# The Twitter accounts of scientific journals: a dataset

Twitter harbours dense networks of academics, but to what extent do scientific journals use that platform? This article introduces a dataset of 3,485 Twitter accounts pertaining to a sample of 13,821 journals listed in Web of Science's three major indices (SCIE, SSCI and AHCI). The summary statistics indicate that 25.2% of the journals have a dedicated Twitter presence. This number is likely to grow, as, on average, every one and a half days sees yet another journal setting up a new profile. The share of Twitter presence, however, varies strongly by publisher and discipline. The most active discipline is political science, which has almost 75% of its journals on Twitter, while other research categories have zero. The median account issues 116 messages a year and it interacts with distinct other users once in two to three Tweets. Approximately 600 journals refer to themselves as 'peer-reviewed', while 263 journals refer to their citation-based impact (like the impact factor) in their profile description. All in all, the data convey immense heterogeneity with respect to the Twitter behaviour of scientific journals. As there are numerous deceptive Twitter profile names established by predatory publishers, it is recommended that journals establish their official accounts lest bogus journals mislead the public about scientific findings. The dataset is available for use for further scientometric analyses.

***Keywords***

science communication; altmetrics; journals; twitter; social media

ANDREAS NISHIKAWA-PACHER

Knowledge Manager
TU Wien
Bibliothek
Vienna
Austria;
PhD candidate
Department of Legal and Constitutional History
University of Vienna
Austria;
PhD candidate
Department of International Relations
Vienna School of International Studies
Austria

## Introduction

Journals disseminate research not only by publishing relevant manuscripts, but also by actively promoting their findings to stakeholders.[1] It is thus consequential that journals promote their articles in those channels where academic networks are dense – and in the digital world of social media, this means Twitter.[2] Messages on Twitter, or Tweets, that link to scientific outputs are among the most prevalent sources behind altmetrics, which in turn measure the societal impact of scholarly publications.[3] Altmetrics do draw from other sources as well (like reference managers, news websites, policy documents, Wikipedia, or Facebook),[4] but Twitter has been repeatedly found to have the largest coverage[5] of altmetric-inducing mentions among social media platforms.[6] An analysis of more than 12 million scientific publications, for example, found that 34% of them made impact via Twitter, while the second largest social media platform in this regard, Facebook, had a share of just 8.6%.[7] And as altmetrics themselves experience an uptake in research evaluation,[8] it may be plausible to believe that aggregates of Tweets could indirectly influence academic career decisions or allocations of research budgets. There is at least evidence that large funding organizations have been subscribing to altmetric platforms for years,[9] that scientists include altmetric scores on their CVs when applying for research funding[10] and that universities promote themselves with altmetrics because they offer a 'more complete picture of the institution's talent and the broad impact of its work'.[11] Despite counter-arguments criticizing the opaqueness and manipulability of altmetrics, including through Tweets,[12] the presentiment that funders will eventually 'recognize altmetrics as a valid tool for researcher evaluation and accreditation'[13] is already widespread. All in all, there is thus no doubt that Twitter has become a significant forum within the scientific system. Given the importance of Twitter for the informational spread of scholarly insights, one may attempt to understand how scientific journals make use of that platform. For instance, one may ask whether journals engage in a kind of 'gaming' behaviour to unduly raise the Altmetric Attention

Scores of their publications[14] and to what extent, and with what effect, they engage with broader communities across social media channels.[15] One may also look for recurrent textual patterns that are visible in the journals' Tweets, perhaps in terms of their emotional content regarding issues like open access or impact factors[16] and consider how dedicated social media editors affect a journal's impact.[17]

Investigations on journals' Twitter uses, however, have been scarce. There is a wealth of studies regarding the Twitterverse at article[18] or individual researcher level,[19] but less at the journal level. Perhaps this is because individual researchers tend to be more active on Twitter than the journals themselves.[20] A high proportion of the few meta-scientific studies in the journal-level strand have been mostly restricted to specific disciplines,[21] which does not allow for a more global view given that some classifications contain hundreds of research categories. Web of Science, for example, classifies journals into approximately 250 subject categories. The few journal-level Twitter studies that are more all-encompassing fail to make their dataset transparently available under generous licences.[22] They thus cannot be easily modified, updated, shared or re-used.[23] They do point to interesting insights though, such as to a positive association between a journal's Twitter use and readership,[24] citations[25] and even the impact factor.[26] They also found how inter-journal communications can be detected within the same citation index but hardly across separate indices.[27] They identified the factors that determined 'successful' Tweets[28] – such as interactive user mentions,[29] infographics and online journal clubs.[30] Nevertheless, more powerful studies, more focused theories and more accurate diagnoses of the current state of journals' outreach activities could be conducted with the help of a larger dataset that covers all kinds of scientific fields, that would be distributed under a Creative Commons (CC) licence, that could be enlarged and modified without limitations, and that would collect the Twitter accounts from thousands of journals across every research domain.

'a positive association between a journal's Twitter use and readership, citations and even the impact factor'

This article presents such a dataset, one based on a Twitter data collection from 13,821 journals listed in the three major indices of Web of Science, i.e. the SCIE (Science Citations Index Expanded), the SSCI (Social Science Citation Index), and the AHCI (Arts and Humanities Citation Index). In total, the dataset found 3,485 journal-level Twitter accounts across 264 research categories. The dataset is freely and publicly available against a Creative Commons licence (CC0), and anyone can suggest additions to the dataset via GitHub so as to ensure the further nourishment of the dataset over time.

'This article presents … a dataset … based on a Twitter data collection from 13,821 journals'

The data-collection method is presented in the next section, followed by some summary statistics. The article closes with a discussion section recommending journals to register official accounts on Twitter and wishing the platform would 'verify' these profiles. Otherwise, predatory publishers could create misleading profiles, an issue that was indeed repeatedly encountered during the course of data collection. The article closes by outlining potential future venues for practice and research.

