The Ethics of Authorship

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Outline

- Why is authorship an ethical issue?
- Biomedical authorship
- Guest authorship
- Order of listing
- Difficult areas
- Practical steps
Why is authorship an ethical issue?

- Authorship is about
  - Credit
  - Responsibility
  - Transparency
Credit

- Authorship is the ‘currency’ of academia
- Research productivity is measured by authorship
- Funding decisions and appointments use authorship as evidence
- Authorship may also bring direct rewards
## Reward systems of Chinese universities

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<th>Journal</th>
<th>Monetary award (RMB)*</th>
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<td>IF &lt;1 (but in SCI)</td>
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*Award to 1st author, decreased by 50% for each subsequent author*

CHF 1 = 6.3 RNB  (£1 = 9 RNB)


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CHF 30,000
Average salary for doctor 110,000 RMB
Average urban wage 40,000 RMB

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Shao J & Shen H *Learned Publishing* 2011; 24:95-7
Responsibility

- Correcting errors
- Responding to criticism / letters
- Taking responsibility for misconduct
Transparency

- Where the work was done
- Who was involved
- Potential conflicts of interest
Authorship misattribution

- Denies credit
- Shifts responsibility
- Reduces transparency
Systems of reward for authorship may:

- Encourage ‘salami’ publication
- Encourage guest authorship
- Encourage misconduct (plagiarism / fabrication)
Authorship definitions

- No universal definition
  - some common themes
- Variation between disciplines (?regions)
- Little agreement on what order of authors signifies
Author numbers are growing
(at least in biomedicine)

http://www.nlm.nih.gov/bsd/authors1.html

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The GUSTO study
• 1081 hospitals in 15 countries
• 41,021 patients
Replication of Genome-Wide Association Signals in UK Samples Reveals Risk Loci for Type 2 Diabetes

Eleftheria Zeggini,1,2* Michael N. Weedon,3,4*
Cecilia M. Lindgren,1,2* Timothy M. Frayling,3,4*
Katherine S. Elliott,2 Hana Lango,3,4 Nicholas J. Timpson,2,6
John R. B. Perry,3,4 Nigel W. Rayner,1,2 Rachel M. Freathy,3,4
Jeffrey C. Barrett,2 Beverley Shields,4 Andrew P. Morris,2
Sian Ellard,4,6 Christopher J. Groves,1 Lorna W. Harries,4
Jonathan L. Marchini,7 Katharine R. Owen,1 Beatrice Knight,4
Lon R. Cardon,2 Mark Walker,8 Graham A. Hitman,9
Andrew D. Morris,10 Alex S. F. Doney,10 The Wellcome Trust Case
Control Consortium (WTCCC)1 Mark I. McCarthy,1,2*
Andrew T. Hattersley3,4†

* These authors contributed equally to this work.
† Membership of the WTCCC is listed at the end of this paper.
‡ These authors contributed equally to this work.
Search for New Particles in Two-Jet Final States in 7 TeV Proton-Proton Collisions with the ATLAS Detector at the LHC

G. Aad et al. (ATLAS Collaboration)
Show All Authors/Affiliations

Received 13 August 2010; published 11 October 2010

See accompanying Physics Synopsis

A search for new heavy particles manifested as resonances in two-jet final states is presented. The data were produced in 7 TeV proton-proton collisions by the LHC and correspond to an integrated luminosity of 315 nb$^{-1}$ collected by the ATLAS detector. No resonances were observed. Upper limits were set on the product of cross
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3172 authors from 177 institutions
Biomedical authorship
International Committee of Medical Journal Editors (ICMJE) authorship criteria

- All persons designated as authors should qualify for authorship, and all those who qualify should be listed.

- Each author should have participated sufficiently in the work to take public responsibility for appropriate portions of the content.
ICMJE continued

Authorship credit should be based on:

- 1) substantial contributions to conception and design, or acquisition of data, or analysis and interpretation of data;
- 2) drafting the article or revising it critically for important intellectual content; and
- 3) final approval of the version to be published.

