



RHODES UNIVERSITY



# Citation Pollution & Predatory/ Questionable Publishing Practices

**DIGI-FACE Publications Webinar**  
**29 February 2024**



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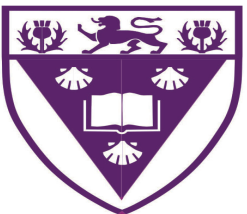
# Abstract

The session provides background on citation pollution and its effect on scholarly integrity and reputation. It is intended to provide the academic and academic library community with an understanding of how to further engage with their respective decision-makers and policymakers on distinguishing between questionable and legitimate science and the tools currently available to assist with this process. The importance of dealing with illegitimate research on time, both from scholarly communication and research quality perspective, is emphasised.



# Critical Questions

- What is your reputation as a scholar worth to you?
- What is your institutional scholarly reputation worth?
- As a publisher or editor, what is your reputation worth?
- What is our role in reputational risk management?
- How do we support scholarly rigour as researchers, librarians and research support units?



# A look at science today

## Citations cartels: an emerging problem in scientific publishing

Paper Mills—The Dark Side of the Academic Publishing Industry

The scientific literature is [polluted with fake manuscripts churned out by paper mills](#) — businesses that sell bogus work and authorships to researchers who need journal publications for their CVs. But just how large is this paper-mill problem?

Our list of retracted or withdrawn COVID-19 papers is [up past 400](#). There are more than [47,000 retractions in The Retraction Watch Database](#) — which is now [part of Crossref](#). The Retraction Watch Hijacked Journal Checker now contains more than 250 titles. And have you seen our [leaderboard of authors with the most retractions lately](#) — or our list of [top 10 most highly cited retracted papers](#)? What about [The Retraction Watch Mass Resignations List](#)?

## Saudi university dean has 20 retractions in two years

A prolific Saudi pharmacy professor published over 200 papers in the last four years, but in recent months the quality of these papers has come into question.



Nabil Alhakamy

[Nabil Alhakamy](#), a dean of research and higher education at King AbdulAziz University's Faculty of Pharmacy,

## Exclusive: Elsevier to retract paper by economist who failed to disclose data tinkering

A paper on green innovation that [drew sharp rebuke](#) for using questionable and undisclosed methods to replace missing data will be retracted, its publisher told Retraction Watch.

Previous work by one of the authors, a professor of economics in Sweden, is also facing scrutiny, according to another publisher.



Almas Heshmati

the [most recent of which](#)



## More than 10,000 research papers were retracted in 2023 – a new record

The number of articles being retracted rose sharply this year. Integrity experts say that this is only the tip of the iceberg.



There's far more scientific fraud than anyone wants to admit  
*Ivan Oransky and Adam Marcus*

## REPRODUCIBILITY CRISIS IN SCIENCE?

Why Most Published Research Findings Are False

Will public trust in science survive the pandemic? GLOBAL HEALTH

Peer review: a flawed process at the heart of science

Estimating the reproducibility of psychological science

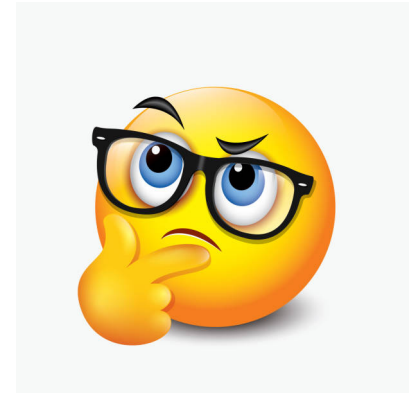
Believe it or not: how much can we rely on published data on potential

Open Science Collaboration\*

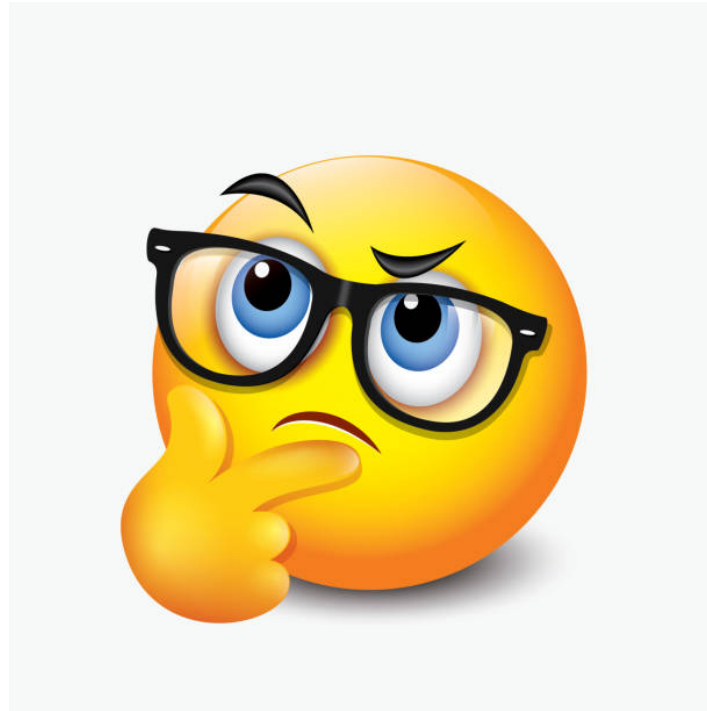


# What will I address today

- What is the difference between questionable and legitimate science?
- What is citation pollution?
- How does it effect scholarly integrity and scholarly reputations?
- What can the academic library community do?
- Which tools are currently available to assist?

