

Emerging issues in authorship

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University of Split School of Medicine, Split, Croatia

The trade of authorship is a violent, and indestructible obsession.

George Sand
(French writer, 1804-1876)

Declaration of activities and relationships

University of Split School of Medicine, Split, Croatia:
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Head, Center for Evidence-based Medicine



Editor Emerita, *Journal of Global Health*
Senior Co-editor in Chief, *ST-OPEN*



Council member, Committee on Publication Ethics (COPE)
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Funding:

Croatian Research Foundation

Horizon 2020 and Horizon Europe grants (EnTIRE, VIRT2UE, SOPs4RI, iRECS, iRISE, CHANGER)



ABOUT COPE

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97 COUNTRIES



GLOBAL COMMUNITY
on publication ethics

- Non-profit established in 1997; operated, managed, and governed by small group of paid employees, with volunteers on **Trustee Board and Council**
- **>14,000 members** from 97 countries:
 - primarily editors of scholarly journals; also:
 - universities and research institutes
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- COPE brings together all those involved in scholarly research and its publication to strengthen the network of support, education, and debate in publication ethics:
Creating a culture of publication integrity together

COPE ACTIVITIES & RESOURCES



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- [Guidelines](#): formal policy documents



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The screenshot shows the COPE website's 'Authorship and contributorship' page. The navigation bar includes 'Guidance', 'Member resources', and 'About COPE'. The main content area is divided into several sections, each highlighted with a red box:

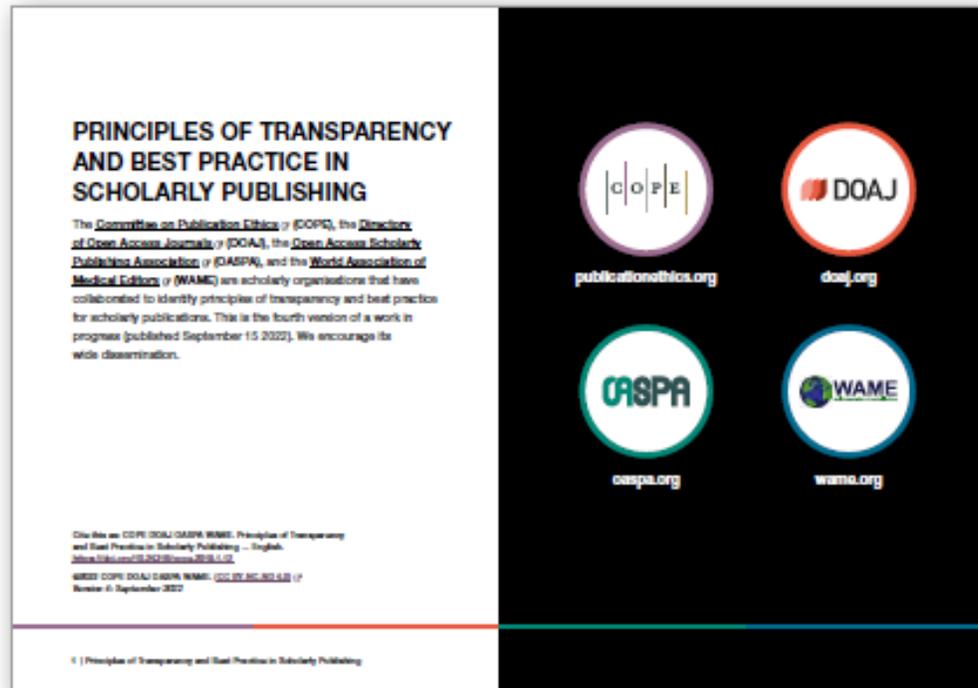
- Cases:**
 - [Author retracts request to be removed from author list](#)
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- Guidelines:**
 - [Ethics toolkit for a successful editorial office](#)
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COPE RESPONSE TO EMERGING CHALLENGES

- Principles of transparency and best practice in scholarly publishing
- Ethics toolkit for a successful editorial office



- Papermills research



C O P E

The Principles of Transparency and Best Practice in Scholarly Publishing should apply to all published content, including special issues and conference proceedings.

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A journal's name is unique



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COPE & STM. Paper Mills — Research report from COPE & STM — English. <https://doi.org/10.24318/jtbG8IHL> ©2022
Committee on Publication Ethics (CC BY-NC-ND 4.0) Version 1: June 2022

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This link [https://www.scisource.com/authorship](#) presents topics for articles on various aspects of education, economics, biology, political science, architecture, civil engineering, informatics, and engineering. Please note that positions in the article are ranked from highest to lowest. The publication is carried out on a turnkey basis: the articles have already been written, translated, proofread, formatted, and the journal has been selected for publication. The only thing you



PAPER MILLS



Common indicators

- Scientific topic: Frequently papers are in the field of cellular and molecular biology, but this is changing all the time
- Experiments: Usually many Western blot experiments, cytometry assays, histology/cell staining
- Experimental data: Western blots are often “too clean” especially the background; cytometry assays are also “too clean”; molecular weight markers are usually not shown for Western blot experiments.
- Layout: The layout of these papers appears very similar (graphs, statistical error bars, fonts in figures, etc.).
- Affiliations: Authors affiliations often do not show a specific university. At times, the mentioned departments do not seem to match the topic of the paper.