## Methods

In the first four months of 2022, all journals listed in Web of Science's three major indices, SCIE, SSCI and AHCI, were manually searched for on the Twitter website, based on the respective full journal title. In ambiguous cases, such as when the name of the journal was a trivial one (like *Materials*), the term 'journal' was added to the search query. When the journal title was too lengthy, appropriate abbreviations were used; for instance, the Twitter account of the *Journal of the Association of Environmental and Resource Economists* could only be found once it was searched for as 'Journal JAERE' (without spelling out the full journal name). In other cases, the standardized system of abbreviating serial publication titles[31] was used to find relevant accounts. An example was the profile for the *Journal of Hypertension* which could only be detected by searching for the abbreviated label 'J Hypertension'.

If a Twitter account pertaining to a journal was found, then it was inserted into the dataset – but only if there was no obvious evidence that the account was 'unofficial'. For instance, the *Review of Economic Studies* had an 'official' account at @RevEconStudies and an explicitly 'unofficial' one at @RevEconStud (cf. the top-left screenshot in Figure 1). The 'official' nature was not always straightforward to infer, especially when the accounts lacked a description or had never issued a Tweet; but when in doubt, the account was added to the dataset.

To be included in the dataset, the Twitter profiles had to be exclusively dedicated to the journal. For instance, Twitter accounts that belonged to journal-publishing societies but that were not exclusively about the journal itself were not integrated into the dataset, even if they explicitly mentioned the journal in the profile description. This was the case, for example, with the *Central European History Society* (@CentralEuropean) or the *Inter-Asia Cultural Studies Society* (@iacs_society) which did mention their society journals in their Twitter biography. Single Twitter accounts that covered *multiple* journals at once were also not integrated into the dataset – such as the account @ACR_Journals which presented the Twitter feed for *Arthritis & Rheumatology*, for *Arthritis Care & Research* and for *ACR Open Rheumatology* – i.e. for three journals at once. Finally, profiles that only pertained to a specific part of a journal – such as the account @SRReviews, which only posted Tweets about book reviews in *Studies in Religion*, but not about other article types – were also left out of the dataset. Figure 1 shows some of the Twitter profiles not included in the dataset.

> 'To be included in the dataset, the Twitter profiles had to be exclusively dedicated to the journal'

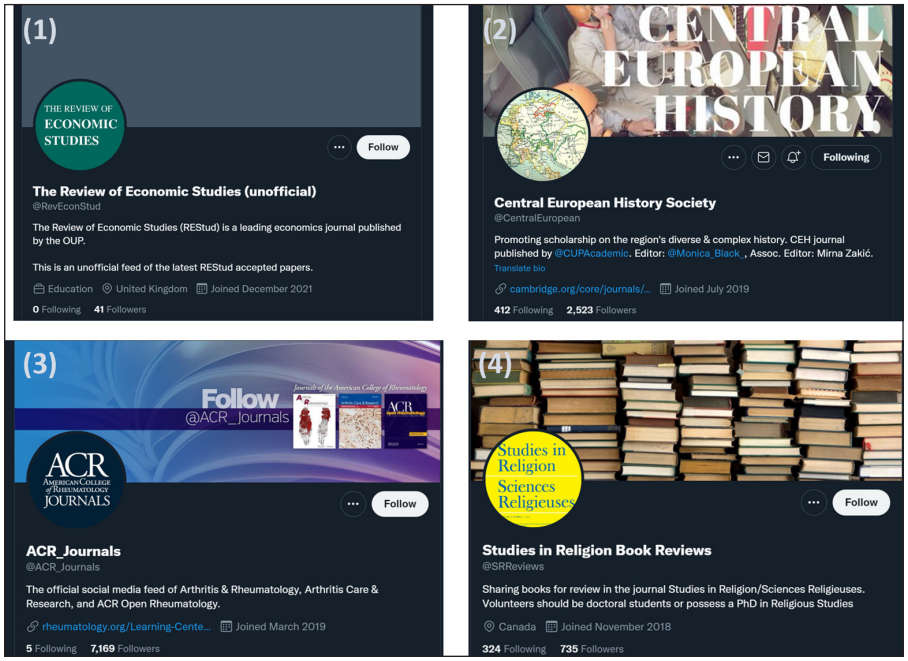


Figure 1. Screenshots (as of 4 June 2022) of the Twitter profile descriptions (1) for an explicitly unofficial account of the *Review of Economic Studies*, (2) for the *Central European History Society* which also covers its journal, (3) for multiple journals of the *American College of Rheumatology* (ACR) and (4) for book reviews in the journal *Studies in Religion*

For the purpose of deeper summary statistics, and to illustrate the potential insights that can be gained from this dataset, further information was fetched from the Twitter application programming interface (API): the respective date of registration for every Twitter profile, the respective numbers of Tweets in 2020 and 2021 (the two years prior to data collection, a period chosen because it fully covered the maximum number of 3,200 retrievable Tweets via the API), the respective users mentioned or retweeted or replied to in the Tweets of this two-year period and the respective current profile description. This data-fetching was done using *R*, with all codes being available in the GitHub repository.

The information about the users mentioned, retweeted or replied to was then summarized into a so-called 'community engagement ratio'.[32] This ratio was calculated by taking, for each journal account, the total number of distinct users that were mentioned or retweeted or replied to, and by dividing that number by the count of Tweets issued across the two-year period. For example, if a journal interacted with 100 distinct users in 2020 and 2021 across a total of 350 Tweets, its community engagement ratio would be 100 / 350, or 0.285.

The data collected were linked with Web of Science's information about the index and the research categories for each journal.

The following section presents some summary statistics.

