The Hitchhiker's Guide to Scholarly Research Integrity

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ASIS&T 83rd Annual Meeting 26 October 2020 ID:162 Paper Session 11:1 @ 4:00 PM





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Disclosures

- The speaker, and all authors, do not have any financial conflicts of interest to disclose.
- But we are great fans of Douglas Adams' science fiction novels!

Douglas Adams' The Hitchhikers Guide to the Galaxy



thefirstedition.com/product/the-hitchhikers-guide-to-the-galaxy

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Don't Panic banners on Towel Day in Innsbruck Austria

Celebrated every year on May 25 in tribute to Douglas Adams



en.wikipedia.org/wiki/Towel_Day

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Outline

- Misinformation, disinformation, malinformation
- Creative authenticity and fair citation
- Scholarly research integrity
- Idea-laundering plagiarism by authors
- Idea-bleaching censorship by editors
- Truthful reporting with PDP, NPDS, DREAM, FAIR
- Ethical peer-reviewed publishing

Misinformation, disinformation, malinformation

• Truthful reporting or fake news?

- Worsening problems with unethical peer review have contributed to situations that fail to correct or retract an improper, misleading, or deceptive research paper despite obvious evidence for the misconduct. So where does 'the buck stop'?
- Academic integrity offices as 'catch and kill' operations according to Pickett 2020: "Universities can make a lot of money from sham science. They lose money from catching fraudsters. Uncovering fraud also brings negative publicity and a host of other headaches, such as potential lawsuits for defamation and wrongful termination. Even in biomedical cases, where the public health consequences of fake research are most severe, universities dismiss almost 90% of fraud accusations without an investigation, or even an auditable record."

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Creative Authenticity and Fair Citation

- "Dwarfs standing on the shoulders of giants", attributed to 12th century Bernard of Chartres, popularized 1675 by Isaac Newton.
- Creative authenticity through fair citation encourages authors to remain true to their own research vision and goals by contributing novel work to their field while distinguishing their own work from other scholars' work.
- Truthful attribution in scholarly research requires the practice of citing relevant publications, with other references discussed in one's own work, as a means of acknowledging and attributing specific contributions to other authors.
- This practice requires authors to search, find, and cite the original body of work where the concepts and ideas were first published as part of due diligence when completing a literature review.

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Scholarly Research Integrity

- Fraud, plagiarism, and misconduct in science have worsened in recent decades as evidenced by an increasing number of retractions of published papers.
- Plagiarism has now become the most common cause of retractions; see recent study by Campos-Varela 2019, discussed by Conroy 2019.
- Plagiarism detection software has not yet solved the problem, especially for idea plagiarism in contrast to verbatim text plagiarism.
- Websites such as RetractionWatch.com and PubPeer.com help monitor the situation, and organizations such as COPE at PublicationEthics.com help promote ethical policies.
- But we still need a new solution for this old problem of plagiarism.

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Plagiarism: A continuing problem

Recommended presentation by Rosiana Azman and Stephen Fox:

Persistent plagiarism problem Understanding Plagiarism ... with some help from Dr. Seuss Plagiarism is a prominent problem Copving seems like an easy way out A plagiarism prevention o But it makes instructors shout Green presentation Edd We want students to understand and bv • And hope this Powerpoint gives a hand Han Rosiana (Nani) L. Azman, Ph.D. • We'll begin with an explanation University of Hawai'i Maui College Stephen H. Fox, Ph.D. o Then turn to Seuss for examination Hawai'i Pacific University By Dr. Seuss University of Hawai'i Maui College

AzmanFox-Understanding-Plagiarism-9-2014

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Idea-laundering plagiarism by authors: definition

Dutta et al. 2020 definition:

- a "kind of plagiarism called *idea laundering*, analogous to the concept and practice of money laundering, in which ideas are plagiarized and then the plagiarism is hidden in plain sight. To clarify this analogy,"
- "first define *money laundering* as the act of passing money that was illegitimately obtained through another illegitimate process with the intent of making it appear legitimate, i.e., *making dirty money look clean*."
- "Then define *idea laundering* as the act of passing ideas that were illegitimately obtained through another illegitimate process with the intent of making it appear legitimate, i.e., *making dirty ideas look clean*."