PAPER MILLS



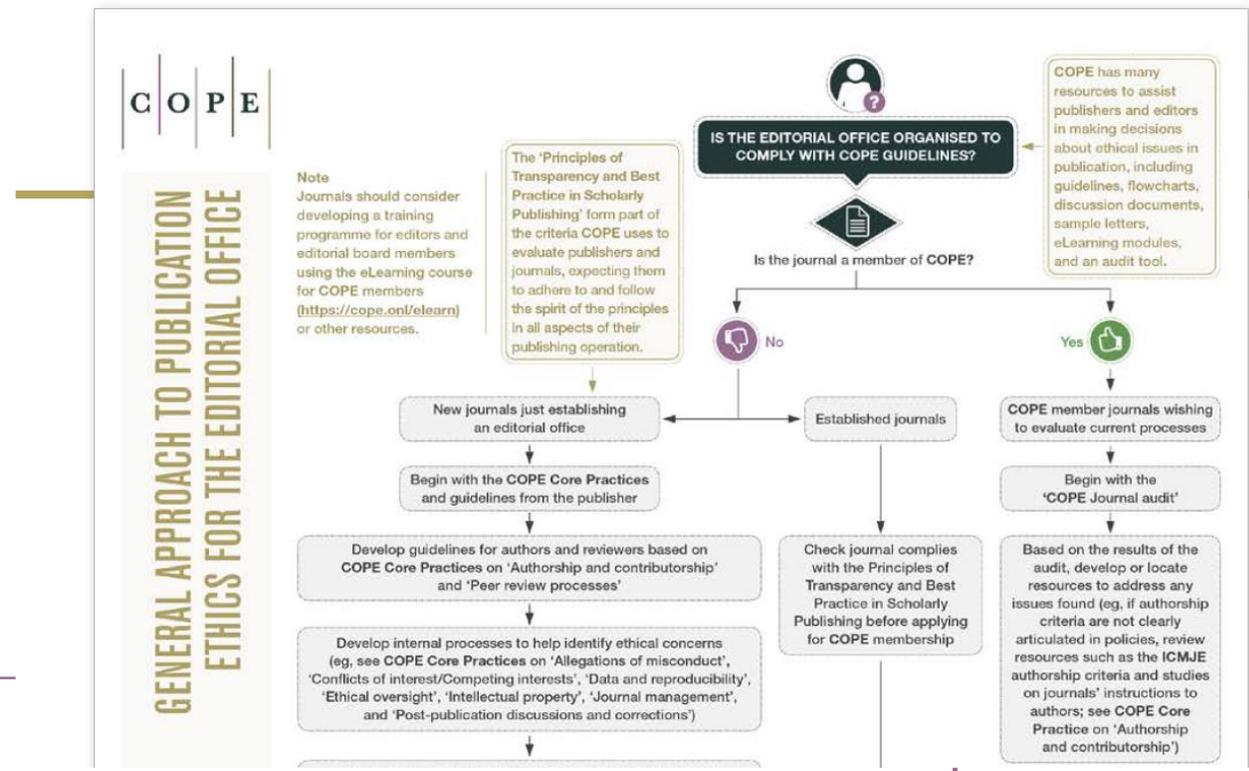
Common indicators

- Authors: Papers are usually submitted by authors who have no publishing record with the specific journal, or elsewhere. Many non-institutional email-addresses are used. New ORCIDs seem to be created for each individual submission. This is a particularly challenging indicator as there are countries where institutional email addresses are rare and therefore that does not automatically mean the author is not genuine.
- Experimental design: Upon closer evaluation, flaws in experimental design are found. For instance, experimental data does not match the descriptions of experimental methods or reagents cannot be applied for the described purpose.
- Missing ethical approval for animal experiments.
- Substantial changes to the author list during revision or proof corrections.
- Image elements have been published elsewhere in a different paper (same or slightly manipulated Western blot image elements, whole cytometry assays, or microscopic cell images).

TOOLS FOR EDITORS



1. <u>Develop guidelines for authors</u>	6
2. <u>Develop guidelines for reviewers</u>	7
3. <u>Develop processes to help identify ethical concerns</u>	8
4. <u>Develop guidelines for promptly responding to suspected ethical breaches by authors, reviewers, and editors</u>	15



Challenges in authorship

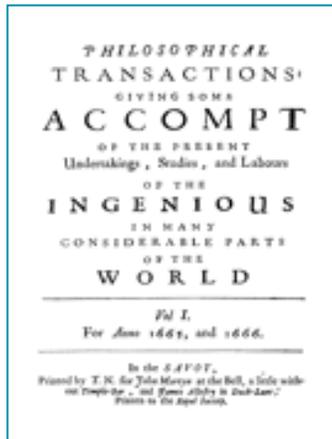
“Old” challenges

- Definition
- Contribution declaration
- Order of authors
- Equal / anonymous authorship
- Ethics of authorship

New challenges

- Authorship in participatory research
- Artificial intelligence

Who is an author?

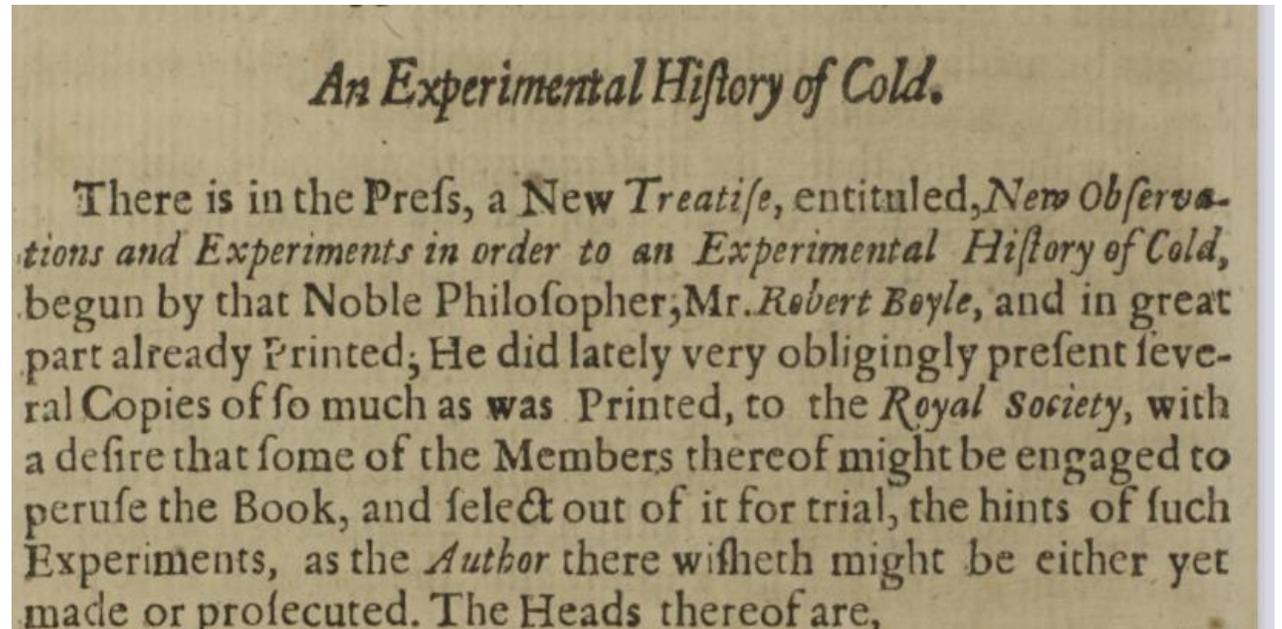


Article

An experimental history of cold

Robert Boyle

Published: 06 March 1665 | <https://doi.org/10.1098/rstl.1665.0006>



Who is an author?

- Definition of authorship across disciplines

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Phys Rev Lett. 2001 Mar 19;86(12):2515-22.

Measurement of CP-violating asymmetries in B0 decays to CP eigenstates.