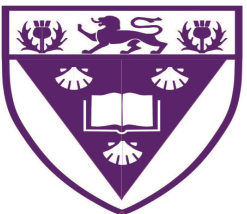


# Questionable versus Legitimate Science



# Questionable versus Legitimate Science

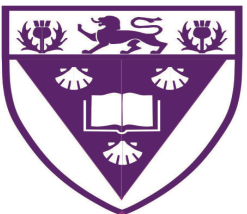
- Questionable Science
  - Do not adhere to best practices regarding scholarly integrity
  - Invalidated science due to unethical behaviour in research
  - Types of questionable science:
    - Articles published in predatory journals
    - Retracted Research
    - Unidentified “Bad” Science
    - Weak or Low-Quality Science
    - Falsified Science
    - Other unethical behaviours, e.g. lack of RDM?





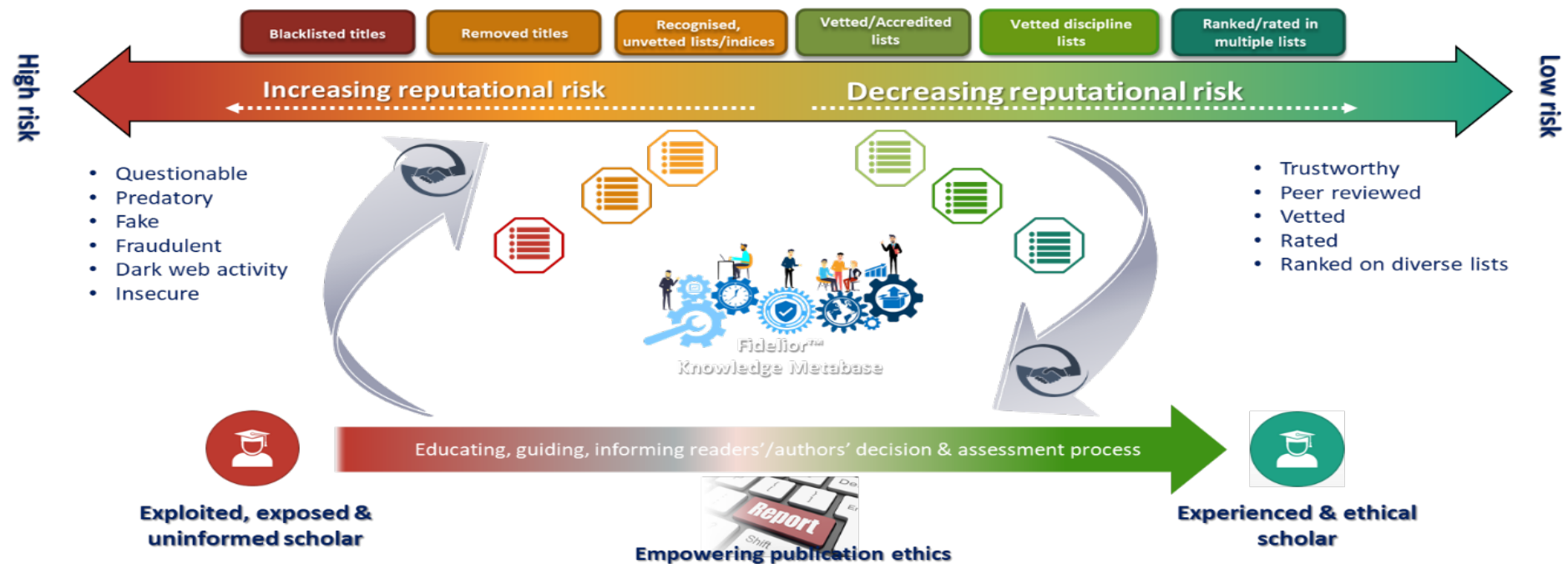
# Questionable versus Legitimate Science

- Legitimate Science
  - Adheres to best scholarly practices
    - Researcher level
    - Institutional level (e.g. ethical clearance)
    - Publisher level
    - Editorial processes level

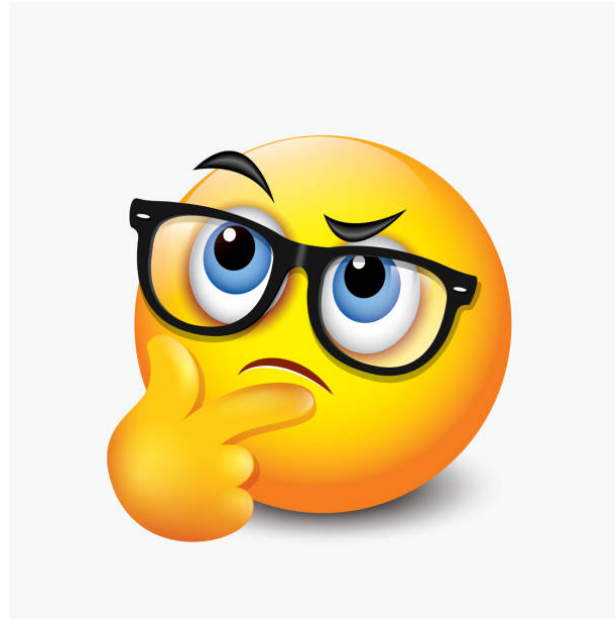


# Best versus Bad Practices

- How to distinguish
  - Journal vetting & Reputational Risk [2]