# Results

## Share of journals with Twitter accounts

Out of 13,821 distinct journals across the three indices, 25.2% had their dedicated Twitter presence as of the first quarter in 2022 (see Table 1). SCIE journals were the least present ones (with a share of just over a fifth, or 22.2%, of all its journals on Twitter), while the most social media-affine index was the SSCI, where more than a third (or 35.1%) of all journals exhibited a Twitter account. The AHCI was in between, with 27.6% of its outlets on Twitter.

| Index | Journals ... | ... with Twitter | ... without Twitter | Share of Journals with Twitter |
|---|---|---|---|---|
| SCIE | 9,560 | 2,120 | 7,440 | 22.2% |
| SSCI | 3,565 | 1,252 | 2,313 | 35.1% |
| AHCI | 1,854 | 511 | 1,343 | 27.6% |
| Total* | 13,821 | 3,485 | 10,336 | 25.2% |

Table 1. Share of journals with Twitter accounts by *Web of Science* index (as of mid-2022). (SCIE = Science Citation Index Expanded, SSCI = Social Science Citation Index, AHCI = Arts and Humanities Citation Index). *Note: the numbers in the 'Total'-row do not add up the former rows due to overlapping categories

If the past is an indicator of the future, then the Twitter share is likely to rise in the coming years, for the share of journals with such accounts has grown from 0.1% in 2007 to 24.3% in 2021 (see Figure 2). This growth amounts to an increase of roughly 1.6% each year. In other words, approximately 224 Web of Science-indexed journals register on Twitter annually, meaning that on average, every one and a half days sees yet another journal signing up a new profile.

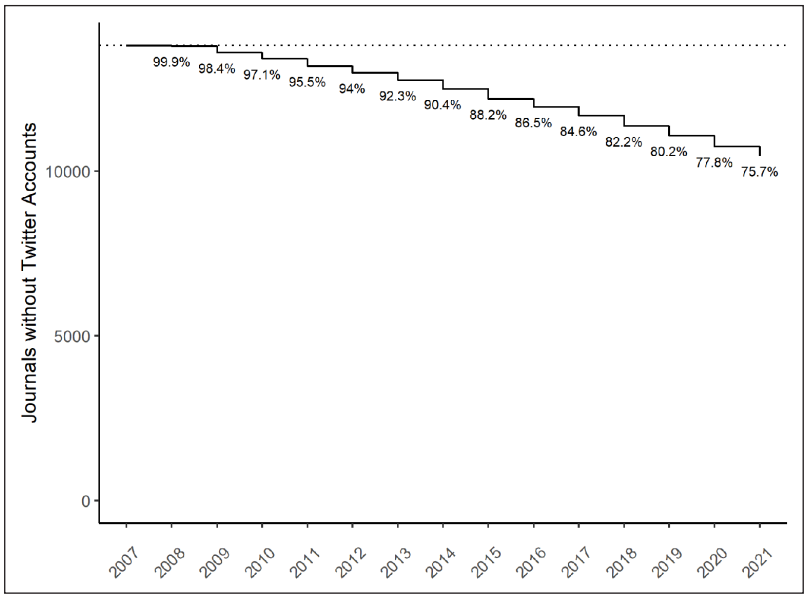


Figure 2. Cumulative share of journals without dedicated Twitter accounts, 2007-2021

Note that this year-on-year growth rate resembles that of Twitter generally. The mean annual change compared to the respective year before was 26.4% among journals (that is, the volume of journals grew by a quarter) in the period between 2009 and 2021; for example, there were 1,470 journals with Twitter accounts by the end of 2014, a number that grew to 1,809 a year later, denoting 414 new profiles, or almost 23% of that subsequent year's total share. This mean annual change approximates the equivalent mean growth of 26.9% in overall Twitter users in this period (though the data available calculates Twitter user growth by counting not all registered profiles, but rather 'daily monetizable active users' as of the fourth quartal, or Q4, for each year since 2009).[33]

## Share of journals by publisher

The distribution of Twitter-active journals also differs by publisher. It seems that some publishers have adopted a rather co-ordinated public relations strategy with regards to their journals' social media presence. To provide some indicative data, one may look at all publishers with at least ten distinctive journals listed in the three major indices of Web of Science. Out of 134 publishers in that subsample, just 21 of them have at least half of the journal portfolio on Twitter. Only the *American Medical Association* attains a share of 100%, followed by the *Future Medicine* and the *American Meteorological Society*, both of which have 90% or more of their journal portfolio on Twitter. Among the larger publishers, *BMJ Publishing Group*, *Multidisciplinary Digital Publishing Institute* (MDPI), *Nature*, *Frontiers*, the *American Chemical Society* (ACS), *Lippincott Williams & Wilkins* (LWW) and the *Royal Society of Chemistry* (RSC) stand out as highly Twitter-active publishers. Table 2 lists the top 25 of these mid- to large-sized publishers, using the labels according to Web of Science (though there may be other naming conventions depending on the aggregation of publisher imprints).

