–2025)

https://youtu.be/zD8nVD_TdM0
<https://www.gla.ac.uk/researchculturestatement>



Research Culture Action Plan @UofG

Research integrity

Supporting research that is conducted to the highest standards

2015

Collegiality

Ideas & incentives for supporting the careers of others

2018

Career development

Careers Concordat

Recovery from COVID-19

2019

Research recognition

Measuring what matters:
DORA/Leiden

Recognising varied contributions & outcomes

2020

Open research

Promoting the early and wide sharing of research

2021+

Research Strategy 2020–2025

By working in teams, building on each other's ideas, and making Glasgow the best place to develop a career, our research transforms lives and changes the world

Research principles
@UofG

We value the quality of our research over its quantity

The University succeeds when our individual researchers succeed

How research is done is as important as what is done

<https://www.gla.ac.uk/research/strategy/ourstrategy/>

RESEARCH STRATEGY 2020–2025

PRIORITIES

COLLABORATION WORKING TOGETHER TO TACKLE BIGGER CHALLENGES

We will address urgent problems in our society and the biggest gaps in our knowledge by working together. The timeline from pioneering academic research to societal impact takes years or even decades.

We will create collaborative spaces in which researchers from different disciplines, countries, sectors and organisations can work together to solve complex problems.

We will create digital and virtual spaces in which researchers can collaborate and enable connectivity to enhance our research, influence and profile.

CREATIVITY REAFFIRMING THE CENTRALITY OF IDEAS

Great research starts with great ideas, but we also know that this creativity takes time and requires the right conditions. The quality of our research outputs and impact will continue to drive the reputation and careers of our researchers, and that rests crucially on the ideas that we develop.

We will support creativity by developing the opportunities in which new ideas can emerge. Our development programmes will focus on creating an environment in which researchers can flourish in developing trust and autonomy.

We will create an environment in which researchers can flourish in developing trust and autonomy.

CAREERS HELPING EACH OTHER TO SUCCEED

Glasgow succeeds when its people succeed. We will make Glasgow the best place in which to pursue a career whether at the University or in the city, by creating an environment in which colleagues are supported to fulfil their ambition, and expectations are met at every career stage, and measures of progression are easy to access.

We will create an environment in which researchers can flourish in developing trust and autonomy.



Supporting what we value

- Specialist career tracks
Career routes for non-traditional PIs
- Embedded CRediT taxonomy in institutional outputs repository
Recognises and records the role of each collaborator
- Responsible evaluation, e.g. DORA
“Conversation starters” for talking about research outputs

- Supporting PIs to support careers
What does 10 days of CPD look like?
“Conversation starters” for career support
- “SCOPE” workshop on what we value about career support
Changes to recruitment toolkit
- Narrative CV
Community project to develop enhanced CV template

29 Research Integrity Advisers
Leadership in each area, for advice on research practice

Recovery from COVID-19 (£26M)
Including addressing differential impact of COVID-19 on projects and careers

Rewarding what we value (1/3)

Research is assessed across 7 dimensions
Progression is preponderance-based

Updated our academic promotion criteria in 2019/20

- 1. Parity of credit for research outputs and impact**
- 2. Reward those who support careers**

*Collegiality; how has CPD
has been supported by PIs*

Collegiality

“Supporting others to
succeed”

Examples:

Including earlier stage
academics as co-
investigators on funding
bids

Nominating others for
peer recognition

Acting as second
supervisor in support of
primary supervision by a
colleague

Rewarding what we value (2/3)

4. **Combine quantitative evidence and a narrative when evidencing activity**
5. **Require commitment to Open Research practices**
e.g. preprints, pre-registration, data availability, author contribution statements (CRediT)
6. **Quality over quantity**
e.g. use of 100-word descriptors



Rewarding what we value (3/3): Fellowship applications

5. Selected Outputs

In the tables below, please list the applicant's **four most significant publications** or other outputs. Alternatively, please list research impact of equivalent quality.