# Citation Pollution



# Citation Pollution

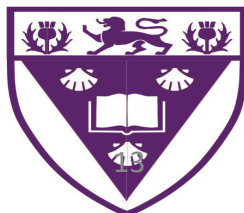
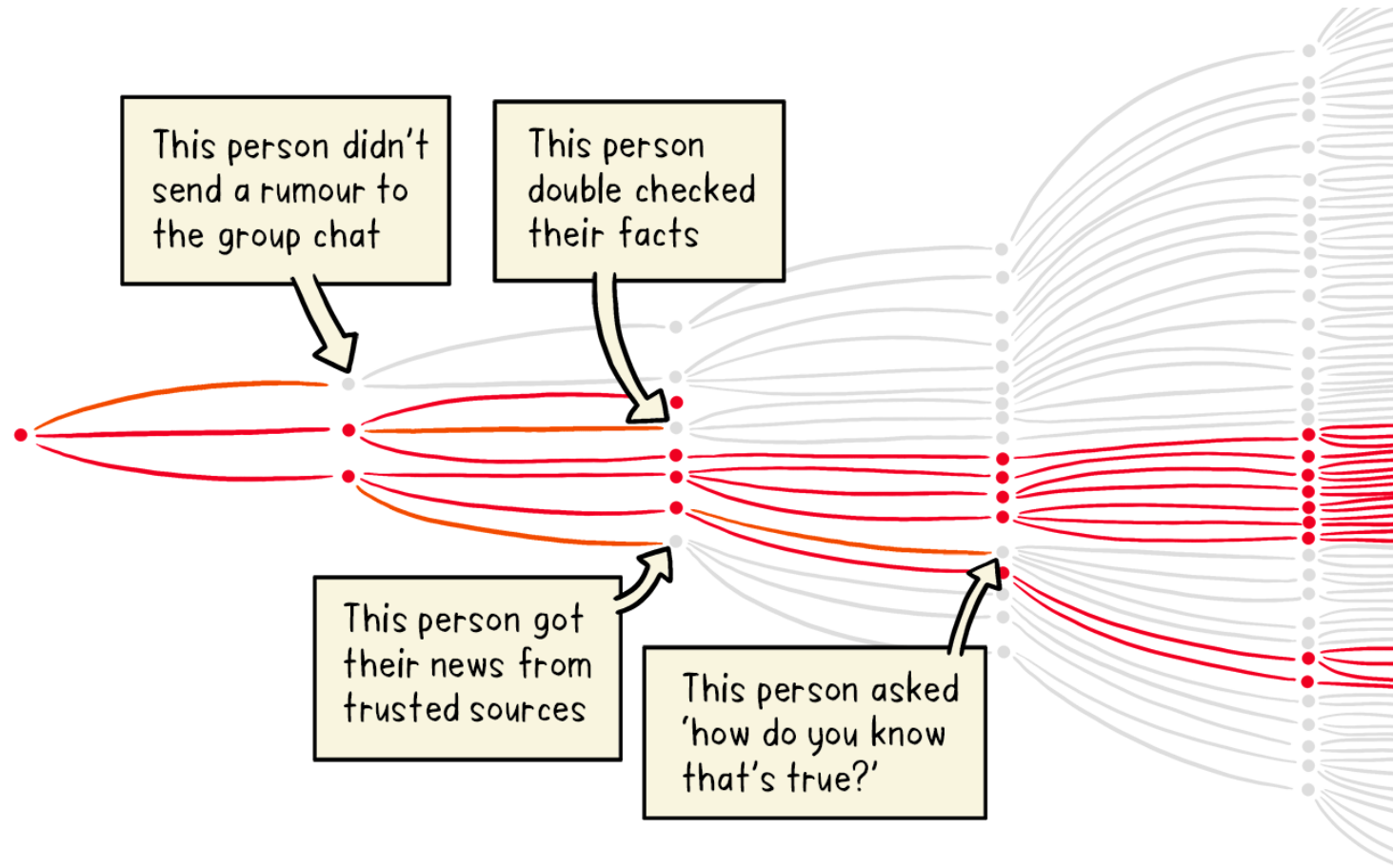
- Citation Pollution results from citation behaviours where scholars knowingly or unknowingly cite low-quality or pseudoscientific materials as part of their scholarly creation and communication processes and how these scholarly outputs are disseminated within the scholarly ecosystem.

*“Entire fields of scientific research are now [be] susceptible to a pollution of the literature by unverified research or even fake articles published in fake journals being incorporated into legitimate meta-analyses.” [3]*



# WHO – ‘Let’s flatten the infodemic curve’

<https://www.who.int/news-room/spotlight/let-s-flatten-the-infodemic-curve>



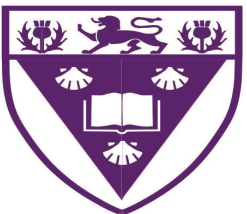
# Impact of Citation Pollution

- It can corrupt academic evaluation systems.
- Researchers, knowingly or unknowingly, build their academic reputations based on questionable publications and pseudoscience.
- Scholars receive recognition, are promoted and remunerated based on articles published in questionable outlets.
- Predatory journals can be used to inflate a researcher's Google Scholar citation metrics and H-index.
- Accreditation bodies are influenced and misled.

