A Taxonomy of Retraction Reasons

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Problem: Retractions can harm an author's reputation and complicate the evaluation of their trustworthiness and research.

Purpose: refining reasons for retractions offer a means to understand trustworthiness surrounding retractions.

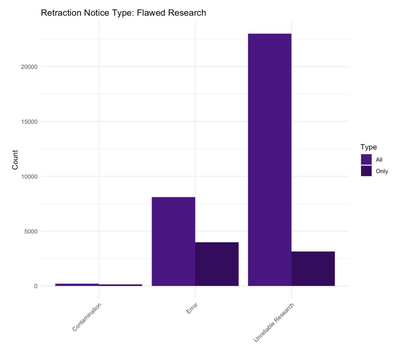
Solution: Our proposed taxonomy systematically classifies retraction reasons, facilitating discussions and improving trustworthiness evaluations, benefiting the academic community.

Taxonomy of Retraction Reasons

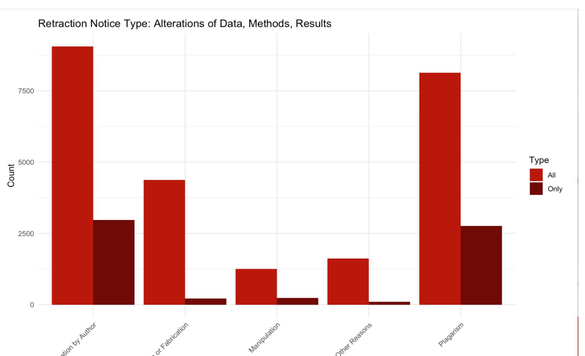
Flawed Research

Retraction notice reasons primarily affecting methods or results and alone (without reasons from other categories) suggest no intentional nefarious activities.

7.3 % of all retractions are solely attributed to Flawed Research Issues

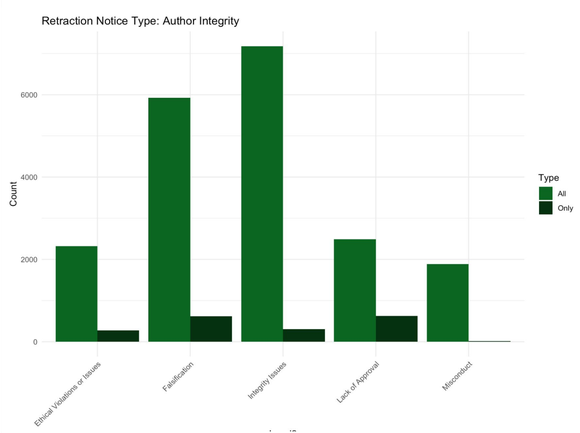


Data, Methods, Results **Alterations**



Implies an intent to alter research by one or more of the authors - specifically the methods and results. While overlapping and closely associated with the next category 'Author Integrity,' altering results implies the author(s) operate within the institutional environments and are thus professionals breaking ethical principles of proper research practices.

Author Integrity

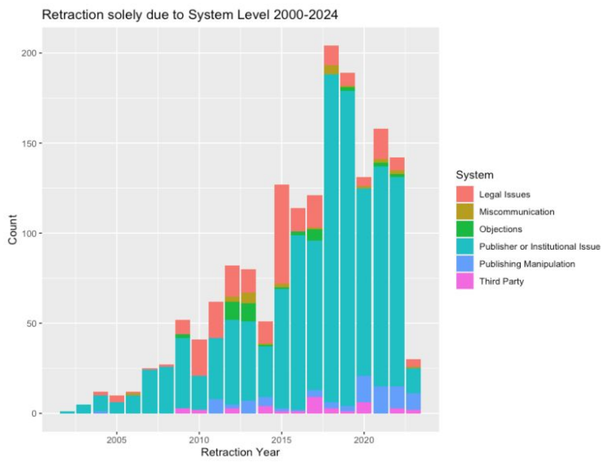


Encompasses issues stemming from or impacting the [person(s) named as] author's actions surrounding ethical and normative research practices. As described in previous work on trust markers, we differentiate between the processes used to conduct research and the research itself. We have separated the overlapping categories of altering research data, methods, or results from the manipulation of the research process.

