

The Role of Journals in Promoting Research Integrity

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Top 10 Biases in Biomedical Publishing

#10 Ghost Authorship

Flanagin A, et al., Prevalence of Articles With Honorary Authors and Ghost Authors in Peer-Reviewed Medical Journals JAMA. 1998;280(3):222-224.

International Committee of Medical Journal Editors. Uniform Requirements for Manuscripts Submitted to Biomedical Journals. JAMA.1993; 269:2282-2286.

Wislar JS, Flanagin A, Fontanarosa PB, DeAngelis CD. Honorary and ghost authorship in high impact medical journals: a cross sectional survey of corresponding authors. BMJ 2011;343:d6128.

#9 Conflicts of Interest

Bekelman JE, Li Y, Gross CP. Scope and impact of financial conflicts of interest in biomedical research: a systematic review. *JAMA* 2003 Jan 22-29; 289(4):454-65.

Gardner W, Lidz CW. Research Sponsorship, Financial Relationships, and the Process of Research in Pharmaceutical Clinical Trials. *Journal of Empirical Research on Human Research Ethics* 2006; (2):11-18.

Tereskerz PM, Moreno J. Ten Steps to Developing a National Agenda to Address Financial Conflicts of Interest in Industry Sponsored Clinical Research. *Acct. in Research* 2005; 12(2): 139-55.

DeLong G. Conflicts of interest in vaccine safety research. *Account. Res.* 2012; 19(2):65-88.

#8 Advertising/Marketing

Lexchin J, Bero LA, Djulbegovic J, Clark O. Pharmaceutical industry sponsorship and research outcome and quality: systematic review. *BMJ* 2003 May 31; 326(7400):1167.

Brown A, Kraft D, Schmitz SM, Sharpless V, Martin C, Shah R, Shaheen NJ. Association of industry sponsorship to published outcomes in gastrointestinal clinical research. *Clin Gastroenterol Hepatol*. 2006 Dec;4(12):1445-51.

Lexchin J, Light DW. Commercial influence and the content of medical journals. *BMJ*. 2006 June 17; 332(7555):1444-1447.

#7 Duplicate Publication

Elm E, Poggia G, Walder B, Tramèr MR. Different Patterns of Duplicate Publication: An Analysis of Articles Used in Systematic Reviews. *JAMA*. 2004;291(8):974-980.

Huston P, Moher D. Redundancy, disaggregation, and the integrity of medical research. *Lancet*. 1996;347:1024-1026.

DeAngelis, CD. Duplicate Publication, Multiple Problems. *JAMA*. 2004;292(14):1745-1746

#6 Reviewer / Editor Bias

Lock S. *A Difficult Balance: Editorial Peer Review in Medicine*. London, UK: Nuffield Provincial Hospitals Trust; 1985.

Guarding the guardians: research on editorial peer review; selected proceedings from the First International Congress on Peer Review in Biomedical Publication. May 10-12, 1989, Chicago, Ill. *JAMA*. 1990;263(10):1317-1441.

Schroter S, Tite L, Hutchings A, Black N. Differences in review quality and recommendations for publication between peer reviewers suggested by authors or by editors. *JAMA*. 2006 Jan 18;295(3):314-7.

#5 Outcome Bias

Stern JM, Simes RJ. Publication bias: evidence of delayed publication in a cohort study of clinical research projects. *BMJ*. 1997;315:640-5.

Chan AW, Hróbjartsson A, Haahr MR, Gøtzsche PC, Altman DG. Empirical evidence for selective reporting of outcomes in randomized trials: comparison of protocols to published articles. *JAMA*. 2004 May 26;291(20):2457-65.

Dwan K, et al. Systematic Review of the Empirical Evidence of Study Publication Bias and Outcome Reporting Bias. *PLoS One*. 2008 Aug 28;3(8):e3081.

#4 Fabrication, Falsification and Plagiarism (FFP)

Office of Research Integrity (HHS). <http://ori.hhs.gov/>

Dickinson JE. Methods to Counter Scientific Misconduct in Medical Journals: Text-Matching software programs. Aust N Z J Obstet Gynaecol. 2011 Aug;51(4):287-8.

Steen RG. Misinformation in the medical literature: what role do error and fraud play? J Med Ethics. 2011 Aug;37(8):498-503.

Fanelli D. How Many Scientists Fabricate and Falsify Research? A Systematic Review and Meta-Analysis of Survey Data. PLoS ONE 2009. 4(5): e5738. doi:10.1371/journal.pone.0005738

#3 Image Manipulation

Gilbert, N. Science journals crack down on image manipulation

<http://www.nature.com/news/2009/091009/full/news.2009.991.html>

Parrish D, Noonan B. Image Manipulation as Research Misconduct.. Sci. Eng. Ethics. 2009; 15(2):161-7.

Pearson, H. Special Report Forensic software traces tweaks to images. Nature. (2 February 2006); 439:520-521.