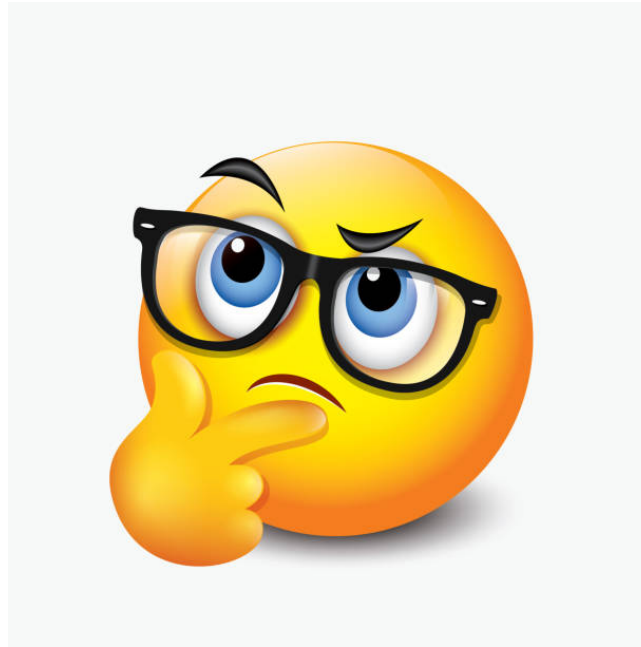


# Impact of Citation Pollution

- Questionable science can damage the professional standing, ranking, and reputation of universities.
- Questionable science can distort public discourse.
- Questionable science and citation pollution can lead to the wastage of resources.
- Questionable science can lead to retraction or discontinuance of funding opportunities for research entities and/or researchers.



# Journal Assessment & Due Diligence



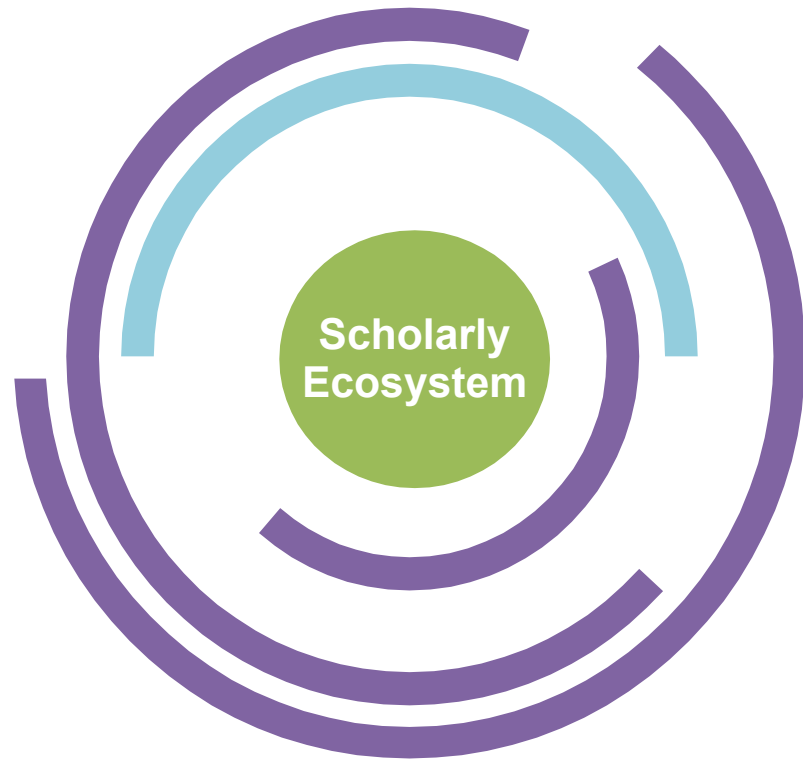


# Identifying Reputable Journals

- Journal list types
  - Audit 2020
    - 400+
    - So-called “Journal Blacklists”
      - Stop Predatory Journals
      - Cabell’s
      - Beall’s
      - Iranian Journal Blacklist
      - Malaysian Blacklist
    - Vetted / accredited / approved
      - Indices (indexing & abstracting services)
      - Organisational vetted
      - Institutional vetted
      - Research entity vetted
      - Directories

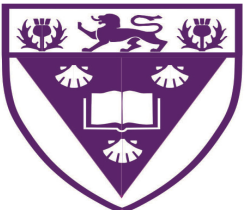


# Journal Assessment



## Assessment Practices

- Scientific rigor <sup>[15]</sup>
  - Peer-review
- Affiliations
  - Organisations
- Editorial Board
  - Affiliation of Board members
- Impact Factor
- Business Model
- Indexing is expression of assessment



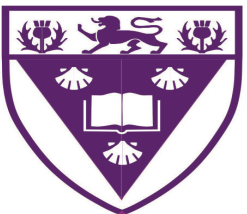
# Journal Reputation and Standing

- Are you able to find the journal title easily using a web browser and search engine?
- Is it easy to find the latest issue and articles published in the journal?
- Does the journal have a long-standing reputation and has the journal been publishing regularly over a period of time?
- Does the journal provide information about its previous name changes, if applicable?
- Does the journal claim a valid and verifiable impact factor?
- Does the journal use internationally accepted metrics?
- Does the journal have an ISSN and/or e-ISSN?
- Do articles in the journal have Digital Object Identifiers (DOIs)?