Under 'Output details', please provide, where relevant: the title, title of journal / book (and publisher), year of publication, page ranges, DOI and full author list.

Under 'Importance and Contribution' please **highlight the influence that each output has made to advancing the field**, supported by indicators of quality as appropriate to your discipline (maximum 100 words each). Appropriate indicators include, for example, reference to (UK) REF panel criteria or benchmarked and subject-normalised citation metrics, but **not journal impact factor**.

In the case of jointly authored outputs, **please state your contribution to the work**.

Output details	
Importance & Contribution	

Output details	
Importance & Contribution	

Output details	
Importance & Contribution	

Output details	
Importance & Contribution	

Document your commitment to open research, as appropriate to your discipline (open data, open access, open code, open educational resources and practices that support replication).

--

The **CRedit taxonomy** may be helpful in articulating contributions



Mesasuring how we are doing

Research Culture Survey 2019

0% complete

Page 1: Research Culture 2019 survey

We want Glasgow to be the place where good researchers want to come (and stay!) to do excellent research. We are committed to promoting a positive research culture and have introduced a raft of measures to support this, including training, support staff, research integrity advisors, IT innovations and new policies. However, all of this work is meaningless if it does not change what is felt on the ground. We have introduced this survey as a way of understanding where we are making progress and where there is still work to be done. We will run it again in summer 2020 to track progress.



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Lab for Academic Culture

Launched December 2020:

- Beyond “research” culture
 - A home for delivery of culture-related projects
 - Monitoring and evaluating progress
 - Working with the sector (HEIs, funders etc)
- Project-led delivery via secondment of staff from services or faculties





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Thank you

Culture @UofG

<https://www.gla.ac.uk/researchculture/>

*Tanita Casci and Miles Padgett were/are our
institutional leads for Research Culture*

Samantha.Oakley@glasgow.ac.uk

 @rscsam



COPE Seminar 2021

Together shaping the future of publication ethics

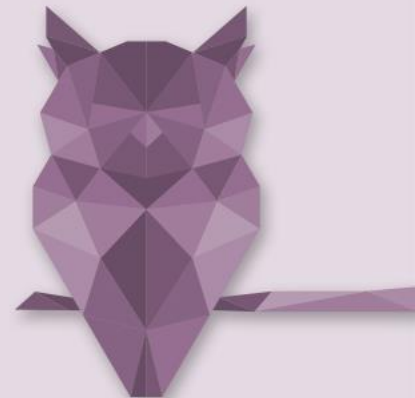
Ethical authorship versus fraudulent authorship

Evan D. Kharasch, MD, PhD

Merel H. Harmel Professor of Anesthesiology
Vice-Chair for Innovation

Duke University School of Medicine

Editor-in-Chief, ANESTHESIOLOGY



#COPE2021

Disclosures:

A 3D-rendered rectangular box, possibly representing a container or a placeholder. The box is light gray with a subtle shadow and a slight bevel on its edges. Inside the box, the word "none" is written in a simple, black, sans-serif font, centered horizontally and vertically.

none

Ethical authorship versus fraudulent authorship

Committee on
Publication Ethics

C O P E

Integrity

Issues of importance in publication ethics today
2019 COPE member research

49%

Lack of education in
publication ethics among
authors/reviewers

45%

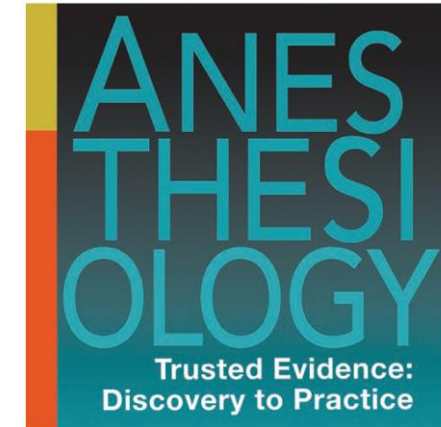
Lack of training and education
in research ethics among
authors/reviewers