Aubert B, Boutigny D, De Bonis I, Gaillard JM, Jeremie A, Karyotakis Y, Lees JP, Robbe P, Tisserand V, Palano A, Chen GP, Chen JC, Qi ND, Rong G, Wang P, Zhu YS, Eigen G, Reinertsen PL, Stugu B, Abbott B, Abrams GS, Borgland AW, Breon AB, Brown DN, Button-Shafer J, Cahn RN, Clark AR, Dardin S, Day C, Dow SF, Elioff T, Fan Q, Gaponenko I, Gill MS, Goozen FR, Gowdy SJ, Gritsan A, Groysman Y, Jacobsen RG, Jared RC, Kadel RW, Kadyk J, Karcher A, Kerth LT, Kipnis I, Kluth S, Kolomensky YG, Kral JF, Lafever R, LeClerc C, Levi ME, Lewis SA, Lionberger C, Liu T, Long M, Lynch G, Marino M, Marks K, Meyer AB, Mokhtarani A, Momayezi M, Nyman M, Oddone PJ, Ohnemus J, Oshatz D, Patton S, Perazzo A, Peters C, Pope W, Pripstein M, Quarrie DR, Rasson JE, Roe NA, Romosan A, Ronan MT, Shelkov VG, Stone R, Telnov AV, von der Lippe H, Weber T, Wenzel WA, Zisman MS, Bright-Thomas PG, Harrison TJ, Hawkes CM, Kirk A, Knowles DJ, O'Neale SW, Watson AT, Watson NK, Deppermann T, Koch H, Krug J, Kunze M, Lewandowski B, Peters K, Schmucker H, Steinke M, Address JC, Barlow NR, Bhimji W, Chevalier N, Clark PJ, Cottingham WN, De Groot N, Dyce N, Foster B, Mass A, McFall JD, Wallom D, Wilson FF, Abe K, Hearty C, Mattison TS, McKenna JA, Thiessen D, Camanzi B, Jolly S, McKemey AK, Tinslay J, Blinov VE, Bukin AD, Bukin DA, Buzyaev AR, Dubrovnik MS, Golubev VB, Ivanchenko VN, Kolachev GM, Korol AA, Kravchenko EA, Onuchin AP, Salnikov AA, Serednykov SI, Skovpen YI, Telnov VI, Yushkov AN, Lankford AJ, Mandelkern M, McMahon S, Stoker DP, Ahsan A, Buchanan C, Choun S, MacFarlane DB, Prell S, Rahatlou S, Raven G, Sharma V, Burke S, Campagnari C, Dahmes B, Hale D, Hart PA, Kuznetsova N, Kyre S, Levy SL, Long O, Lu A, Richman JD, Verkerke W, Withereill M, Yellin S, Beringer J, Dorfan DE, Eisner AM, Frey A, Grillo AA, Grothe M, Heusch CA, Johnson RP, Kroeger W, Lockman WS, Pulliam T, Sadrozinski H, Schalk T, Schmitz RE, Schumm BA, Seiden A, Spencer EN, Turri M, Walkowiak W, Williams DC, Chen E, Dubois-Felsmann GP, Dvoretzki A, Hanson JE, Hillin DG, Metzler S, Oyung J, Porter FC, Ryd A, Samuel A, Weaver M, Yang S, Zhu RY, Devmal S, Geld TL, Jayatilaka S, Jayatilaka SM, Mancinelli G, Meadows BT, Sokoloff MD, Bloom P, Fahey S, Ford WT, Gaede F, van Hoek WC, Johnson DR, Michael AK, Nauenberg U, Olivas A, Park H, Rankin P, Roy J, Sen S, Smith JG, Wagner DL, Blouw J, Harton JL, Krishnamurthy M, Soffer A, Toki WH, Warner DW, Wilson RJ, Zhang J, Brandt T, Brose J, Colberg T, Dahlinger G, Dickopp M, Dubitzky RS, Eckstein P, Fullerschnieder H, Krause R, Maly E, Müller-Pfefferkorn R, Otto S, Schubert KR, Schwierz R, Spaan B, Wilden L, Behr L, Bernard D, Bonneaud GR, Brochard F, Cohen-Tanugi J, Ferrag S, Fouque G, Gastaldi F, Matricon P, Mora de Freitas P, Renard C, Roussot E, Tjampens S, Thiebaut C, Vasileiadis G, Verderi M, Anjomshoaa A, Bernet R, Di Lodovico F, Khan A, Muheim F, Playfer S, Swain JE, Falbo M, Bozzi C, Dittongo S, Folegani M, Piemontese L, Treadwell E, Anulli F, Baldini-Ferrolli R, Calcaterra A, de Sangro R, Falciai D, Finocchiaro G, Patteri P, Peruzzi IM, Piccolo M, Xie Y, Zallo A, Bagnasco S, Buzo A, Contri R, Crosetti G, Lo Vetere M, Macri M, Monge MR, Pallavicini M, Passaggio S, Pastore FC, Patrignani C, Pia MG, Robutti E, Santroni A, Morì M, Bartoldus R, Dignan T, Hamilton R, Mallik U, Cochran J, Crawley HB, Fischer PA, Lamsa J, McKay R, Meyer WT, Rosenberg EI, Albert JN, Belgbeder C, Benkebil M, Breton D, Cizeron R, Du S, Grosdidier G, Hast C, Höcker A, LePeltier V, Lutz AM, Plaszczyński S, Schune MH, Trincaz-Duvold S, Truong K, Valassi A, Wormser G, Bionta RM, Brigljević V, Brooks A, Fackler O, Fujino D, Lange DJ, Muggge M, O'Connor TG, Pedrotti B, Shi X, van Bibber K, Wenaus TJ, Wright DM, Wuest CR, Yamamoto B, Carroll M, Fry JR, Gabathuler E, Gamet R, George M, Kay M, Payne DJ, Sloane RJ, Touramanis C, Aspinwall ML, Bowerman DA, Dauncey PD, Egede U, Eschrich I, Gunawardane NJ, Martin R, Nash JA, Price DR, Sanders P, Smith D, Azzopardi DE, Back JJ, Dixon P, Harrison PF, Newman-Coburn D, Potter RJ, Shorthouse HW, Strother P, Vidal PB, Williams