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Idea-laundering plagiarism by authors: criteria

- A majority, plurality, or other non-trivial percentage of similar content exists between the plagiarizing paper and the plagiarized paper as measured by similarity metrics that correlate and quantify equivalent entities, similar concepts, and identical ideas.
- Not accidental with benign citation amnesia, or falsely-claimed independent development, or falsely-claimed public domain information; evidence of copyright, trademark, patent violations; meeting attendance records for conferences where plagiarists met and spoke with victims who were plagiarized; refusal to correct the exclusion of citation of the plagiarized paper when requested.
- Deliberate with evidence of malign intent; continued promotion with secondary and tertiary plagiarists to propagate the spread of the plagiarism; collusion with journal editors to censor the response with commentary submitted by the victim of the plagiarism.

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Censorship: A continuing problem

Censorship during ASIS&T 2019 in Melbourne Australia



https://www.voanews.com/press-freedom/ aussie-papers-launch-front-page-censorship-protest - 34

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Idea-bleaching censorship by editors: definition

Taswell et al. 2020 definition:

- "In extension with analogy to idea-laundering plagiarism by authors, we define idea-bleaching censorship by editors as any act that aids and abets the plagiarists by ignoring and silencing inquiries or requests from readers who report the plagiarism."
- "With or without an apparent conflict of interest between authors and editors, these acts of idea-bleaching censorship by editors may be those of either omission or commission."

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Idea-bleaching censorship by editors: criteria

- Ignoring the report or inquiry and never responding to the reader-reporter who alleges plagiarism, thus maintaining the non-responsive posture of 'blind eyes and deaf ears'.
- Refusing to publish a Letter to the Editor, Opinion, Debate, Commentary, or Response from the reader-reporter who seeks to cite the previously published research that was plagiarized.
- Acting in collusion with the plagiarizing authors by allowing the plagiarists to claim false pretexts while they continue to publish repeated derivative works based on the plagiarism.
- Conducting sham investigations, whether by ignoring and/or excluding evidence, or by failing to issue an evidence-based report.
- Refusing to conduct investigations into allegations of misconduct.

Truthful reporting with PDP, NPDS, DREAM, FAIR

- PORTAL-DOORS Project (PDP) with Aoraki and Cervin software
- Nexus-PORTAL-DOORS-Scribe (NPDS) cyberinfrastructure
- DREAM principles with the summarizing phrase *Discoverable Data* with Reproducible Results for Equivalent Entities with Accessible Attributes and Manageable Metadata
- FAIR metrics with the phrases Fair Attribution to Indexed Reports and Fair Acknowledgment of Information Records

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Ethical peer-reviewed publishing

- Declarations of statements expressed in first-person voice by authors, reviewers, editors, and publishers intended to promote and support research integrity in scholarly publishing with commitments required for participants both *before and after* publication.
- Software-guided workflow process with checklist of appropriate signing steps for authors, reviewers, editors, and publishers when engaged in an ethical peer review process for publishing scholarly research manuscripts.
- Definitions, assertions, and claims expressed both in natural language and in version 2 of the DREAM ontology; software for the publishing workflow creates and maintains an audit trail of signed agreements.

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Conclusion

- We want to stop plagiarism, censorship, fraud, and other misconduct in scholarly research; progress with software-guided workflows for ethical peer-reviewed publishing will help.
- Social engineering, with appropriate incentives and disincentives, remains as important as software engineering for a solution to the continuing problems of author plagiarism and editor censorship.

Remember: Don't Panic!



wikipedia.org/wiki/The_Hitchhiker's_Guide_to_the_Galaxy wikipedia.org/wiki/So_Long,_and_Thanks_for_All_the_Fish

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For More Information

- DREAM Principles and FAIR Metrics from the PORTAL-DOORS Project for the Semantic Web – Presented June 2019, 11th IEEE ECAI portaldoors.org/pub/docs/ECAI2019DREAMFAIR0612.pdf
- Managing Scientific Literature with Software from the PORTAL-DOORS Project – Presented September 2019, 15th IEEE eScience portaldoors.org/pub/docs/BCDC2019PdpDemo0817.pdf
- Definitions, Formulas, and Simulated Examples for Plagiarism Detection with FAIR Metrics – *Presented October 2019, 82nd ASIS&T* portaldoors.org/pub/docs/ASIST2019FairMetrics0611.pdf
- DREAM Principles from the PORTAL-DOORS Project and NPDS Cyberinfrastructure – Presented February 2020, 14th IEEE ICSC portaldoors.org/pub/docs/ICSC2020PDPDREAM191222.pdf
- The Hitchhiker's Guide to Scholarly Research Integrity Presented October 2020, 83rd ASIS&T portaldoors.org/pub/docs/ASIST2020HHGuide0610.pdf

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- We welcome collaborators interested in promoting integrity and ethics and in preventing plagiarism and censorship.