42%

Assessing contribution and
authorship claims (or just
general authorship issues)

38%

Increase in plagiarism and
fraudulent submissions



**Authorship:
What counts?
Who counts?
Who cares?**

Authors and authorship



Integrity

Why Authorship Matters (ICMJE, WAME)

1. Authorship confers credit and has important academic, social, and financial implications
2. Authorship implies responsibility and accountability for published work

Credit and accountability are inseparable

Minimum requirements for authorship, common to all definitions (COPE):

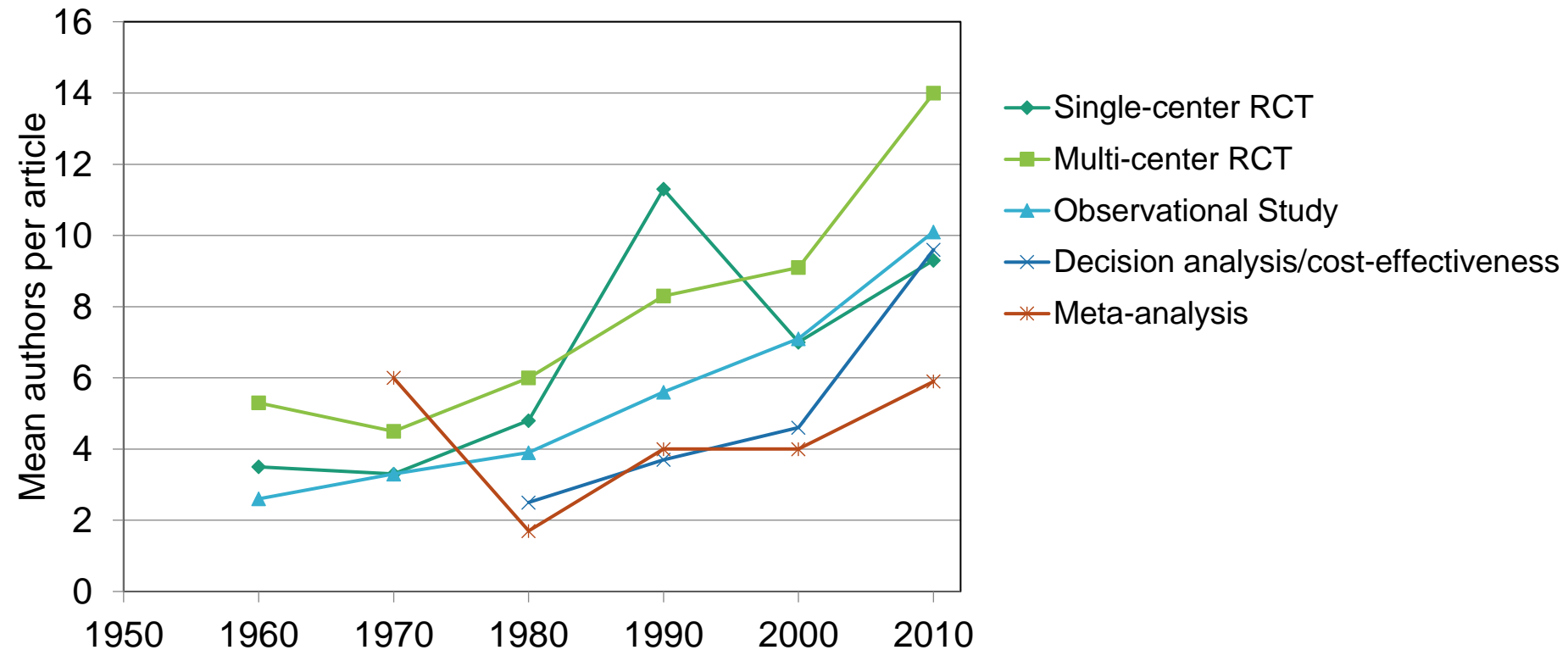
1. Substantial contribution to the work
2. Accountability for the work done and publication

Authors must know, understand, and adhere to the **criteria for authorship**:

1. Within their respective disciplines
2. For the institution in which they work
3. For the journal to which they are submitting

Authorship inflation in medical publications

Analysis of the 1st 50 original articles published each decade 1960-2010 in *JAMA*, *NEJM*, *BMJ*



- ❖ Increasing research complexity is an inadequate explanation for authorship growth
- ❖ Instead, growth in authorship appears inflationary

Increasing Complexity or Competition?