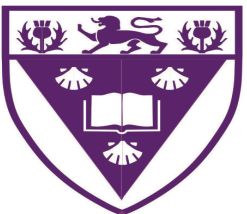
# Journal affiliation

- Is the journal published by, associated with or affiliated to a reputable organisation (e.g., academic societies)?
- Is the journal endorsed by a reputable organisation?
- Is the journal or journal publisher a member of the Committee on Publication and Ethics (COPE), Open Access Scholarly Publishers Association (OASPA), European Association of Science Publishers (EASE) and/or listed in the Directory of Open Access Journals (DOAJ)?



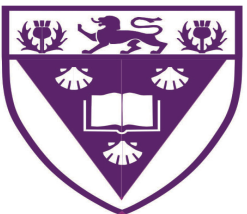
# Peer review policy & processes

- Does the journal require a peer review as part of the publication process?
- Has the journal got a clear and well-defined peer review policy?
- Is the peer review process informative and apparent?
- What type of peer-review process is followed? Does the journal follow a double-blind peer-review process?
- How many reviewers are typically used during peer review?
- How long does the peer review process typically take? Is this timeline reasonable given disciplinary or industry standards?
- What is the journal's acceptance rate? (Journals with lower article acceptance rates are typically regarded as more prestigious.)

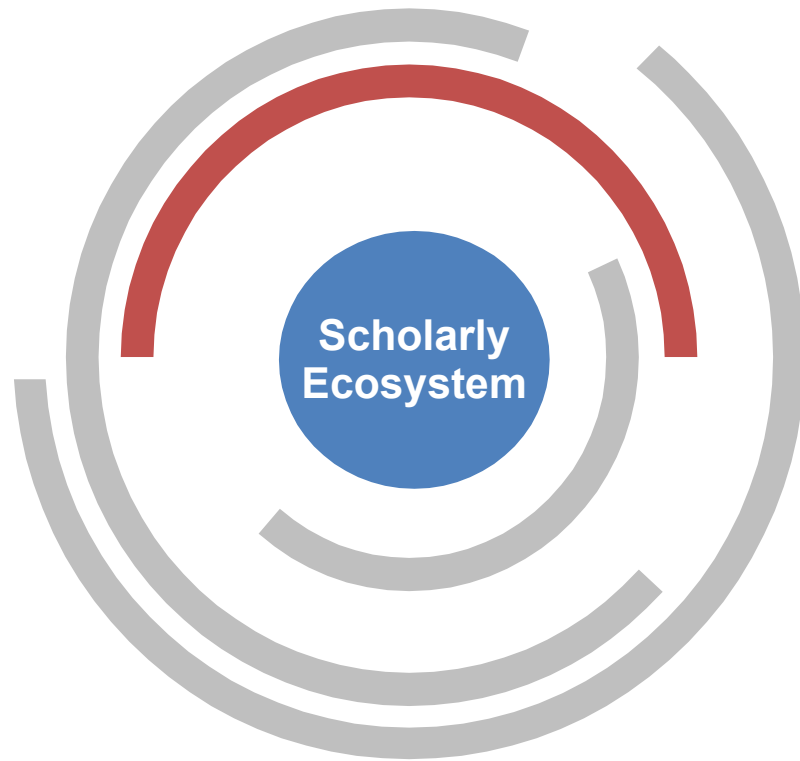


# Editorial boards

- Does the journal have an editorial board, and are the members of the board clearly stated?
- Do the editors belong to editorial forums e.g., the World Association of Medical Editors (WAME)?
- Do the editors state on their websites or professional social networking platforms that they are the editors of the journal in question? (Editorial boards may be hijacked.)
- Are the editors associated with reputable organisations locally or internationally?
- Are the editors experts in their respective disciplines?



# Journal Assessment



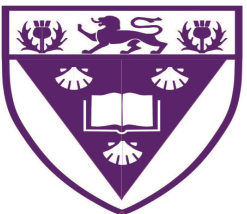
## Vetting Principles

- Compliance to set of criteria <sup>[15]</sup>
  - Principle of transparency and best practice<sup>[9]</sup>
    - Editorial Forums e.g. WAME
    - Membership e.g. OASPA, COPE
  - Journal review processes
    - Policy statement (ethics, etc.)
    - Technical
    - Administrative (publication regularity, identifiers, etc.)
- Reliance on renowned index providers
  - e.g. Clarivate Analytics, Elsevier, etc.



# Publication processes

- Are the publication timelines realistic and indicative of rigorous peer review?
- Is the journal associated with a reputable publisher?
- Do the publisher require you to submit the research dataset?





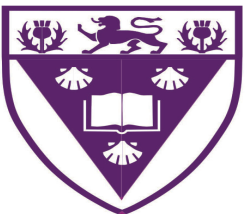
# Publication processes

- What business model (e.g. Open, Hybrid or Closed access) does the journal follow? If it is an Open Access journal:
  - Is the Open Access (OA) model clearly stated?
  - Does it charge Article Processing Charges (APCs)? If it charges APCs, are they realistic?
  - Does the publisher consider waivers or discounts on the APCs? (This practice is helpful for researchers from emerging economies.)
  - Is there a withdrawal or admin fee if authors wish to retract their submissions?
  - If a withdrawal or admin fee for retractions exists, are there any conditions applied by the publisher? Do you retain copyright when you retract a paper?



# Publication processes

- Does the author retain copyright during the submission process? (Preferably an author should retain copyright.)
- Does the author retain the copyright of the work once published? (Generally, if the journal is open access, authors retain their copyright.)
- Does the author have to sign a publisher's agreement?



