

Letter to the editor: Should stricter regulations be set for the use or analysis of Twitter (and other social media) in academic publishing?

Dear *Aslib Journal of Information Management* Editors,

Currently, the pursuit of research utilizing Twitter data, alongside various other social media platforms, has become an increasingly prevalent undertaking (Sinnenberg *et al.*, 2017). The recent (end of June 2023) restrictions placed by Twitter (now X) on public access to Tweets, requiring a login in order to view them, compounded by a daily limit to the number of Tweets that can be viewed, places – we feel – a damper on open communication via social media and is thus counter to open science principles. These communication and linking limitations seem to, in one respect, defeat the purpose of such social media platforms, which should be open to the public, at least to view such communications. With truncated access, the freedom and spirited nature of communication become limited.

We reflect briefly on what this closed-access approach might mean for academic research and suggest two aspects that should be taken into account when conducting Twitter (or any social media)-based research. Following a spot check of the instructions for authors of some journals in which Twitter-related papers have been published, we were unable to identify any guidelines specific for Twitter (or any social media)-based research.

The first issue we touch on is whether social media that does not have open and unfettered access should be researched. If the “raw data” of such analyses – in the case of Twitter, the tweets themselves – are not visible to the public, then how are analyses based on Twitter being verified by editors and peer reviewers, surely not all of whom have sign-in access to Twitter? Therefore, in our opinion, authors should be obliged to keep and present the raw data (i.e. tweets) of any Twitter-based research, as hard-copy evidence of their research. As one example, a recent review by Foderaro and Lorentzen (2023) claims to have 30,000 tweets as the “final dataset”. Yet, there is no supplement with an open collection of this dataset that would allow any reader or member of the public to verify – and reproduce – the validity of that dataset and thus the study’s claimed findings. The journal in which that paper was published claims to follow a set of open science/data principles, the Transparency and Openness Promotion (TOP) Guidelines. In contrast, as one example, Banda *et al.* (2021) present the full raw tweet dataset on Zenodo. We recommend that even at the post-publication stage, Foderaro and Lorentzen (2023) and *Aslib Journal of Information Management* could still make the raw tweet dataset publicly available to make the study TOP-compliant.

Author contributions: Except for the database search in Web of Science Core Collection, which was conducted by the second author, the authors contributed equally to all other aspects of the paper, including, but not exclusively limited to, conceptual design, discussion, methodology, analysis and validation, writing and editing all versions of the manuscript.

Data availability statement: The raw data of the analysis in Web of Science Core Collection is available in the [Supplementary file](#).

Conflicts of interest: The authors declare no relevant conflicts of interest.



Paper DOI	Raw data available/ visible?	Policy existent? Journal; publisher
10.1007/s11192-023-04678-6	No/no	No, only general <i>Scientometrics</i> ; Springer Nature https://www.springer.com/journal/11192/submission-guidelines
10.14235/bas.galenos.2022.50479	No/no	No, only general <i>Beziydem Science</i> ; Galenos Publishing House https://www.beziydemscience.org/instructions-to-authors
10.1108/GKMC-07-2021-0124	No/no	No, only general, but claim to follow TOP Guidelines ² <i>Global Knowledge, Memory and Communication</i> ; Emerald Publishing Ltd https://www.emeraldgroupublishing.com/journal/gkmc
10.3928/01477447-20221024-02	No/no	No, only general <i>Orthopedics</i> ; SLACK Journals https://journals.healio.com/journal/ortho/submit-an-article
10.1629/uksg.593	Yes/yes	No, only general <i>Insights</i> ; United Kingdom Serials Group https://insights.uksg.org/about/editorialpolicies
10.1177/15563316221115723	No/no	No, only general <i>HSS Journal</i> [®] ; Sage https://journals.sagepub.com/author-instructions/HSS
10.1177/17456916221113759	No/no	No, only general <i>Perspectives on Psychological Science</i> ; Sage https://journals.sagepub.com/author-instructions/PPS ; https://www.psychologicalscience.org/publications/perspectives/pps-submissions
10.1111/jnu.12827	No/no ³	No, only general <i>Journal of Nursing Scholarship</i> ; Wiley https://sigmapubs.onlinelibrary.wiley.com/hub/journal/15475069/about/forauthors ; https://authorservices.wiley.com/ethics-guidelines/index.html ⁴
10.1007/s10530-022-02901-8	Yes ⁵ /no	No, only general <i>Biological Invasions</i> ; Springer Nature https://www.springer.com/journal/10530/submission-guidelines
10.1007/s11192-023-04653-1	No/no	No, only general <i>Scientometrics</i> ; Springer Nature https://www.springer.com/journal/11192/submission-guidelines

(continued)

Table 1.
A total of 13 studies published in 2023 were screened from a Web of Science core collection search to assess if the raw data were available and if the respective journals have open data policies for Twitter (and social media)-based research¹

Table 1.