Complexity: Technical sophistication of research process and attendant specialization of individual researchers

Competition: Pressures from (i) evaluative criteria (grants, patents, publications, & article citation rates that directly inform hiring, promotion, and tenure, and indirectly affect social capital among colleagues) and (ii) scarce resource allocation (grants)

- ❖ Coauthorship increased about one author per article per decade
- ❖ Higher impact factor journals published higher-authorship articles
- ❖ Coauthorship growth is primarily driven by research competition not complexity
- ❖ Demand for recognition incentivizes weaker criteria for authorship

Authorship inflation vs inappropriate (fraudulent) authorship

Author inflation is problematic and disconcerting, but the inclusion of gift and guest authors is truly unethical and rampant. Such authorship practices are considered a type of research fraud.*

Case study

Snuppy: World's first cloned dog. Created using an ear cell from an adult Afghan hound



“It seems clearly wrong for Gerald Schatten to be listed as an author on the article that announced the first successful cloning of a dog, merely because he had recommended that the research team use a professional photographer to get a good photograph of Snuppy”

Case study

Case report:

Ventilator sharing system used to successfully ventilate two pairs of COVID-19 patients for one hour

4 patients

20 authors

Case study

Editor: The number of authors on the manuscript appears excessive

Author: *“Look, I had clinical fellows who collected blood samples at night and on weekends. I can’t pay them extra, but I need to compensate them. So I made them authors”*

Unacceptable types of authorship

Gift (honorary, courtesy) authorship:

Offered from a sense of obligation, tribute, respect, or dependence, to an individual who has not contributed to the work, for anticipated benefit (e.g. Dept Chair). Most prevalent problem.

Guest (celebrity, prestige) authorship:

Granted in belief that expert standing of the guest will increase the likelihood of publication, credibility, or status of the work or authors

Ghost authorship:

Failure to identify someone who merited authorship (may range from uncredited author-for-hire to major contributor not named as author)

One-fourth to one-third of published original research articles had one or more honorary authors

Honorary authorship was positively associated with journal impact factor

“Authorship abuse is not a victimless crime as the entire research and publication process relies on trust

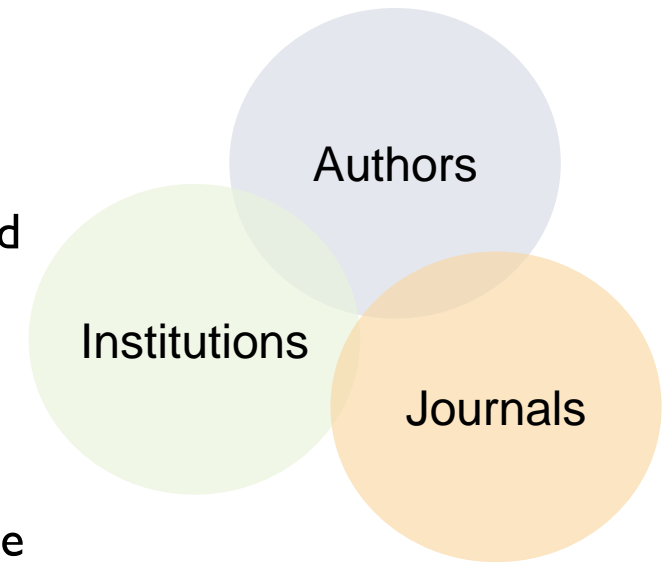
If scientists or clinicians are prepared to lie about the people involved with a research project or a publication, why should we expect them to be any more honest about their findings?”