| Rank | Publisher | Journals | Share of Journals with Twitter | Rank | Publisher | Journals | Share of Journals with Twitter |
|---|---|---|---|---|---|---|---|
| 1 | AMER MEDICAL ASSOC | 12 | 100.0% | 13 | HUMAN KINETICS PUBL INC | 16 | 68.8% |
| 2 | FUTURE MEDICINE LTD | 11 | 90.9% | 14 | HOGREFE PUBLISHING CORP | 11 | 63.6% |
| 3 | AMER METEOROLOGICAL SOC | 10 | 90.0% | 15 | FRONTIERS MEDIA SA | 48 | 62.5% |
| 4 | AMER PHYSICAL SOC | 13 | 84.6% | 16 | AMER SOC MICROBIOLOGY | 13 | 61.5% |
| 5 | BMJ PUBLISHING GROUP | 41 | 80.5% | 17 | PENSOFT PUBLISHERS | 13 | 61.5% |
| 6 | ELSEVIER SCIENCE LONDON | 15 | 80.0% | 18 | UNIV CALIFORNIA PRESS | 20 | 60.0% |
| 7 | AMER PHYSIOLOGICAL SOC | 13 | 76.9% | 19 | AMER CHEMICAL SOC | 61 | 57.4% |
| 8 | MDPI | 95 | 76.8% | 20 | LIPPINCOTT WILLIAMS & WILKINS | 214 | 53.7% |
| 9 | COPERNICUS GMBH | 24 | 75.0% | 21 | ROYAL SOC CHEMISTRY | 41 | 53.7% |
| 10 | NATURE PORTFOLIO | 79 | 73.4% | 22 | ADIS INT LTD | 15 | 46.7% |
| 11 | SLACK INC | 11 | 72.7% | 23 | IEEE COMPUTER SOC | 26 | 46.2% |
| 12 | CELL PRESS | 26 | 69.2% | 24 | MOSBY-ELSEVIER | 24 | 45.8% |
| | | | | 25 | PALGRAVE MACMILLAN LTD | 24 | 45.8% |

Table 2. Share of journals with Twitter accounts by publisher (as labelled by *Web of Science*), only taking into account publishers with at least 10 distinct journals in *Web of Science*'s SSCI, SCIE or AHCI

It has indeed been noticed already that *Nature* journals[34] or *Cell* journals[35] were highly successful on social media in terms of referrals to scholarly articles; it is possible that their prolific presence on Twitter may have been a contributory factor. The dataset at least corroborates such fragmentary observations.

## Share of Twitter accounts by discipline

Zooming in to the level of the 264 specific disciplines, Table 3 presents some summary statistics grouped by index. Accordingly, the median research category has 22.4% of its journals present on Twitter; the average one has a quarter of its journals there, albeit an overall standard deviation of 15.7% indicates that the research fields are rather heterogeneous.[36] A look at the outliers indeed reveals that there are even categories without a single Twitter-using journal, while the most Twitter-affine category reaches a share of almost 75%.

| Index | Avg | Median | Mode | Std.Dev. | Min | Q1 | Q3 | Max |
|---|---|---|---|---|---|---|---|---|
| SCIE | 21.5% | 19.4% | 20.0% | 13.3% | 0.0% | 11.5% | 30.8% | 60.0% |
| SSCI | 35.0% | 34.6% | 14.3% | 16.8% | 7.7% | 21.3% | 45.4% | 74.7% |
| AHCI | 29.1% | 26.3% | 66.7% | 16.9% | 6.2% | 16.3% | 34.7% | 66.7% |
| Total* | 25.5% | 22.4% | 16.1% | 15.7% | 0.0% | 14.3% | 35.2% | 74.7% |

Table 3. Twitter presence of journals in the various categories; summary statistics grouped by the respective *Web of Science* index. (SCIE = Science Citation Index Expanded; SSCI = Social Science Citation Index; AHCI = Arts and Humanities Citation Index.) * The 'Total'-row includes journals with multiple attributions to the three indices

A closer disaggregation is provided by Figures 3 and 4. They show the respective share for every single research category, grouped by index, and ordered from the most to the least Twitter-active category. Political Science, International Relations and Women's Studies (all three in SSCI) attain a Twitter presence covering more than 70% of the respective discipline's journals. The next threshold of 60% is surpassed only by the categories Literary Reviews and African, Australian, Canadian Literature (both in AHCI) as well as Critical Care Medicine (in SCIE). At the lowest end are the three SCIE disciplines Logic, Andrology and Agricultural Engineering. None of these have any journals on Twitter.