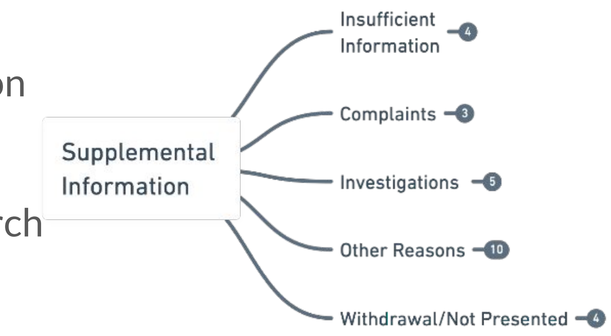
System Level

System Level

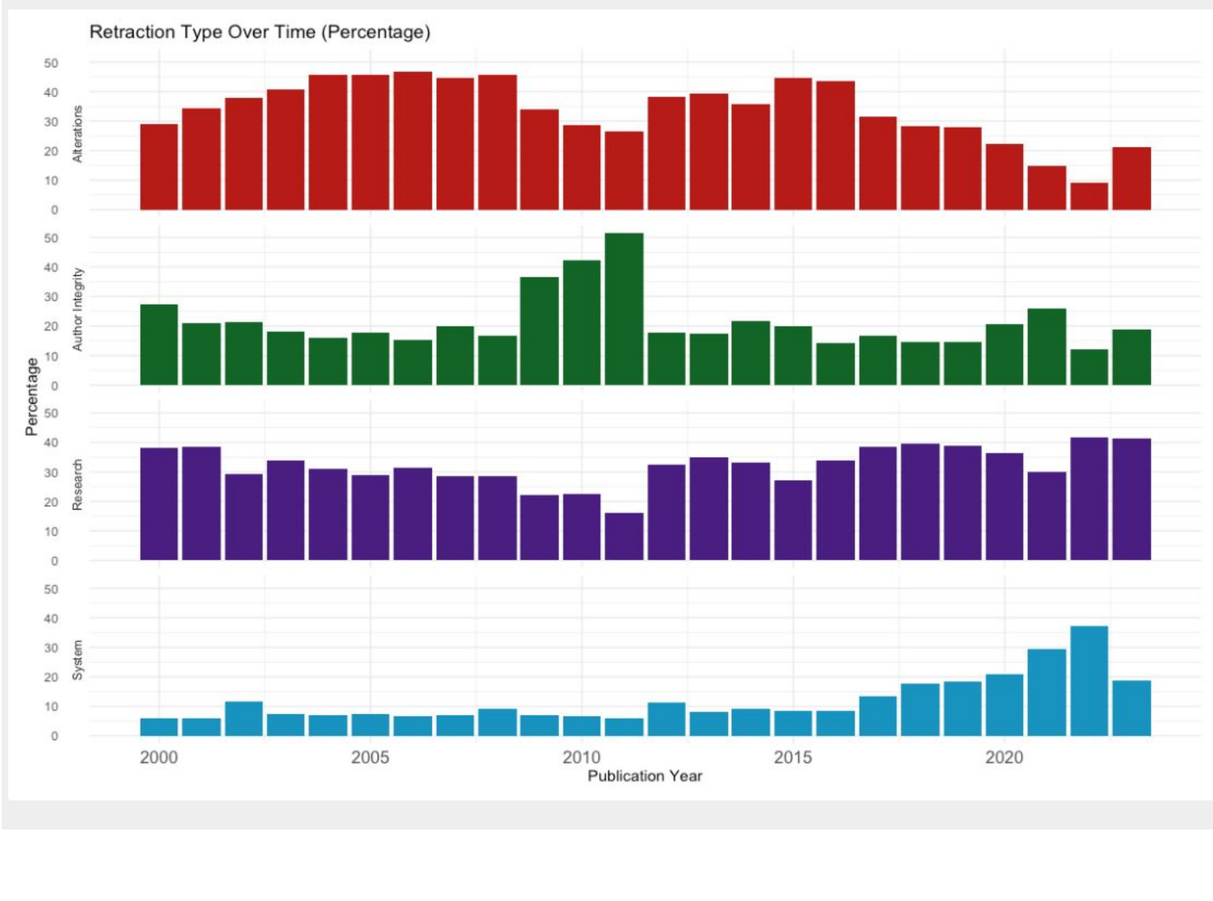
Covers reasons for retractions due to problematic issues surrounding the scholarly publication by entities such as publishers (e.g., copyright or data ownership issues) and third parties, as well as legal issues and miscommunications.



The Supplemental Information category does not provide information on the trustworthiness of the research or authors and typically accompanies other reasons.



66% of all retractions are attributed to Alterations or Author Integrity Issues



Original retraction reasons: Retraction Watch Database User Guide Appendix B: Reasons
https://retractionwatch.com/retraction-watch-database-user-guide/retraction-watch-database-user-guide-appendix-b-reasons/

Data sources for analyses: Retractionwatch data
Obtained as a csv from Crossref Lab's API
https://api.labs.crossref.org/data/retractionwatch?name@email.org
Dimensions https://app.dimensions.ai/

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