# DHET & Journal Vetting [1]

“... DHET trusts international lists to exercise sufficient internal quality checks to ensure that the journals included in their lists comply with the highest standards of editorial quality and integrity.”

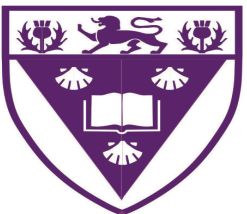
“However, it is now well documented ... that international journal indexes and lists do not in fact exercise sufficient quality controls”



# Bad practices

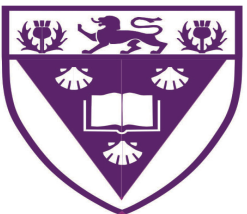


# Best practices



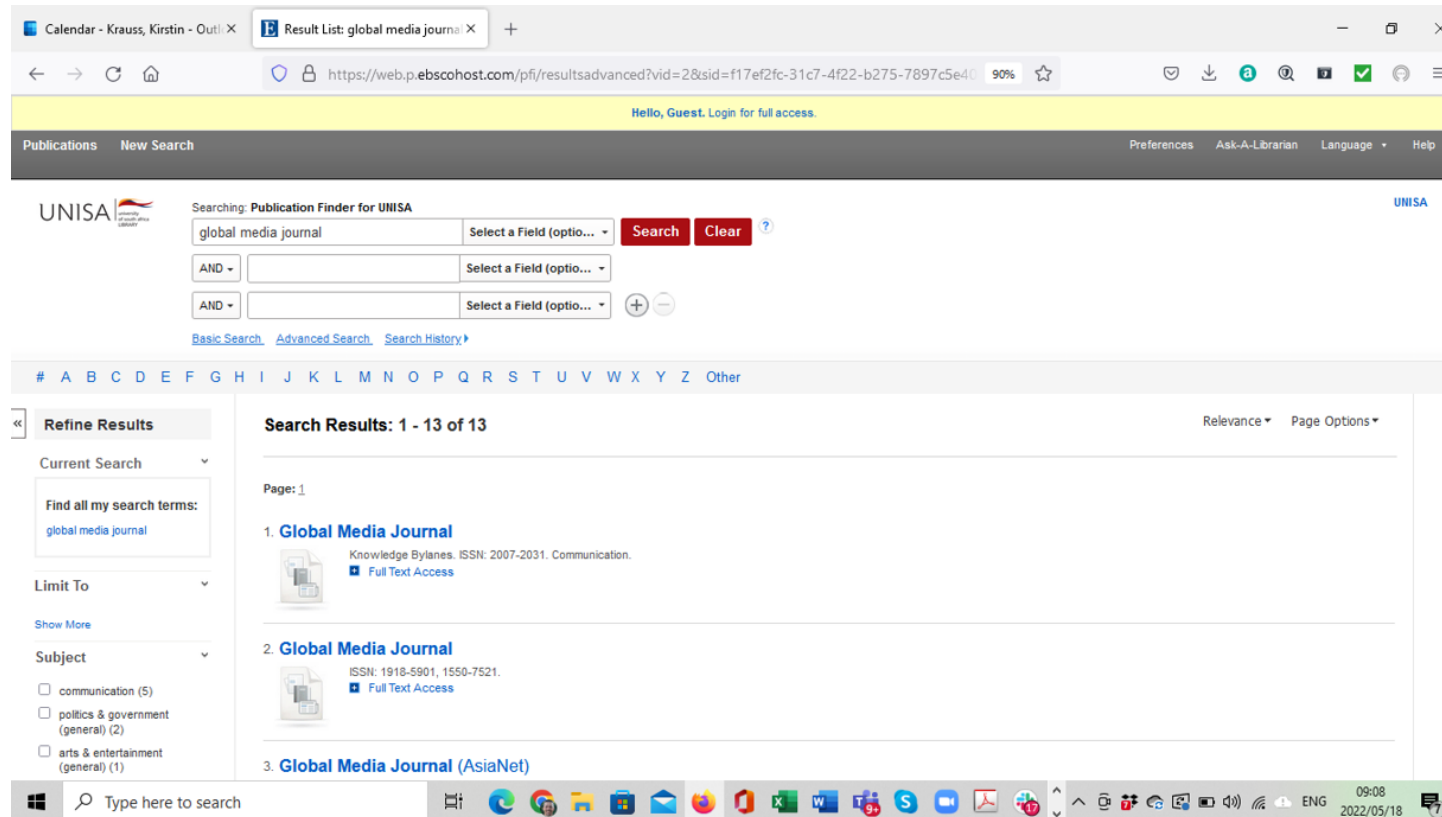
# Academics and Academic Librarians

- Reflect on Citation Behaviours and Patterns
- Reflect on Scholarly Support rendered to the scholarly community
  - What is meant by a Scholarly Librarian post or unit?
  - What is meant by a Digital Scholarship post or unit?



# Academic Librarians & Citation Pollution

- Reflect on possible actions that can be taken:
  - Which journals are being made accessible at your library?