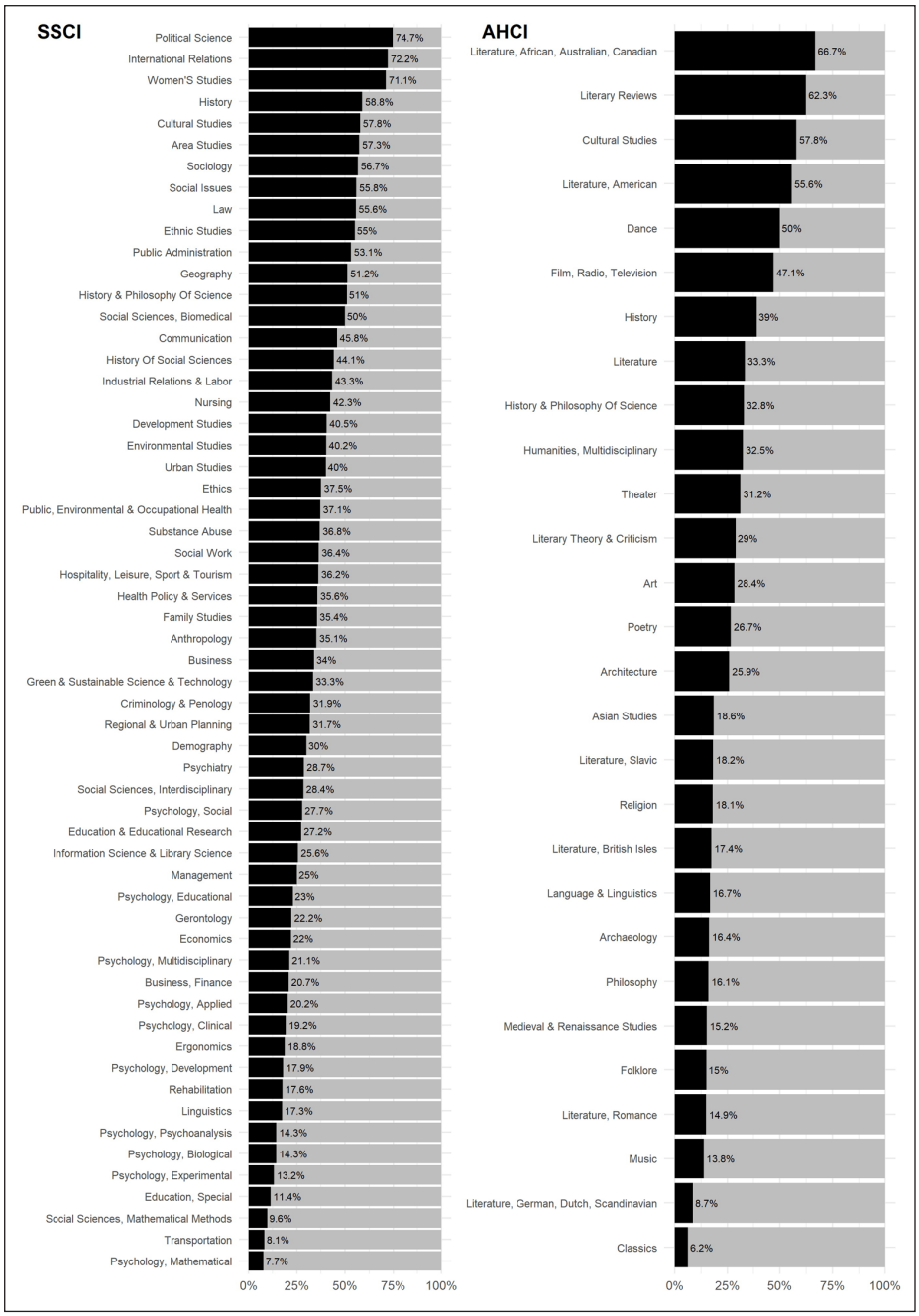


Figure 3. Share of journals on Twitter, grouped by research category and Web of Science index. (SSCI = Social Science Citation Index, AHCI = Arts and Humanities Citation Index)

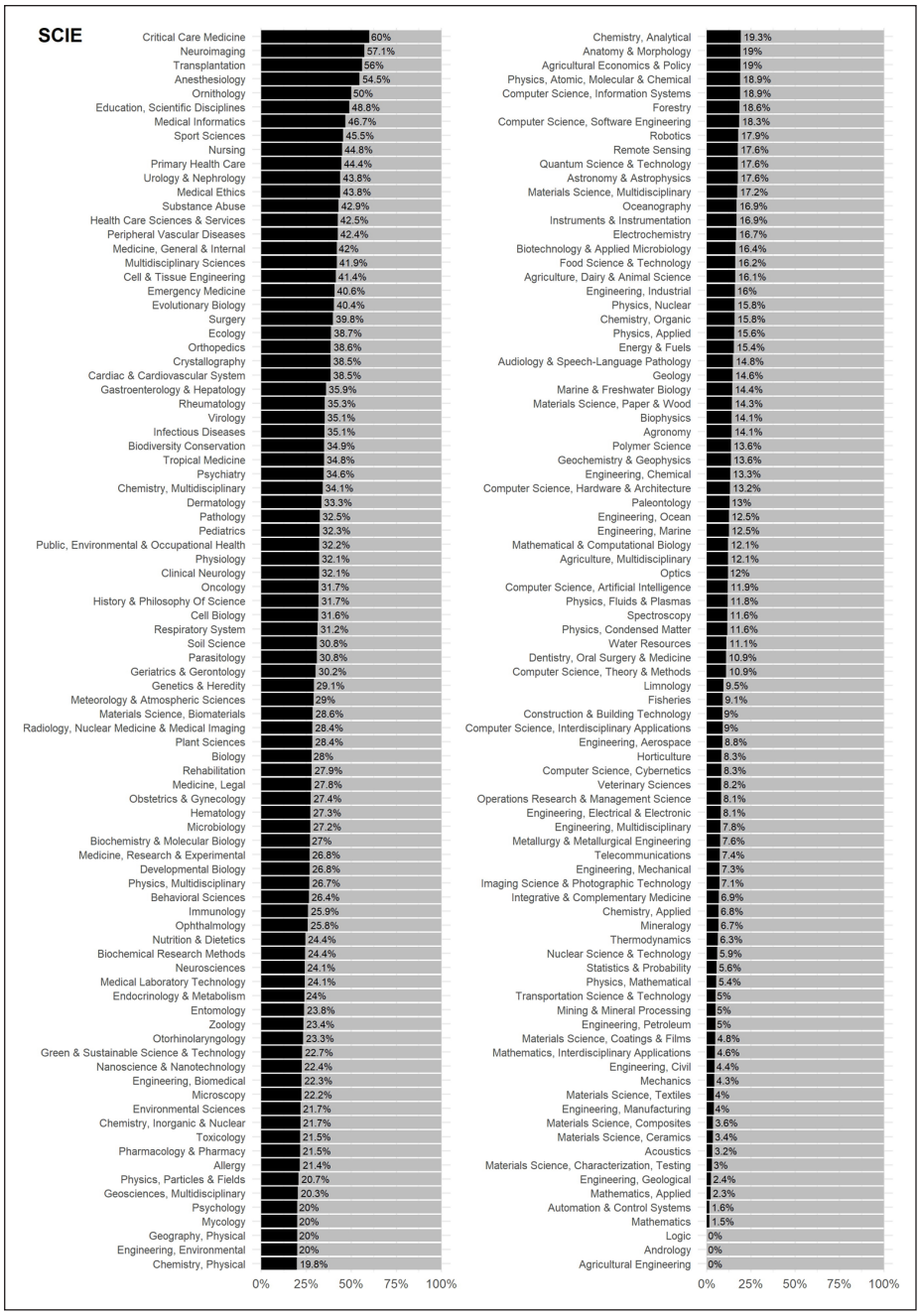


Figure 4. Share of journals on Twitter, grouped by research category, covering all journals in the SCIE (Science Citation Index Expanded)