White C. Software makes it easier for journals to spot image manipulation. BMJ. 2007 March 24; 334(7594):607.

#2 Authorship Determination

Farthing MJ. Authors and publication practices. *Sci Eng Ethics*. 2006 Jan;12(1):41-52.

Marušić A, Bošnjak L, Jerončić A. A Systematic Review of Research on the Meaning of Ethics and Practices of Authorship Across Scholarly Disciplines. *PLoS One*. 2011;6(9):e23477.

Bates T, Anić A, Marusić M, Marusić A. Authorship criteria and disclosure of contributions: comparison of 3 general medical journals with different author contribution forms. *JAMA*. 2004 Jul 7;292(1):86-8.

#1 Literature Corrections

Pfeifer M.P, Snodgrass G.L. The continued use of retracted, invalid scientific literature. *JAMA*. 1990 Mar 9;263(10):1420-3

Peterson GM. The effectiveness of the practice of correction and republication in the biomedical literature. *J Med Libr Assoc*. 2010 April; 98(2):135-139.

Neale AV, Northrup J, Dailey R, Marks E, Abrams J. "Correction and Use of Biomedical Literature Affected by Scientific Misconduct." *Science and Eng. Ethics*. 2007; 13: 5-24.

PREVENTATIVE MEASURES

- Instructions to Authors (IA)
- CSE 2011 study findings
 - Most IA address mechanics of paper
 - Only 25% journals address research integrity issues ⁽¹⁾

Robert J. An author's guide to publication ethics: a review of emerging standards in biomedical journals. *Headache* 2009 Apr;49(4):578-89.

(1) Scheetz, Overgaard, Scott-Lichter. The Road Less Travelled: Why Contributorship is worth the walk. CSE Annual Meeting. Baltimore, MD May 2011.

Critical Elements to Include in IA

- Does the journal address authorship or contributorship?
- Does the journal address breaches of publication ethics and how they'll be resolved?
- Do the IA state how literature corrections (retractions, corrections and/ or erratum) will be addressed?

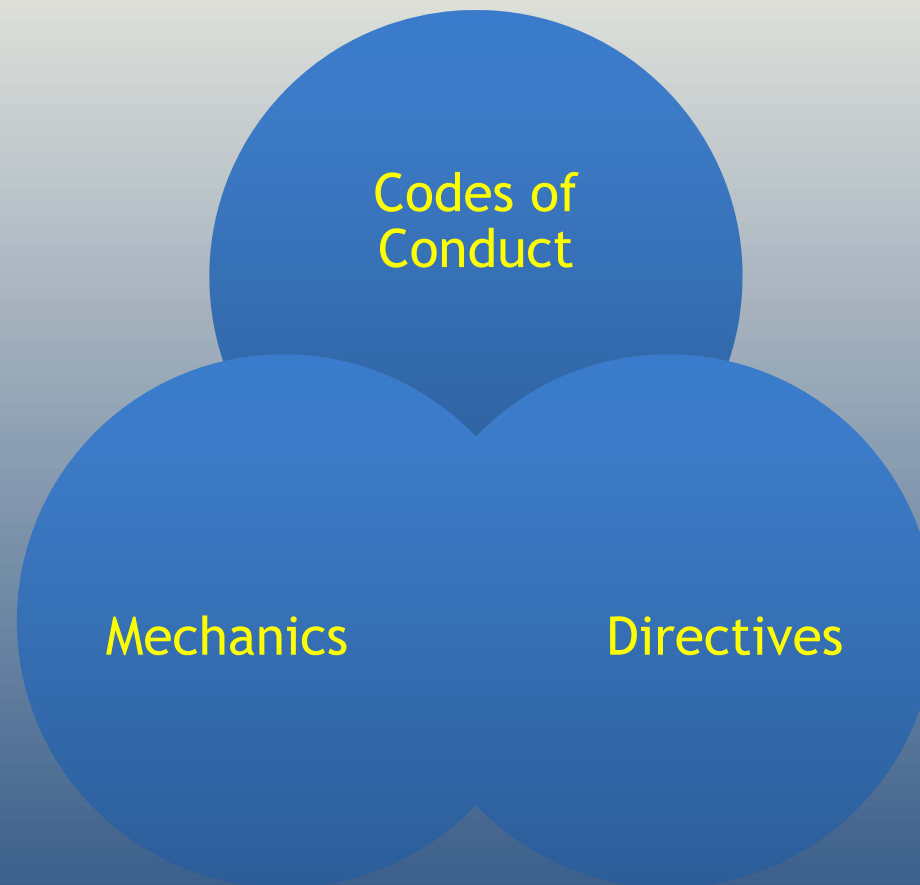
Existing Model

Directives

Codes of
Conduct

Mechanics

Proposed Model



Existing Resources

- CSE - Council of Science Editors
- WAME - World Association of Medical Editors
- COPE - Committee on Publication Ethics
- EASE - European Association of Science Editors
- Retraction Watch - blog dedicated to educating readers about retractions

Questions?

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