MI, Cowan G, George S, Green MG, Kurup A, Marker CE, McGrath P, McMahon TR, Salvatore F, Scott I, Vaitsas G, Brown D, Davis CL, Ford K, Li Y, Pavlovich J, Allison J, Barlow RJ, Boyd JT, Fullwood J, Jackson F, Lafferty GD, Sawas N, Simopoulos ET, Thompson RJ, Weatherall JH, Bard R, Farbin A, Jawahery A, Lillard V, Olsen J, Roberts DA, Schieck JR, Blaylock G, Dallapiccola C, Flood KT, Hertzbach SS, Koffer R, Lin CS, Staengle H, Wilcoq S, Wittlin J, Brau B, Cowan R, Sciolia G, Taylor F, Yamamoto RK, Britton DI, Milek M, Patel PM, Trischuk J, Lanni F, Palombo F, Bauer JM, Booke M, Cremaldi L, Eschenberg V, Kroeger R, Reep M, Reidy J, Sanders DA, Summers DJ, Beaulieu M, Martin JP, Nief JY, Seitz R, Taras P, Zacek V, Nicholson H, Sutton CS, Cavallo N, Cartaro C, De Nardo G, Fabozzi F, Gatto C, Lista L, Paolucci P, Piccolo D, Soacca C, LoSecco JM, Alsmiller JR, Gabriel TA, Handler T, Heck J, Brau JE, Frey R, Iwasaki M, Sinev NB, Strom D, Borsato E, Colechia F, Dal Corso F, Galeazzi F, Margoni M, Marzolla M, Michelon G, Morandini M, Posocco M, Rotondo M, Simonetto F, Stroliri R, Torassa E, Voci C, Bailly P, Benayoun M, Briand H, Chauveau J, David P, De La Vaissière C, Del Buono L, Genat JF, Hamon O, Le Diberder F, Lebbolo H, Leruste P, Lory J, Martin L, Roos L, Stark J, Versillé S, Zhang B, Manfredi PF, Ratti L, Re V, Speziali V, Frank ED, Gladney L, Guo QH, Panetta JH, Angelini C, Batignani G, Bettarini S, Bondioli M, Bosi F, Carpinelli M, Forti F, Giorgi MA, Lusiani A, Martinez-Vidal F, Morganti M, Neri N, Paoletti E, Rama M, Rizzo G, Sandrelli F, Simi G, Triggiani G, Walsh J, Hairre M, Judd D, Paick K, Turnbull L, Wagoner DE, Albert J, Bula C, Fernholz R, Lu C, McDonald KT, Miftakov V, Sands B, Schaffner SF, Smith AJ, Tumanov A, Varnes EW, Bronzini F, Buccheri A, Bulfon C, Cavoto G, del Re D, Faccini R, Ferrarotto F, Ferroni F, Fratini K, Lamanna E, Leonardi E, Mazzoni MA, Morganti S, Piredda G, Safai Tehrani F, Serra M, Voena C, Waldi R, Jacques PF, Kalelkar M, Plano RJ, Adye T, Claxton B, Franek B, Galagedera S, Geddes NI, Gopal GP, Lidbury J, Xella SM, Aleksan R, Besson P, Bourgeois P, De Domenico G, Emery S, Gaidot A, Ganzhur SF, Gosset L, Hamel de Monchenault G, Kozanecki W, Langer M, London GW, Mayer B, Serfass B, Vasseur G, Yeche C, Zito M, Copty N, Purohit MV, Singh H, Yumiceva FX, Adam I, Anthony PL, Aston D, Baird K, Bartelt J, Becla J, Bell R, Bloom E, Boeheim CT, Boyarski AM, Boyce RF, Bulos F, Burgess W, Byers B, Calderini G, Claus R, Convery MR, Coombes R, Cottrell L, Coupal DP, Coward DH, Craddock WW, DeStaebler H, Dorfan J, Doser M, Dunwoodie W, Ecklund S, Fieguth TH, Field RC, Freytag DR, Glanzman T, Godfrey GL, Grosso P, Haller G, Hanushevsky A, Harris J, Hasan A, Hewett JL, Himel T, Huffer ME, Innes WR, Jessop CP, Kawahara H, Keller L, Kelsey MH, Kim P, Klaisner LA, Kocian ML, Krebs HJ, Kunz PF, Langenegger U, Langeveld W, Leith DW, Louie SK, Luitz S, Luth V, Lynch HL, MacDonald J, Manzin G, Mariske H, McCulloch M, McShurley D, Menke S, Messner R, Metcalfe S, Moffett KC, Mount R, Muller DR, Nelson D, Nordby M, O'Grady CP, O'Neill FG, Oxoby G, Pavel T, Peri J, Petrak S, Putallaz G, Quinn H, Raines PE, Ratcliff BN, Reif R, Robertson SH, Rochester LS, Roodman A, Russell JJ, Sapozhnikov L, Saxton OH, Schietinger T, Schindler RH, Schwiening J, Seeman JT, Serbo VV, Skarpass K Sr, Snyder A, Soha A, Spanier SM, Stahl A, Stelzer J, Su D, Sullivan MK, Talby M, Tanaka HA, Vavra J, Wagner SR, Weinstein AJ, White JL, Wienands U, Wisniewski WJ, Young CC, Zioulas G, Burchat PR, Cheng CH, Kirkby D, Meyer TI, Roat C, De Silva A, Henderson R, Berridge S, Bugg W, Cohn H, Hart E, Weidemann AW, Benninger T, Izen H, Kitayama I, Lou XC, Turcotte M, Bianchi F, Bona M, Di Girolamo B, Gamba D, Smol A, Zanin D, Bosio L, Della Ricca G, Lanceri L, Pompili A, Poropat P, Vuagnin G, Panvini RS, Brown CM, Kowalewski R, Roney JM, Band HR, Charles E, Dasu S, Elmer P, Hu H, Johnson JR, Nielsen J, Orejudos W, Pan Y, Prepost R, Scott U, von Wimmersperg-Toeller JH, Wu SL, Yu Z, Zobernig H, Kordich TM, Moore TB, Neal H; BABAR Collaboration.