## Activity of Twitter accounts

Using each journal account's Tweets issued in the years 2020 and 2021, Table 4 presents descriptive statistics about the annual social media activity of the journals. In total, the journals sent out more than 800,000 Tweets per annum. The median journal tweeted 116 a year, or roughly once in three days. In contrast, and perhaps surprisingly, the modal journal was quite inactive: it only issued a single Tweet in two years. These numbers again point to a highly heterogeneous landscape with regard to the Twitter behaviour of academic journals.

| Index | Avg | Median | Mode | Std.Dev. | Min | Q1 | Q3 | Max |
|---|---|---|---|---|---|---|---|---|
| SCIE | 306 | 163.0 | 0.5 | 357 | 0.5 | 50.2 | 416 | 1 557 |
| SSCI | 174 | 83.5 | 1.5 | 248 | 0.5 | 30.5 | 196 | 1 546 |
| AHCI | 210 | 63.5 | 11.5 | 333 | 0.5 | 18.0 | 196 | 1 526 |
| Total* | 256 | 116.0 | 0.5 | 332 | 0.5 | 36.5 | 329 | 1 557 |

Table 4. Number of Tweets per year across all journals with Twitter accounts, grouped by Web of Science index, using summed numbers from 2020 and 2021 and divided by two (for the two years). (SCIE = Science Citation Index Expanded; SSCI = Social Science Citation Index; AHCI = Arts and Humanities Citation Index.) * The 'Total'-row includes journals with multiple attributions to the three indices

The summary statistics differ strongly by Web of Science index. The median journal in the SCIE was almost twice as active (with 163 Tweets a year) as the SSCI counterpart (83.5 Tweets annually), while their AHCI equivalent trailed behind with 63.5 Tweets per annum.

The indices, however, did converge at the maximum end of the Twitter activity landscape. The most active journals in each index sent out more than 1,500 Tweets a year, or more than four messages a day (which is, according to some marketing wisdom, the "adequate intensity of tweeting").[37] Most of the prolific social media accounts belonged to the *Journal of the American Medical Association* (JAMA) network, as Table 5 shows.

'The most active journals in each index sent out more than 1,500 Tweets a year'

| Journal | Annual Tweets | Journal | Annual Tweets |
|---|---|---|---|
| JAMA Ophthalmology | 1,557.0 | Journal of Clinical Nursing | 1,444.5 |
| JAMA Otolaryngology | 1,557.0 | Nature Reviews Gastroenterology & Hepatology | 1,428.5 |
| JAMA Dermatology | 1,555.0 | Journal of Cell Biology | 1,423.5 |
| JAMA Cardiology | 1,553.5 | Journal of Controlled Release | 1,414.5 |
| JAMA Neurology | 1,552.5 | European Journal of Neuroscience | 1,410.5 |
| JAMA Psychiatry | 1,546.5 | Hypertension | 1,406.5 |
| JAMA Surgery | 1,543.5 | ChemCatChem | 1,406.0 |
| JAMA Oncology | 1,535.5 | Nature Plants | 1,403.3 |
| British Journal for the Philosophy of Science | 1,526.5 | Journal of Cardiothoracic & Vascular Anesthesia | 1,399.0 |
| JAMA Internal Medicine | 1,518.5 | Mayo Clinic Proceedings | 1,395.0 |
| JAMA Pediatrics | 1,511.5 | Journal of Experimental Medicine | 1,390.5 |
| Colorectal Disease | 1,496.5 | Journal of Clinical Oncology | 1,379.5 |
| Current Sociology | 1,480.5 | Critica Letteraria | 1,378.5 |
| Journal of Athletic Training | 1,478.0 | Molecules | 1,373.0 |
| Lancet Infectious Diseases | 1,470.5 | Architectural Review | 1,371.0 |

Table 5. The 30 most prolific Twitter accounts in terms of the number of Tweets issued each year (average count across 2020 and 2021)

Figure 5 presents histograms indicating the distribution of journals based on the number of Tweets they issue each year. Given the minuscule modal values, the distributions are strongly long-tailed to the right.