*Conditions 1, 2, and 3 must all be met.*

- Acquisition of funding, the collection of data, or general supervision of the research group, by themselves, do not justify authorship
Many people don't know / disagree with ICMJE criteria

Of 39 French researchers (PIs)
- 49% unaware of ICMJE authorship criteria
- 77% disagreed that all 3 criteria should be met
- 41% had been left off articles
- 62% had learnt they were an author after publication

Pignatelli et al JME 2005;31:578-81
Many people don't know / disagree with ICMJE criteria

Of 66 UK researchers (university medical faculty)
- 51% unaware of any explicit criteria
- 62% disagreed that all 3 criteria should be met

Bhopal et al *BMJ* 1997;314:1009-12
Many people don't know / disagree with ICMJE criteria

Of 77 Indian researchers (faculty at teaching hospital)
- 65% aware that authorship criteria existed
- but only 44% correctly identified the source
- 39% reported conflict over authorship

Dhaliwal et al *Med Gen Med* 2006;8:52
Authorship should be limited to those who have made a significant contribution to the concept, design, execution, or interpretation of the research study. All those who have made significant contributions should be offered the opportunity to be listed as authors. Other individuals who have contributed to the study should be acknowledged, but not identified as authors.
To protect the integrity of authorship, only persons who have significantly contributed to the research or project and manuscript preparation shall be listed as co-authors. The corresponding author attests to the fact that any others named as co-authors have seen the final version of the manuscript and have agreed to its submission for publication. Deceased persons who meet the criterion for co-authorship shall be included, with a footnote reporting date of death. No fictitious name shall be given as an author or co-author. An author who submits a manuscript for publication accepts responsibility for having properly included all, and only, qualified co-authors.
One solution

- Contributorship
- List individuals' contributions (who did what)
- Can still acknowledge others
Contributor list

- S&T were involved with study design and data interpretation, U performed statistical analysis, V&W collected data, T prepared the first draft, all authors reviewed the final version

- Adopted by some medical journals
- 1st used in psychology journals (1970s)
Contributorship

- Who takes responsibility for the integrity of the whole project?

- Some journals require a ‘guarantor’
  - ‘one or more authors ... who take responsibility for the integrity of the work as a whole, from inception to publication’
How much responsibility should co-authors take?

- Gerald Schatten co-author on Hwang cloning paper
- Found guilty of ‘research misbehaviour’ by University of Pittsburgh
- Aware that some cell lines were lost through contamination in Jan 05, failed to realise there was insufficient time to grow and analyse replacements by mid March when paper was submitted
Not all medical journals follow ICMJE

**BMJ**

- **Contributorship**
  Please note the way that we list the names of contributors to papers published in the *BMJ*. We believe that the definition of authorship, produced by the International Committee of Medical Journal Editors (or Vancouver Group), has some serious flaws.

- We now list contributors in two ways. Firstly, we publish a list of authors' names at the beginning of the paper and, secondly, we list contributors (some of whom may not be included as authors) at the end of the paper, giving details of who did what in planning, conducting, and reporting the work.
For reports of original data and systematic reviews, authors’ specific contributions will be published in the Acknowledgment section.
Neurology defines an author as a person who has made a substantive *intellectual contribution* to the submitted manuscript. A substantive contribution includes one or more of the following:

- Design or conceptualization of the study
- OR analysis or interpretation of the data
- OR drafting or revising the manuscript for intellectual content
- Professional writers employed by pharmaceutical companies or other academic, governmental, or commercial entities who have drafted or revised the intellectual content of the paper **must** be included as authors.
Neurology has changed ICMJE

- *Neurology* defines an author as a person who has made a substantive *intellectual contribution* to the submitted manuscript. A substantive contribution includes one or more of the following:
  - Design or conceptualization of the study
  - OR analysis or interpretation of the data
  - OR drafting or revising the manuscript for intellectual content
- Professional writers employed by pharmaceutical companies or other academic, governmental, or commercial entities who have drafted or revised the intellectual content of the paper **must** be included as authors.
ICMJE has ‘softened’ over the years …

- “While contributorship and guarantorship policies obviously remove much of the ambiguity surrounding contributions, they leave unresolved the question of the quantity and quality of contribution that qualify for authorship. The ICJME has recommended the following criteria for authorship; these criteria are still appropriate for journals that distinguish authors from other contributors.”