Fraudulent authorship

Why do authorship problems exist?

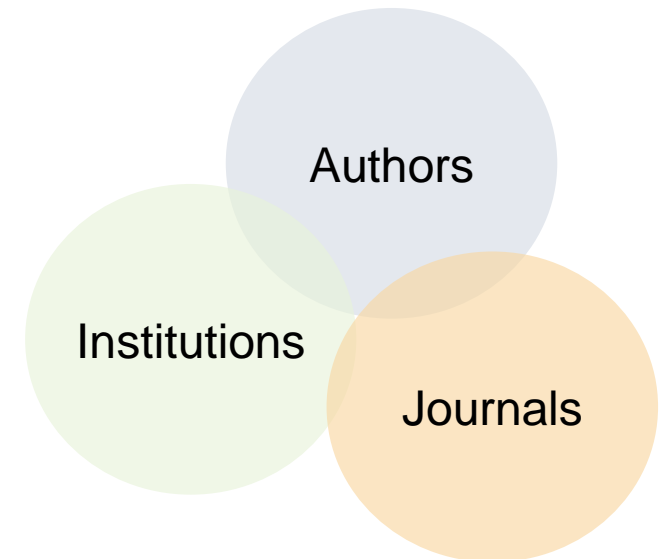
Prevailing theory: The credit economy of science and credit-motivated fraud, or, more philosophically, *thumos* (honor and esteem) replaces *nous* (finding truth)

- Scientists become motivated by credit, regard, and status
- Academicians feel pressure from institutional grant requirements and appointment and promotion process
- Institutions too seek credit, reputation, status, and financial gains therefrom in extramural funding and donations
- **Tension:** Authorship used inside science to communicate research findings, determine credit, responsibility, and career advancement; vs used outside science by institutions as a metric of faculty productivity and for ranking
- **Dance:** Faculty and institutions are *pari passu* in a perverse mutual reward system that incentivizes misbehavior
- Journals, too, have become enmeshed in the thirst for *thumos*, credit, and status, and complicit in the credit economy



Fraudulent authorship

What actions can be taken (policies, definitions, declarations, technology, etc) by authors, journals, and institutions to promote ethical authorship and detect or prevent unethical authorship and other fraudulent practices?



Addressing fraudulent authorship



Changing mores:

1. Authorship is intellectual not transactional
2. Bring authorship fraud out of the grey into the

light

Research Misconduct

Fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results

- a) Fabrication: making up data or results and recording or reporting them
- b) Falsification: manipulating research materials, equipment, or processes, or changing or omitting data or results such that the research is not accurately represented
- c) Plagiarism:

Research Integrity Issues (grey area)

- *Authorship*
- Disclosure: Research funding, sponsorship, support
- Disclosure: competing interests
- Management of conflict of interest – personal, professional, financial
- Ethical approval & compliance: Human subjects (IRB), animals (IACUC), trials registration
- Duplicate publication
- Salami publication
- Simultaneous duplicate submission

Addressing fraudulent authorship



It is the collective responsibility of the authors, not the journal, to determine that all people named as authors meet all four criteria

It is not the role of journal editors to determine who qualifies or does not qualify for authorship or to arbitrate authorship conflicts

3. Journal editors and peer reviewers can and should legitimately question obvious or potential fraudulent authorship

Integrity

A light blue circle containing the word 'Integrity' in a black, sans-serif font.

Addressing fraudulent authorship

Challenges:

- No single, universal consensus definition of authorship
- Criteria for authorship differ widely across disciplines, fields, institutions, labs, journals, historically between various countries and cultures, and evolve over time. Different disciplines variously value technical and intellectual contributions
- After credit, responsibility & accountability, authorship is cultural

Principles:

It is important that authors know, understand, and adhere to the criteria for authorship:

1. Within their respective disciplines
2. For the *institution* in which they work
3. For the *journal* to which they are submitting

4. Journals can and should explicitly define criteria for acceptable and unacceptable

Who defines?
Who decides?