The screenshot shows a web browser window displaying a search results page for 'global media journal'. The page is titled 'Result List: global media journal' and shows a search for 'global media journal' on the 'Publication Finder for UHISA' platform. The search results are displayed in a list format, showing three entries for 'Global Media Journal'. The first entry is 'Global Media Journal' with the ISSN 2007-2031 and the subject 'Communication'. The second entry is 'Global Media Journal' with the ISSN 1918-5901, 1550-7521 and the subject 'Communication'. The third entry is 'Global Media Journal (AsiaNet)'. The page also includes a 'Refine Results' sidebar on the left, a 'Search Results: 1 - 13 of 13' header, and a 'Page: 1' indicator. The browser's address bar shows the URL 'https://web.p.ebscohost.com/pfi/resultsadvanced?vid=28&sid=f17ef2fc-31c7-4f22-b275-7897c5e40...'. The browser's taskbar at the bottom shows the Windows logo, a search bar, and various application icons. The system tray at the bottom right shows the date and time as '09:08 2022/05/18'.



# Academic Librarians & Citation Pollution

- Reflect on possible actions that can be taken:
  - Which journals are being made accessible at your library?
  - How do you support emerging and established scholars with citation behaviours?
    - Understanding why researchers cite what they cite
    - Referencing and referencing tools
    - Consider checking reference lists on their behalf
    - Look at articles preferably pre-publication
    - Follow due diligence process on their behalf





# Academic Librarians & Citation Pollution

- Reflect on possible actions that can be taken:
  - Which journals are being made accessible at your library?
  - How do you support emerging and established scholars with citation behaviours?
  - How do you support publishing initiatives within your institution?
    - Is the Library involved?
    - Quality of metadata on publishing platforms?



# Quality metadata

Overview | DHET Accreditation | Indexing Services | Archiving | Journal Impact

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**INPAGE MENU**

- ISSN
- Focus and scope
- Publication frequency
- Types of articles published
- Open access
- Review process
- Marketing
- Membership

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**Overview**

**ISSN**

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0259-9422 (PRINT)  
2072-8050 (ONLINE)

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**Focus and scope**

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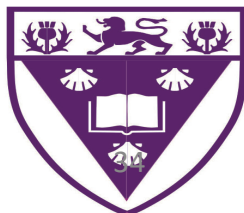
*HTS Theological Studies* is an acclaimed Open Access journal with broad coverage that promotes multi-, inter-, and transdisciplinary religious aspects of studies in the international theological arena. The journal's publication criteria are based on rigorous research, accountable methodologies and novel findings based on sound ethical standards. Its focus and scope are therefore contested Historical Thought and Source Interpretation (HTS). From a multidisciplinary theological perspective, the notion 'historical thought' covers the textual and oral history and hermeneutical studies, myths, legends, narratives and philosophies behind the Abrahamic religions as expressed in the Hebrew Scriptures, Apocrypha, Pseudepigrapha, Qumran literature, the New Testament, Intertestamental literature, Rabbinic literature, Patristic literature and the Qur'an. The aspect 'thought' refers to the classical use of the concept *fides quaerens intellectum* ('faith seeking understanding'), including the traditional university disciplines involving systematic, historical, exegetical and practical reflection – often within a paradigm in which the intersection of philosophy, religious studies, social sciences, humanities and natural sciences generate an interdisciplinary, multidisciplinary and transdisciplinary contested discourse. The notion 'source' alludes to the sources of origins of our endeavour to come to grips with reality. It focuses on the history of religions, as well as phenomenology, psychology, philosophy and sociology of religion(s). The combination of the notions 'source' and 'interpretation' refers to the exegesis of the Ancient Near Eastern scriptures and the Early Church, including studies in the field of early Christian literature, Targum research, Mishna, Talmud, Qumran and Nag Hammadi literature, Apocrypha, Pseudepigrapha, Septuagint, Patristics, Gnostic literature, and Christian-confessional and faith-based sources during both the pre-Enlightenment and post-Enlightenment periods.

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**Historic data**

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*HTS Theological Studies* was founded in 1943 as a result of an international endeavour involving Dutch and South African scholars. It is the oldest theological journal in South Africa. Its historical roots date back to 1942



# Quality metadata

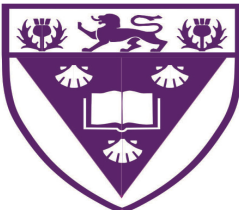
## Standards and Code of Practices

### Membership and Accreditation

AOSIS is a member and/or subscribes to the standards and code of practices of several leading industry organisations.

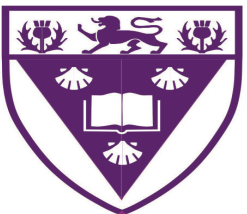
#### Memberships

- [Directory of Open Access Journals](#), an online directory that indexes and provides access to quality open-access, peer-reviewed journals.
- [Ithenticate](#), a leading provider of professional plagiarism detection and prevention technology used worldwide by scholarly publishers and research institutions to ensure the originality of written work before publication.
- [Open Access Scholarly Publishers Association](#), an organisation that represents the interests of open-access journal and book publishers globally in all scientific, technical and scholarly disciplines.
- [CrossRef](#), an association of scholarly publishers that develops shared infrastructure to support more effective scholarly communications.
- [Moodle Pty Ltd](#), responsible for the development and maintenance of the core Moodle software and all the official community websites at moodle.org; also responsible for the certification of Moodle Partners and protection of the Moodle Trademark.
- [Portico](#), a digital preservation service provided by [ITHAKA](#), a not-for-profit organisation with a mission to help the academic community use digital technologies to preserve the scholarly record and to advance research and teaching in sustainable ways.
- [Committee on Publication Ethics \(COPE\)](#): COPE provides advice to editors and publishers on all aspects of publication ethics and, in particular, how to handle cases of research and publication misconduct. It also provides a forum for its members to discuss individual cases.