- “All contributors who do not meet the criteria for authorship should be listed in an acknowledgments section. Examples of those who might be acknowledged include a person who provided purely technical help, writing assistance, or a department chairperson who provided only general support.”
Biomedical authorship: summary

- Not all journals follow ICMJE authorship criteria
- In some journals you can be a contributor but not an author
- In other journals you can only be an author or an acknowledgee
- There is NO guidance on author order!
Guest authorship

- Occurs when somebody who does not fulfil criteria is listed as an author
- Also called honorary / gift authorship
A 'gift' turned sour

- Professor Geoffrey Chamberlain resigned as editor of the *British Jnl Ob Gyn* (1995)
- He had co-authored a paper that later turned out to be fraudulent
- Professor Chamberlain said that in hindsight he agreed that gift authorship was a bad idea but that he had "rubber stamped this paper out of politeness and because he asked me to as head of the department"
How common is guest authorship?

- Wislar et al *BMJ* 2011;343:d6128
- Surveyed 545 corresponding authors of papers published in top medical journals in 2008
- 96/545 (17.6%) of papers had guest authors
- 1996 survey found 19.3%
Guest authorship of research articles increased

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<tr>
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<th>1996</th>
<th>2008</th>
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<tr>
<td>Research articles</td>
<td>16.3%</td>
<td>25.0%</td>
</tr>
<tr>
<td>Review articles</td>
<td>25.5%</td>
<td>15.0%</td>
</tr>
<tr>
<td>Editorials</td>
<td>20.8%</td>
<td>11.2%</td>
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Guest authorship of reviews and editorials decreased

?less ghost writing by drug co’s
Other studies

- Shapiro et al (articles with >3 authors in top medical journals in 1989): \(26\%\) guest

- Mowatt et al (systematic reviews in Cochrane library 1999): \(39\%\) guest
Order of listing

- Important to funders / institutions
  - China
  - Medical Council of India only counts first 2

- Varies across disciplines
- Virtually no guidance in medicine
- Growth in joint 1st authorship
Alphabetical listing is the norm in economics BUT

- With each letter closer to A there is an increased chance of having tenure at a top US department and professional recognition
  (Einav & Yariv *J Econ Persp* 2006;20:175-88)
a. All those, regardless of status, who have made substantive creative contribution to the generation of an intellectual product are entitled to be listed as authors of that product.

b. First authorship and order of authorship should be the consequence of relative creative leadership and creative contribution. Examples of creative contributions are: writing first drafts or substantial portions; significant rewriting or substantive editing; and contributing generative ideas or basic conceptual schemes or analytic categories, collecting data which require significant interpretation or judgment, and interpreting data.

c. Clerical or mechanical contributions to an intellectual product are not grounds for ascribing authorship. Examples of such technical contributions are: typing, routine data collection or analysis, routine editing, and participation in staff meetings. …
American Sociological Association

Sociologists take responsibility and credit, including authorship credit, only for work they have actually performed or to which they have contributed. Sociologists ensure that principal authorship and other publication credits are based on the relative scientific or professional contributions of the individuals involved, regardless of their status. In claiming or determining the ordering of authorship, sociologists seek to reflect accurately the contributions of main participants in the research and writing process. A student is usually listed as principal author on any multiple authored publication that substantially derives from the student's dissertation or thesis. In cases of multiple authorship, sociologists confer with all other authors prior to submitting work for publication and establish mutually acceptable agreements regarding submission.
Experience from Committee on Publication Ethics (COPE)

- Journals can advise on authorship criteria but cannot enforce it
- Editors cannot adjudicate authorship disputes
- Institutions should agree standards and enforce them
New University Authorship Policy - Consultation

The consultation period for the new University Authorship Policy is now open.
The consultation period will close Monday 15 October, 2012.

There is a briefing session on Wednesday September 26 at 10 am in Theatre 1, ICT Building.

Download and read the Consultation Pack
Download the Feedback Form

Send feedback to: research-integrity@unimelb.edu.au

There are few more important principles of research integrity than authorship. Authorship is the fulfilment of a responsibility to communicate research findings for external review and to advance knowledge. Authorship is a key measure of research performance and a critical tool in the establishment of a research profile. The increasing focus on performance measurement (from institutional to individual perspectives) and an increasingly competitive research environment further amplify the importance of authorship and publications in establishing and...
Difficult areas

- Need guidance on order of authorship
- Need for harmonization / agreement for inter-disciplinary research
- Ideally, reward systems should encourage good behaviour / honesty
Practical steps

- Shift from authorship to contributorship
- Rewards based on contribution (not order)
- Appointments / funding based on best papers (not number)
- Institutions should be alert to unfeasibly prolific authors (as well as unproductive ones)
Further reading