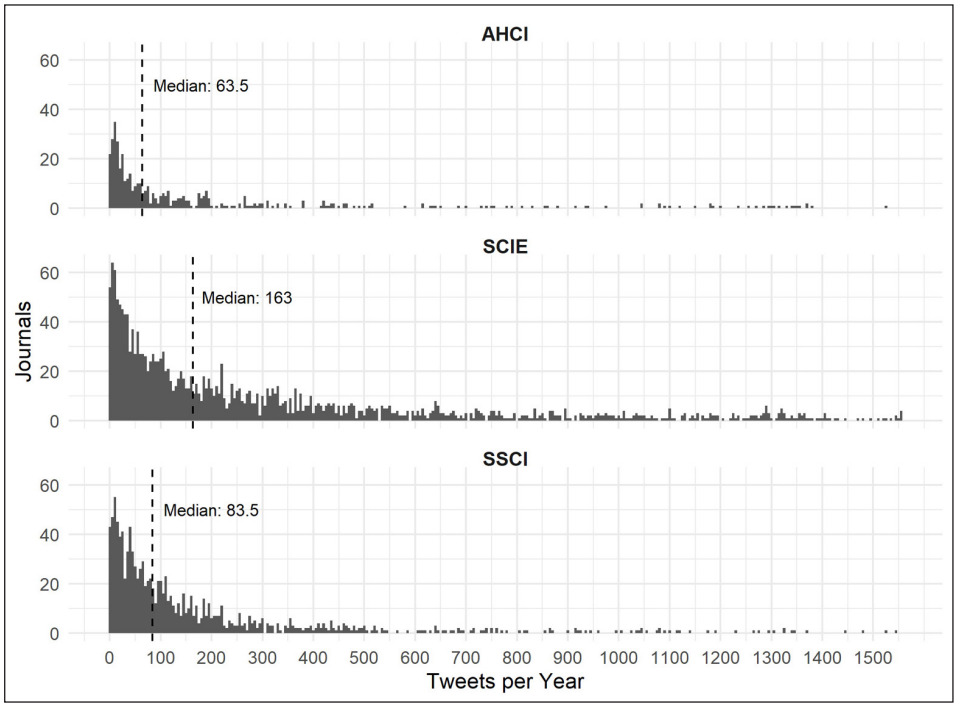


Figure 5. Number of Tweets issued by journals each year based on data from 2020 and 2021

As journals often send out Tweets to announce a new article, one may consider whether the number of Tweets issued by the journals' accounts correlates with the number of articles published by that journal (operationalized by the number of DOIs issued in 2020 and 2021 according to metadata in Crossref). The answer is yes, there is a statistically significant positive correlation – a Kendall's tau estimation leads to $r_\tau = 0.06$, with $p < 0.01$; but this correlation is very weak, if not negligible. Twitter activity may thus be less a function of publication volumes than of a consciously adopted strategy for dissemination and community engagement.

### Community engagement

Drawing again from the 2020 and 2021 data, and only looking at a subset of journals with at least 50 Tweets a year (to exclude rather inactive accounts), Table 6 presents summary statistics regarding the journals' community engagement ratio. The numbers indicate to what extent journals engage with the broader community on Twitter. While the *median* journal does interact with distinct users once in two to three Tweets (a community engagement ratio of 0.42), the *modal* one is quite 'monologous' in its Tweets (with a community engagement ratio of 0.01). There are, of course, conspicuous outliers, with the journal *Journal of Biosciences* (@BiosciencesOf) even reaching the maximum community engagement ratio of 4.83, meaning that it interacts with (mentions, retweets or replies to) slightly less than five distinct users each Tweet. The boxplots in Figure 6 visualize the distributions.

| Index | Avg | Median | Mode | Std.Dev. | Min | Q1 | Q3 | Max |
|---|---|---|---|---|---|---|---|---|
| SCIE | 0.47 | 0.43 | 0.50 | 0.33 | 0 | 0.27 | 0.61 | 2.98 |
| SSCI | 0.43 | 0.36 | 0.01 | 0.39 | 0 | 0.15 | 0.60 | 4.83 |
| AHCI | 0.55 | 0.50 | 1.00 | 0.39 | 0 | 0.31 | 0.71 | 4.50 |
| Total* | 0.48 | 0.42 | 0.01 | 0.39 | 0 | 0.21 | 0.64 | 4.83 |

Table 6. Community engagement ratio across all journals with Twitter accounts, grouped by Web of Science index, using Tweets from 2020 and 2021. (SCIE = Science Citation Index Expanded; SSCI = Social Science Citation Index; AHCI = Arts and Humanities Citation Index)

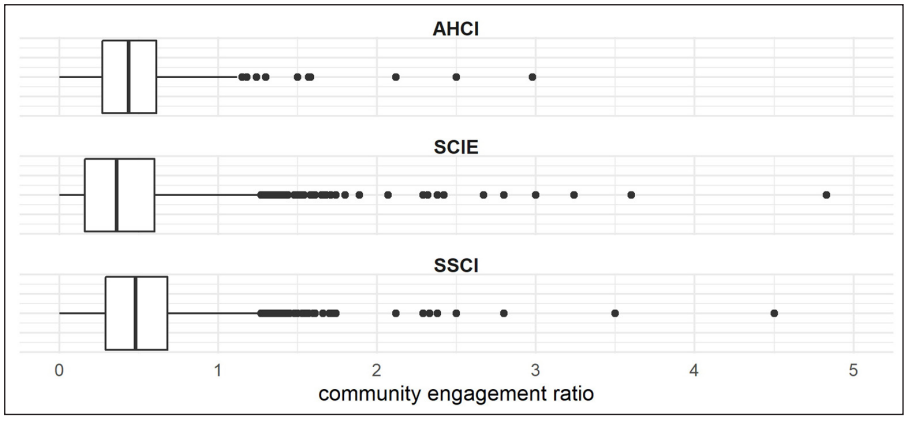


Figure 6. The extent to which scientific journals interact with distinct other users per Tweet

## Self-description of journals

Finally, one could look for specific words that appear in the Twitter profile descriptions so as to gauge semantic structures in the journals' self-descriptions. Probing the overall pattern of some common meta-scientific terms, one can find that 6% of all journals with Twitter accounts explicitly refer to themselves as being open access in their profile description; 6.8% hint at their impact factor (or CiteScore and similar variants) and 15.6% explicitly describe themselves as peer-reviewed outlets (see Table 7, which also includes the regular expression, or regex, used for detecting the relevant strings).

'6% of all journals with Twitter accounts explicitly refer to themselves as being open access'

| Aspect of self-description | Regular Expression | Number of Journals | Share |
|---|---|---|---|
| Open Access | `open access\|\boa\b` | 231 | 6.0% |
| Impact Factor | `\bJIF\b\|Impact.Factor\|CiteScore\|[0-9](\\.\|,)[0-9][0-9]\|most.cited\|highly.cited` | 263 | 6.8% |
| Peer-reviewed | `peer.review\|\breviewed\b\|refereed` | 595 | 15.6% |

Table 7. Self-description of scientific journals based on the occurrence of terms in their Twitter profile descriptions

The share of journals on Twitter on the level of indices, publishers and disciplines; the activity of the Twitter accounts; their community engagement ratio and the semantic look into the journals' self-descriptions – all these stylized facts presented in this section were nothing but superficial demonstrations. The purpose here was only to suggest possible venues for future analyses, indicating the potential analytical utility of the dataset.