Laboratoire de Physique des Particules, Annecy-le-Vieux, France.

Abstract

We present measurements of time-dependent CP-violating asymmetries in neutral B decays to several CP eigenstates. The measurement uses a data sample of 23x10⁶ Upsilon(4S)→BbarB decays collected by the BABAR detector at the PEP-II asymmetric B Factory at SLAC. In this sample, we find events in which one neutral B meson is fully reconstructed in a CP eigenstate containing charmonium and the flavor of the other neutral B meson is determined from its decay products. The amplitude of the CP-violating asymmetry, which in the standard model is proportional to sin2beta, is derived from the decay time distributions in such events. The result is sin2beta = 0.34±0.20 (stat)±0.05 (syst).

2001: 743 authors

Challenges in authorship

Marušić A, Bošnjak L, Jerončić A. A systematic review of research on the meaning, ethics and practices of authorship across scholarly disciplines. PLoS One. **2011;6(9):e23477**

1. Authorship perceptions, definitions, and practices (n=58 articles)
2. Order of authors on the byline (n=45)
3. Ethical and unethical authorship practices (n=46)
4. Power issues in authorship (n=19)

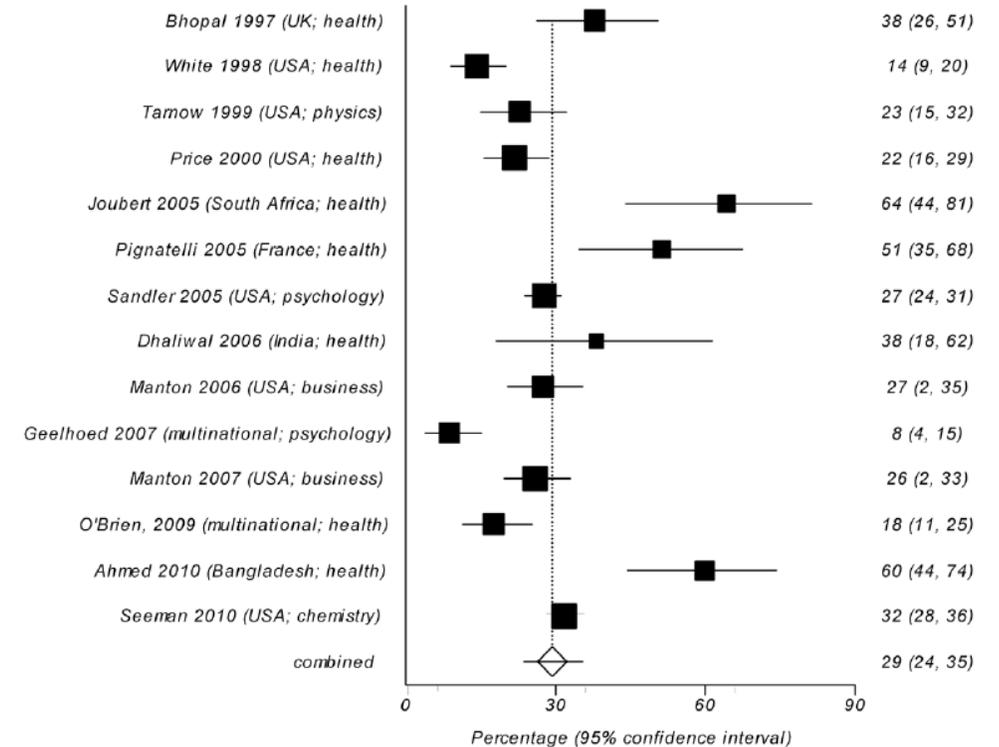
Hosseini M, Gordijn B. A review of the literature on ethical issues related to scientific authorship. Account Res. **2020 Jul;27(5):284-324.**

- Attribution (n=100 articles)
- Violations of the norms of authorship (n=94)
- Bias (n=81)
- Responsibility and accountability (n=46)
- Authorship order (n=43)
- Citations and referencing (n=43)
- Definition of authorship (n=38)
- Publication strategy (n=37)
- Originality (n=35)
- Sanctions (n=16)

Misuse of authorship

Prevalence of authorship problems:

- Overall 29% (95%CI 24-35%) researchers reporting experience with authorship misuse
- 55% (95%CI 45-64%) in France/ S. Africa/ India/ Bangladesh
- 23% (95%CI 18-28%) in USA/ UK/ int. journals



Authorship definition



The ICMJE **recommends** that authorship be based on the following 4 criteria:

1. Substantial contributions to the conception **OR** design of the work; **OR** the acquisition, analysis, **OR** interpretation of data for the work; **AND**
2. Drafting the work **OR** reviewing it critically for important intellectual content; **AND**
3. Final approval of the version to be published; **AND**
4. Agreement 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.



Everyone who has made substantial intellectual contributions to the study on which the article is based (for example, to the research question, design, analysis, interpretation, and written description) **should** be an author.

Authorship definition

Elsevier 2012 (<http://www.elsevier.com/authors/author-rights-and-responsibilities#responsibilities>)

Authorship should be limited to those who have made a significant contribution to the conception, design, execution, **or** interpretation of the reported study. All those who have made significant contributions should be listed as co-authors. Where there are others who have participated in certain substantive aspects of the research project, they should be acknowledged or listed as contributors.

Elsevier 2023

(https://www.elsevier.com/_data/assets/pdf_file/0006/653883/Authorship-factsheet-March-2019.pdf)

Four criteria must all be met to be credited as an author:

- Substantial contribution to the study conception and design, data acquisition, analysis, and interpretation.
- Drafting or revising the article for intellectual content.
- Approval of the final version.
- Agreement to be accountable for all aspects of the work related to the accuracy or integrity of any part of the work.

Wiley 2012

(http://authorservices.wiley.com/bauthor/publicationethics.asp#_Toc149460095)

Wiley-Blackwell recommends that journal editors consider adopting the ICMJE authorship criteria as part of their editorial policy. The ICMJE authorship criteria state '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. Authors should meet conditions 1, 2, and 3.'

Wiley 2023

(<https://authorservices.wiley.com/ethics-guidelines/index.html#5>)

There is no universal definition of authorship, and practices vary by discipline and communities especially when individuals collaborate across subject areas. Different disciplines adopt their own criteria, for example, the ICMJE guidelines are well-known in the biomedical fields, the APA guidelines are used in Psychology, the EuChemS guidelines are adopted in Chemistry, whereas in the arts, humanities and social sciences, publications by single authors are more common. However, the minimum recognized requirements for authorship are making a substantial contribution to the research and being accountable for the work undertaken (COPE Discussion document: authorship).

Authorship vs contributorship

Special Communication 

When Authorship Fails

A Proposal to Make Contributors Accountable

Drummond Rennie, MD; Veronica Yank; Linda Emanuel, MD, PhD

JAMA, August 20, 1997—Vol 278, No. 7

We propose dropping the outmoded notion of *author* in favor of the more useful and realistic one of *contributor*. This requires disclosure to readers of the contributions made to the research and to the manuscript by the contributors, so that they can accept both credit and responsibility. In addition, certain named contributors take on the role of guarantor for the integrity of the entire work.