Way forward: Responsible partnering

Collaboratively we have to take quality assurance to a new level



# Scholarly innovative ecosystem

## 3. Community

Co-creative collaboration & networking in knowledge economy

## 2. Opportunity

Overcoming barriers  
challenging scholarly integrity  
while furthering science

## 1. Stakeholders

Scholars; Research Institutions;  
Public; Private sector



## 4. Toolbox

Environment, Services, Software  
solution, Knowledge Sharing  
Interventions, ...

## 5. Return Of Investment

Academic Integrity, Trusted  
Research environment,  
Sustainable Partnerships...

## 6. Meaningful Transformation

Transformation of the Scholarly  
Communications landscape, Societal  
Impact.



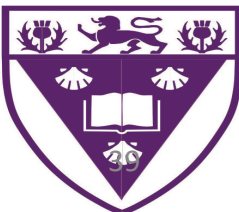
# Publishers Action List

- Engage with all stakeholders:
  - **Publishers and journal hosts:**
    - To ensure journal titles are unique
    - To ensure identifiers have been registered
    - To check their data:
      - For correctness
      - For completeness
      - For openness
      - On all platforms including catalogues, journal lists, ISSN Portal, Wikidata, Wikipedia, Ulrichs, aggregator lists, indices, knowledgebase providers, etc.
    - When changing titles, please also change ISSN
    - Register for DOI at journal title level and use this as the persistent ID
    - When articles are retracted, do NOT delete objects as this adds to link-rot
    - To ensure that bibliographic-level metadata is part of “open science movement”



# Publishers Action List

- Engage with all stakeholders:
  - **List compilers and owners:**
    - To check their data:
      - For correctness
      - For completeness
    - To provide clear set of criteria for reasons for inclusion and exclusion
    - To use standard format for expressing reasons
    - To not just change titles on lists where the journal title has changed, but rather create new bibliographic entry
    - Provide status of journal, example of “C” status:
      - Current
      - CKA (Currently Known As)
      - Ceased



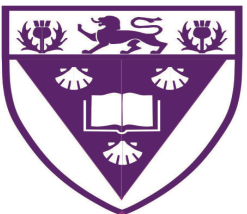
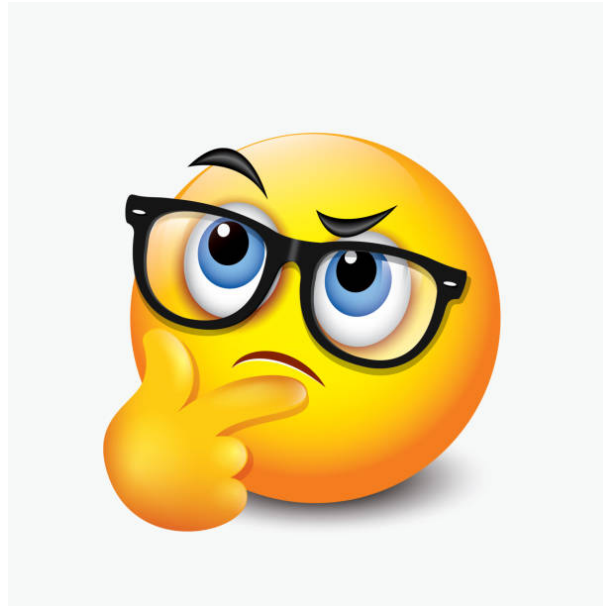
# Publishers Action List

- Engage with all stakeholders:
  - **Academics / Researchers:**
    - Triple check references as human error is evident and impacts on:
      - Increase in citation pollution
      - Inability or difficulty to assess impact of article
      - Inability or difficulty to cross-link between disparate systems
    - Include persistent identifiers in all references
    - Scholarly due diligence





# Scholarly Due Diligence



# Good things coming from the Covid-19 race

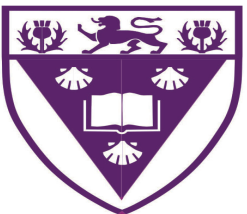
- The scientific community is doing better at correcting itself
- Post-publication reviews are flourishing -An emerging awareness and accountability within the scholarly community led to critical retractions, withdrawals, and corrections
- Cleaning up literature may be a more difficult task:
  - The need for proper retraction notices with clear reasons – Google Scholar can flag retractions earlier
  - Avoiding “link rot” or “reference rot”
- Many of the retractions occurred after the publication

**“this highlights the urgent need to “clean up the references” and update research to remove or revisit claims that are based on retracted research. If not, inferior or flawed research will continue to permeate through science”**
- Speed is the enemy of rigorous science



# Conclusion

- Why do I cite the research I cite, and can I trust them?
- Who do I trust to partner with in publishing my research?
- Can other researchers trust me?



# References

- [1] Mouton, Johan. 2021. [Research Quality Framework for scholarly outputs in SA](#)
- [2] Fidelior. 2021. Doing Due Diligence with Fidelior™ (Current draft internal document)
- [3] Roberts, J. 2016. [Predatory journals: illegitimate publishing and its threat to all readers and authors.](#) *Journal of Sexual Medicine*, vol. 13, n° 12, p. 1830-1833



Thank you / Nkosi / Dankie