Paper DOI	Raw data available/ visible?	Policy existent? Journal; publisher
10.1108/GKMC-07-2021-0122	No/no	No, only general, but claim to follow TOP Guidelines ² <i>Global Knowledge, Memory and Communication</i> ; Emerald Publishing Ltd https://www.emeraldgrouppublishing.com/journal/gkmc
10.1016/j.jdent.2022.104385	No/no	No, only general <i>Journal of Dentistry</i> ; Elsevier https://www.elsevier.com/journals/journal-of-dentistry/0300-5712/guide-for-authors
10.1007/s11192-022-04569-2	No/no	No, only general <i>Scientometrics</i> ; Springer Nature https://www.springer.com/journal/111192/submitmission-guidelines

Note(s):¹See [Supplementary file](#) for the full list of 329 papers found in a search (12 July 2023). Search parameters: Citation Topics:6,238 Bibliometrics, Scientometrics & Research Integrity (only English articles, Twitter within all fields). We note that [Foderaro and Lorentzen \(2023\)](#) are indexed in Web of Science Core Collection Citation Topic: 6,153 Climate Change - 6,153,742 Science Communication, and thus does not appear in the [Supplementary file](#)

²Transparency and Openness Promotion (TOP) Guidelines: <https://www.cos.io/initiatives/top-guidelines>

³Not only do we not see a link to the data, but there is also no description of how the authors calculated the number of tweets

⁴The journals and publisher's policies regarding raw data do not appear to be compatible

⁵Available, but not publicly, only upon request: "The datasets generated and/or analyzed during the current study are available from the corresponding author on reasonable request."

Source(s): Table by authors

To test whether the lack of “raw” data for Twitter-based research was a spontaneous finding in this recent review (Foderaro and Lorentzen, 2023), or not, a search was conducted (12 July 2023) in the Web of Science Core Collection, revealing 329 results (Suppl. file). We selected the 2023 papers to appreciate whether their raw data were available (Table 1). We took into account studies that used Twitter data obtained directly from the Twitter API [1], as well as papers that used additional tools to collect Twitter data, in particular Altmetric tools [2]. We found that only in one of the 13 papers we analyzed did the author of the study make Twitter data immediately available to readers. In another paper, the authors indicated that the study data were available upon request. All the other papers do not provide any information on how to get acquainted with the raw data of these studies. In essence, these studies are based purely on “blind trust” (Teixeira da Silva, 2022). The policies of the journals and publishers we analyzed contain only general recommendations on the transparency of research data, and none of the policies contain any specific information about guidelines related to data from Twitter or other social media.

Researchers who rely on social media should be – in our opinion – obliged to produce evidence of such big data sets in a publicly accessible location, such as Zenodo or GitHub. Since tweets cannot be archived at the Internet Archive, having the URL is simply not enough evidence and possibly hard-copy screenshots would need to be produced as evidence. We suggest that this approach be applied to all Twitter (or any social media, for instance, Threads [3])-based research.

Jaime A. Teixeira da Silva

Independent, Miki-cho, Japan, and

Serhii Nazarovets

Borys Grinchenko Kyiv University, Kyiv, Ukraine

Notes

1. <https://developer.twitter.com/en/products/twitter-api/academic-research>
2. <https://www.altmetric.com/our-audience/researchers/research-access/>
3. <https://blogs.lse.ac.uk/impactofsocialsciences/2023/07/13/will-threads-be-the-new-academic-twitter/>

References

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- Teixeira da Silva, J.A. (2022), “Does the culture of science publishing need to change from the status quo principle of “trust me”?”, *Nowotwory Journal of Oncology*, Vol. 7 No. 2, pp. 137-138, doi: [10.5603/NJO.a2022.0001](https://doi.org/10.5603/NJO.a2022.0001).

Supplementary file

The supplementary material for this article can be found online.