Contributorship: CRediT taxonomy

Term	Definition
Conceptualization	Ideas; or evolution of overarching research goals and aims
Methodology	Development or design of methodology; creation of models
Software	Programming, software development; designing computer programs; implementation of the computer code and supporting algorithms; testing of existing code components
Validation	Verification, whether as a part of the activity or separate, of the overall replication/ reproducibility of results/experiments and other research outputs
Formal analysis	Application of statistical, mathematical, computational, or other formal techniques to analyze or synthesize study data
Investigation	Conducting a research and investigation process, specifically performing the experiments, or data/evidence collection
Resources	Provision of study materials, reagents, materials, patients, laboratory samples, animals, instrumentation, computing resources, or other analysis tools
Data curation	Management activities to annotate (produce metadata), scrub data and maintain research data (including software code, where it is necessary for interpreting the data itself) for initial use and later reuse
Writing - Original Draft	Preparation, creation and/or presentation of the published work, specifically writing the initial draft (including substantive translation)
Writing - Review & Editing	Preparation, creation and/or presentation of the published work by those from the original research group, specifically critical review, commentary or revision – including pre-or postpublication stages
Visualization	Preparation, creation and/or presentation of the published work, specifically visualization/ data presentation
Supervision	Oversight and leadership responsibility for the research activity planning and execution, including mentorship external to the core team
Project administration	Management and coordination responsibility for the research activity planning and execution
Funding acquisition	Acquisition of the financial support for the project leading to this publication

Author vs. contributor

Authorship Criteria and Disclosure of Contributions

JAMA, July 7, 2004—Vol 292, No. 1

Comparison of 3 General Medical Journals With Different Author Contribution Forms

Tamara Bates, MD

Ante Anić, MD

Matko Marušić, MD, PhD

Ana Marušić, MD, PhD

Context A number of general medical journals and Medical Journal Editors (ICMJE) request authors to disclose known about the effect of journal policies on authors'

Objective To determine the number of named authors for authorship, according to their published con

CURRENT MEDICAL RESEARCH AND OPINIONS
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ORIGINAL ARTICLE

How the structure of contribution disclosure statements affects validity of authorship: a randomized study in a general medical journal*

Ana Marušić^{*}, Tamara Bates^o, Ante Anić^{*} and Matko Marušić^{*}



Reliability of disclosure forms of authors' contributions

CMAJ • JANUARY 2, 2007 • 176(1) | 41

Vesna Ilakovac, Kristina Fister, Matko Marusic, Ana Marusic

Quantification of Authors' Contributions and Eligibility for Authorship: Randomized Study in a General Medical Journal

Ana Ivaniš, MD, Darko Hren, BS, Dario Sambunjak, MD, Matko Marušić, MD, PhD, and Ana Marušić, MD, PhD

Croatian Medical Journal, Zagreb University School of Medicine, Zagreb, Croatia.

BACKGROUND: Assessment of authorship contribution is often based on unreliable questionnaires.

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Less Work, Less Respect: Authors' Perceived Importance of Research Contributions and Their Declared Contributions to Research Articles

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Malički et al. BMC Medical Research Methodology 2012, 12:189
http://www.biomedcentral.com/1471-2288/12/189

BMC
Medical Research Methodology

CORRESPONDENCE

Open Access

Why do you think you should be the author on this manuscript? Analysis of open-ended responses of authors in a general medical journal

Mario Malički, Ana Jerončić, Matko Marušić and Ana Marušić^{*}

Equal authorship

Conte et al. FASEB J. 2013;27(10):3902-4.

Change from no joint first authorship in 1990 to co-first authorship of >30% of all research publications in 2012.

Resnik et al. Account Res. 2020;27(3):115-137.

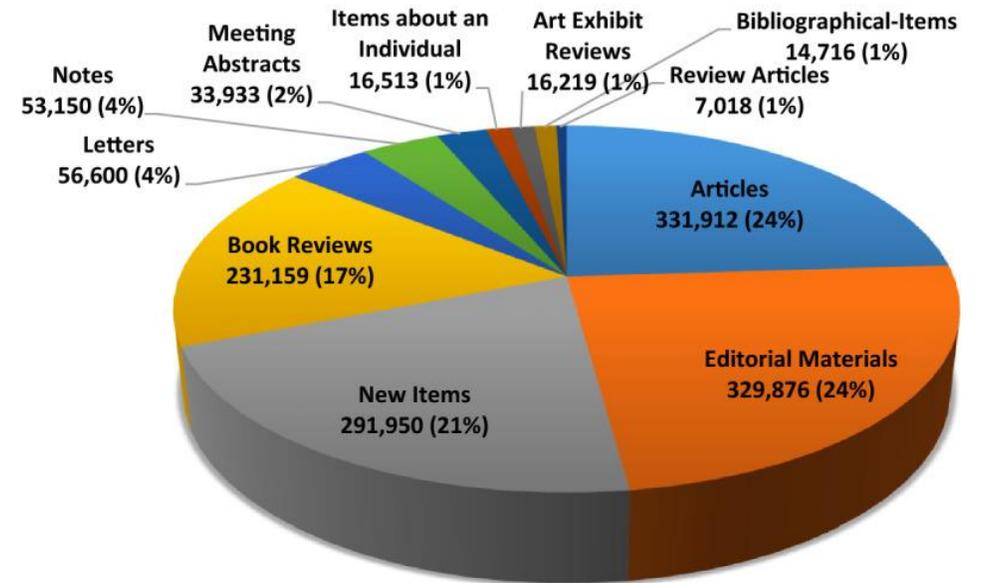
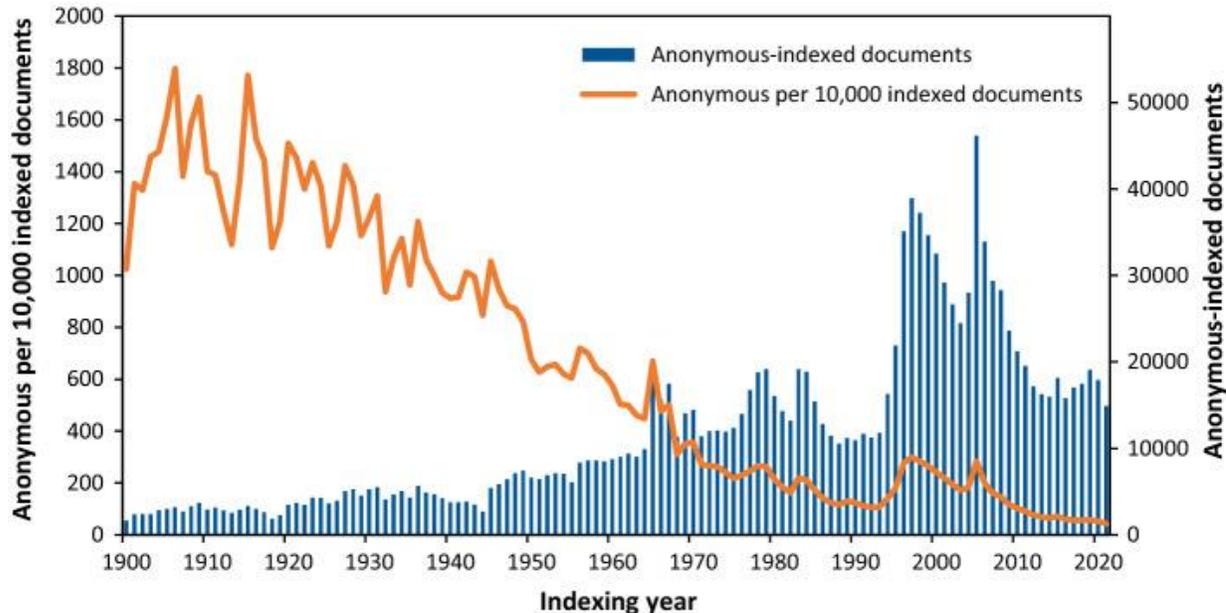
Survey of 1,540 researchers: 58% had been designated as an EC at least once. 38% regarded these designations as useful but ethically questionable. 32% said EC designations are ethically questionable because ECs are difficult to define or measure and 26% said they are ethically questionable because people rarely contribute equally.