Funders/sponsors
Institution
Journal

Addressing fraudulent authorship



Authorship based on ALL 4 criteria:

1. Substantial contributions to the conception or design of the work or **acquisition**, analysis, or interpretation of data
2. Drafting or revising critically for important intellectual content
3. Final approval of the version to be published
4. Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

All designated as authors should meet all four criteria for authorship, and all who meet the four criteria should be identified as authors. Those who do not meet all four criteria should be acknowledged.

<http://www.icmje.org/recommendations/browse/roles-and-responsibilities/defining-the-role-of-authors-and-contributors.html> (2017)



Authorship must satisfy ALL 5 criteria:

1. **Scholarship**: Substantial intellectual contributions to research conception or design, **execution**, analysis, or interpretation of results
2. **Authorship**: Drafting or revising critically for important intellectual content
3. **Approval**: Final approval of the version to be published
4. **Ethics**: Agree to be accountable for all aspects of research and manuscript
5. **Integrity**: Ensure that questions related to accuracy or integrity of any part of the research and manuscript, even ones in which the author was not personally involved, are appropriately investigated, resolved, and communicated (where needed).

All authors should meet all five criteria, and all contributors who meet the five criteria should be authors. Those who do not meet all five criteria can be listed as Collaborators or in Acknowledgments

<https://pubs.asahq.org/anesthesiology/pages/instructions-for-authors-general#authorship>



Integrity

Addressing fraudulent authorship



Non-Author Contributors

Contributors who do not meet all authorship criteria should not be listed as authors, but can be included in Acknowledgments. Examples of activities that alone do not qualify for authorship are acquisition of funding; general supervision of a research group; general administrative support; mentoring; providing patients, reagents, animals, or other study materials; collecting samples; writing assistance; technical editing; language editing; and proofreading

Ghost authorship

Any participation by a professional writer in a manuscript must be disclosed for transparency. Professional writers meeting all authorship criteria must be listed authors. Those who only drafted or edited the manuscript but did not have a role in design, data analysis, or interpretation of results must be identified in the Acknowledgments

Addressing fraudulent authorship

5. Journals can and should create non-author mechanisms for appropriate recognition of scholarly



Non-Author Collaborators

Individuals working in a Research Group who do not meet all five criteria for authorship may be listed as Collaborators if they substantially contributed to the work

Collaborators can be listed as such in PubMed, in addition to the authors. They are listed in a separate Collaborators section below the author byline. PubMed differentiates between full authors and non-author collaborators

Nat Genet. 2008 Jan;40(1):26-8. Epub 2007 Dec 16.

Common genetic variants at the CRAC1 (HMPS) locus on chromosome 15q13.3 influence colorectal cancer risk.

Jaeqer E¹, Webb E, Howarth K, Carvajal-Carmona L, Rowan A, Broderick P, Walther A, Spain S, Pittman A, Kemp Z, Sullivan K, Heinemann K, Lubbe S, Domingo E, Barclay E, Martin L, Gorman M, Chandler I, Vijayakrishnan J, Wood W, Papaemmanuil E, Peneqar S, Qureshi M, CORGI Consortium, Farrington S, Tenesa A, Cazier JB, Kerr D, Gray R, Peto J, Dunlop M, Campbell H, Thomas H, Houlston R, Tomlinson I.

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⊕ Author information

Addressing fraudulent authorship

Authors

- Authorship definitions & culture
- Intellectual not transactional
- Responsibility, accountability AND credit
- Gift, guest, ghost authorship

Institutions

- Reduce A&P pressures
- Address ‘facultization’ of professional practitioners
- Authorship guidelines
- Meaningful RCR education

Journals

- Define/publish criteria for acceptable/unacceptable authorship
- Non-author mechanisms for recognizing contribution
- Attention to authorship in peer review
- Fraudulent authorship as misconduct

THANK YOU

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PROMOTING INTEGRITY IN SCHOLARLY
RESEARCH AND ITS PUBLICATION