Lount & Pettit. Shared first authorship should be declared on academic CVs. Nat Hum Behav. 2023;7(5):659.

Anonymous authorship

Shamsi A et al. A grey zone for bibliometrics: publications indexed in Web of Science as anonymous. *Scientometrics*. 2022;127(10):5989-6009.

- (WoSCC), 1,420,842 documents under "anonymous" authorship in Web of Science Core Collection from 1900 to 2021 (1.5% of the total indexed documents)



Authorship in participatory research

Citizen science is one of the 8 ambitions of Open Science in Horizon Europe (https://research-and-innovation.ec.europa.eu/strategy/strategy-2020-2024/our-digital-future/open-science_en)

Experience from research involving indigenous populations and patients

Authorship in participatory research

Castleden et al. J Empir Res Hum Res Ethics. 2010;5(4):23-32.

Qualitative study with researchers showed inconsistent practices in:

- methods of acknowledging community contributions
- requirements for shared authorship with individual versus collective/community partners
- benefits and risks to sharing authorship with collective/community partners

Ellis et al. J Particip Med. 2021;13(2):e27141.

Rapid review of scoping/systematic reviews

- wide range of terms used for patient and public authors in author affiliations (patient, caregiver or consumer representative, patient partner, expert by experience, citizen researcher, public contributor ...)
- there was little or no information about which review tasks the partner coauthors contributed to
- only 14% (5/37) of systematic/scoping reviews mentioned patient or public involvement as authors in the abstract; involvement was often only indicated in the author affiliation field or in the review text (methods or contributions section).

Artificial intelligence and authorship

“Artificial intelligence (AI) refers to systems that display intelligent behaviour by analysing their environment and taking actions – with some degree of autonomy – to achieve specific goals.” – European Commission

- By January 18, 2023, four studies in the PubMed database had ChatGPT listed as a co-author
- One was later corrected with the ChatGPT removed as co-author
- Scientific publishers have been defining their policies towards using chatbots (including ChatGPT) in writing research articles or designing/conducting studies
- Multiple organizations have taken stances on this issue
- Exacerbating issues such as paper mills

Editorial > [Nurse Educ Pract. 2023 Jan;66:103537. doi: 10.1016/j.nepr.2022.103537.](#)

Epub 2022 Dec 16.

Open artificial intelligence platforms in nursing education: Tools for academic progress or abuse?

Siobhan O'Connor¹, ChatGPT²

Affiliations + expand

PMID: 36549229 DOI: [10.1016/j.nepr.2022.103537](#)

Published Erratum > [Nurse Educ Pract. 2023 Feb;67:103572. doi: 10.1016/j.nepr.2023.103572.](#)

Epub 2023 Feb 6.

Corrigendum to "Open artificial intelligence platforms in nursing education: Tools for academic progress or abuse?" [Nurse Educ. Pract. 66 (2023) 103537]

Siobhan O'Connor¹

Affiliations + expand

PMID: 36754768 DOI: [10.1016/j.nepr.2023.103572](#)

Artificial intelligence and authorship



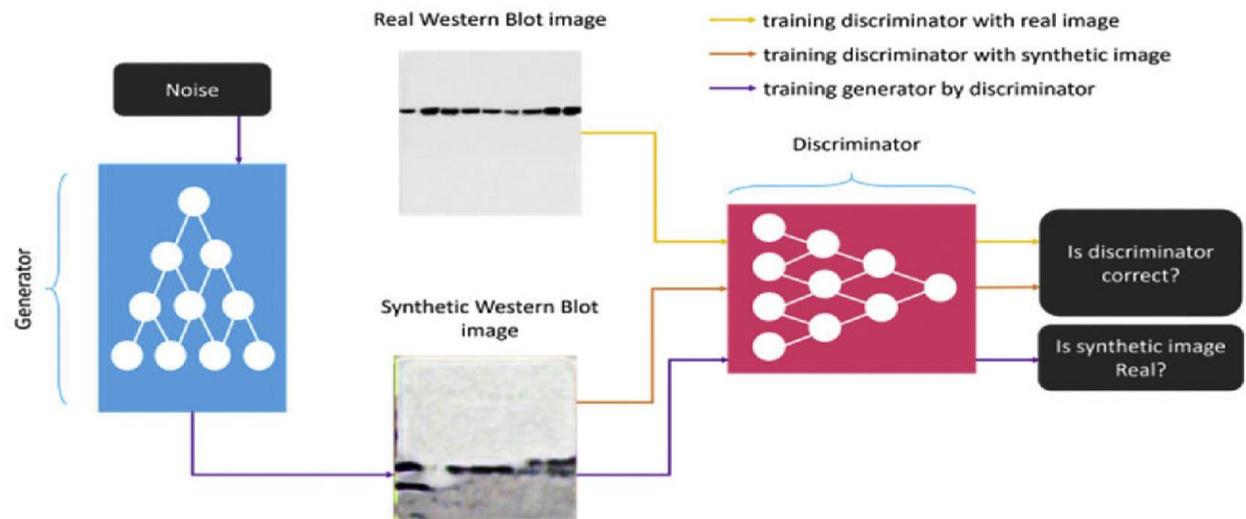
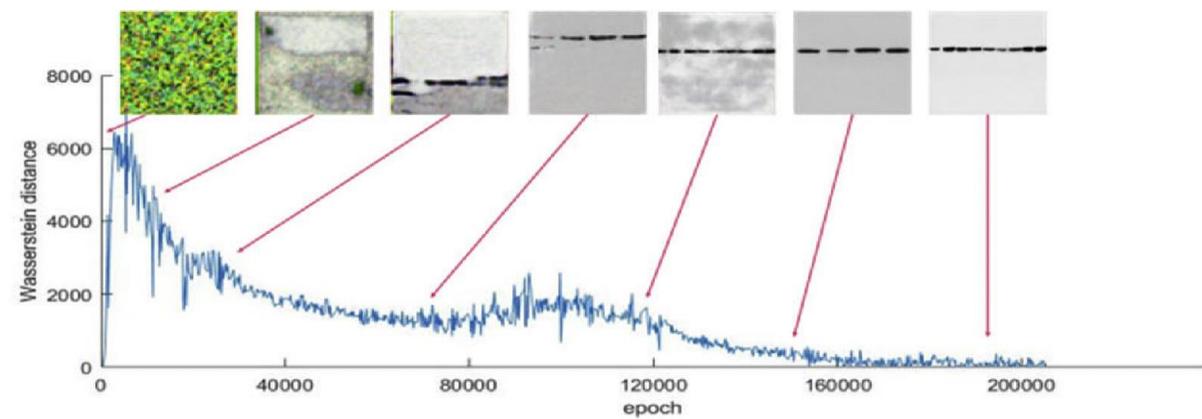
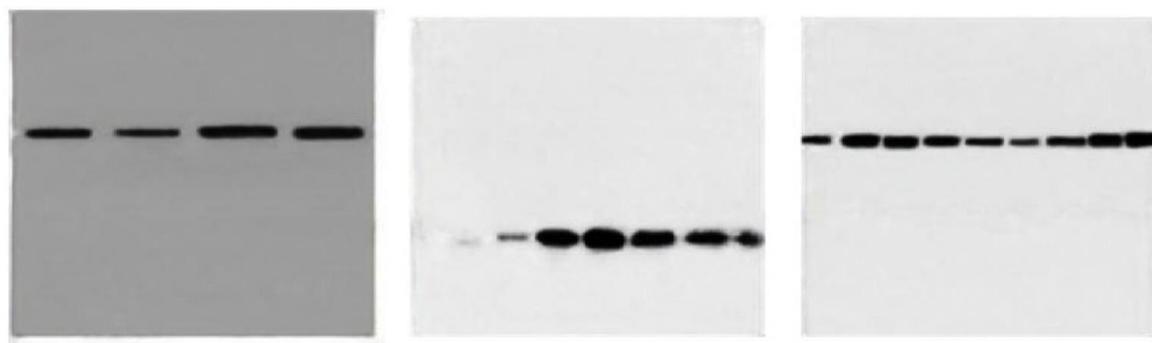
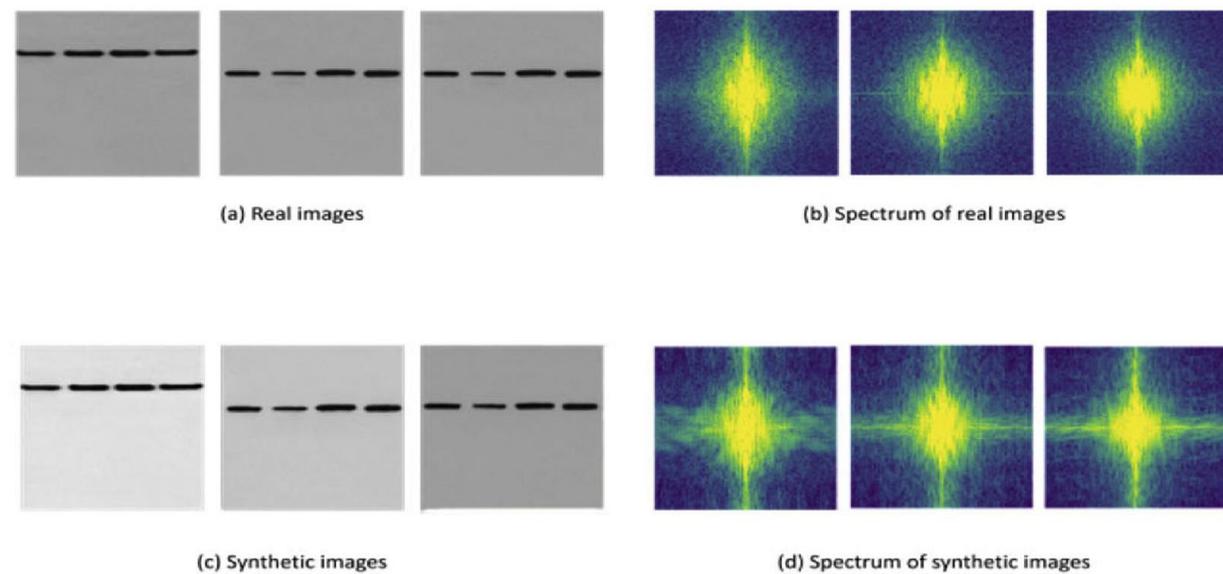
World Association of Medical Editors, 2023

- Chatbots cannot be authors.
- Authors should be transparent when chatbots are used and provide information about how they were used.
- Authors are responsible for the work performed by a chatbot in their paper (including the accuracy of what is presented, and the absence of plagiarism) and for appropriate attribution of all sources (including for material produced by the chatbot).
- Editors need appropriate tools to help them detect content generated or altered by AI and these tools must be available regardless of their ability to pay.

AI and image manipulation

Based on large number of existing images, convincing “deepfakes” can be created in scientific contexts as well

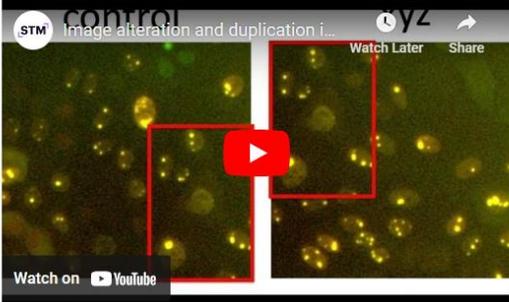
Wang et al. (2022) trained an AI model to generate western blots (from 3000 authentic images) and images of oesophageal cancer on gastroscopie images from cancer-free locations of intestine (from 50 positive and 50 negative locations)

A**B****C****E****D**

AI and image manipulation

- Almost impossible for the naked eye to see
- Elisabeth Bik – super-spotter of duplicated images expressed worries regarding this issue
- Traditional image tools are also unsuccessful
- Some tools do exist: *fotoforensics* (<https://fotoforensics.com/>) and *Forensically* (<https://29a.ch/photo-forensics/#forensic-magnifier>)
- Tools for editors (STM Association, <https://www.stm-assoc.org/stm-image-alterations-duplications-resources-v2/>)

Instructional Videos
Image Integrity in Scientific Publication | Video Series
A series of instructional video modules intended to serve as a tool for scholarly



Watch on  YouTube

MODULE 1. This first module provides an overview of the most commonly found image aberrations in scientific publications and illustrates how they may be detected and verified. [Watch the video here.](#)



Your platform for research integrity and ethics