## Discussion

The present article introduced a dataset of 3,485 Twitter accounts linked to a total sample of almost 14,000 scientific journals. To summarize the descriptive information, they suggest that 25.2% of all the journals indexed in the Web of Science's major indices SCIE, SSCI and AHCI are present on Twitter (as of the first quarter in 2022); that on average, one journal signed up on Twitter every one and a half days between 2007 and 2021; that the average discipline has a quarter of all journals on Twitter, albeit there is strong variation across research fields; that the modal journal Twitter account is inactive, while the median one tweets out 116 messages a year; that community engagement is likewise varied with the average Twitter profile interacting with one distinct user roughly every second Tweet and that hundreds of journals list their impact factor in their Twitter profile description, or otherwise refer to their citation-based impact, while many more use the 'peer-reviewed' label. In a sentence, a key finding is that the publishers, disciplines and journals are highly heterogeneous with regards to their Twitter activities.

The fact that the journals of most disciplines and publishers are not overly active on Twitter does not invalidate the dataset's utility. The Twitter presence of scientific journals has been growing steadily. They already issue almost a million Tweets a year, thereby influencing altmetrics and, possibly, if altmetrics are used in research evaluation, even subsequent funding decisions and career aspects. It is thus nevertheless imperative to have an all-encompassing, generously licensed, freely available dataset at hand.

This is not to say that the dataset is perfect. The Twitter accounts were searched for manually across multiple months. The Twitter search-engine algorithm is opaque, rendering it impossible to know whether the search results were appropriate or whether they are reproducible.[38] Sometimes, it was difficult to discern whether a profile was an 'official' one administered by the journal's editorial team, or whether an account was set up by a private reader without any affiliation to the journal. It is also possible that many journals were overlooked due to the manual searching approach in combination with an unclear, non-transparent Twitter algorithm. A potential remedy against this incompleteness is the Creative Commons licence under which the dataset is distributed; it amounts to an invitation to crowdsource more data via GitHub – everyone is free to reuse the dataset, to suggest additions and to modify it at will. The flaws arising from manual searches and opaque, untransparent algorithms could thus be overcome.

'everyone is free to reuse the dataset, to suggest additions and to modify it at will'

The difficulty of searching is illustrated by the presence of misleading profiles. Some accounts prima facie carried the same name as that of a reputed journal, but once the Twitter feed or the link in the Twitter biography were examined, one could see that the journal behind the account was actually a similarly-named outlet.[39] For example, there was an account named *Veterinary Science* (@VeterinaryScien) belonging to a journal actually named *Veterinary Science & Technology* under what is said to be a predatory publisher, an account not to be mistaken with the SCIE-indexed journal *Veterinary Sciences* which did not have a Twitter presence at the time of data-collection. Another example would be the account *Educational Research &*

*Review* (@educationalre12), carrying the same name as an SSCI-indexed outlet, but which, at a closer look, would be revealed as actually called *International Journal of Education Research and Reviews*. There were multiple other examples of that kind. Predatory publishers have thus already made their way into Twitter to mislead the public about scientific research.[40]

Given this observation, i.e. the fact that some predatory journals boast quasi-fake profiles on Twitter,[41] one cannot but express the practical recommendation that every non-predatory ('serious') journal should register its own account on Twitter before further mischiefs happen. It would be of help if Twitter verified these accounts as official ones, which it tends to do for important or prominent accounts (as marked by a blue badge next to the username).[42] There have been suggestions that Twitter's account-verification service should create a specific category for scientists,[43] such an implementation could be extended to scientific journals as well.

'some predatory journals boast quasi-fake profiles on Twitter'

Other than a verification service executed by Twitter itself, a thorough monitoring of scholarly journals' Twitter profiles will be difficult as there is currently no centralized organization dedicated to such a task. A community-led policing might resemble the current approved listing/block listing approach,[44] perhaps with innovative methods such as the 'web scraping' of official Twitter accounts from trusted publishers' websites. The scholarly publication system does know of efforts like the *Journal Observatory* that recently brought together 'a community of stakeholders that are committed to making journal information more easily accessible'.[45] Its goal is to crowdsource information about meta-scientific structures in a bottom-up manner. Such platforms might create room for yet another data point, this time harbouring links to verified Twitter accounts. There have already been successes, propelling metadata about scientific citations and abstracts into the open domain – namely, I4OC and I4OA, or the *Initiative for Open Citation* and the *Initiative for Open Abstracts*, respectively. Therefore, why not dream about an *Initiative for Open Twitter Profiles*, or I4OT, based on voluntary, bottom-up, crowdsourced commitments from trusted publishers and researchers themselves?

'why not dream about an *Initiative for Open Twitter Profiles*'

Another next step forward would be to conduct in-depth investigations of the Twitter behaviour of journals, such as the extent to which journals act as a 'club' by integrating users into a community-like atmosphere on social media.[46] Overlapping interactions on Twitter could be used as measures for the density of informal scholarly networks, similar, and in addition, to interlocking authorships and editorships.[47] Other analyses could link the present dataset with other journal-level, often crowdsourced information[48] about the journals' peer review policies, their open access approaches, article processing charges, whether they publish Registered Reports and about their editorial boards etc.[49] It is possible that such widely linked data might reveal unexpected patterns within the scientific publication system, opening up further venues for future research. For instance, do the contents of Tweets differ by a journal's Open Science policy? Is greater community engagement associated with higher Altmetric Attention Scores? To what extent do journals reproduce extant citation patterns via their social media postings?[50] How does the composition of an editorial board influence a journal's social media strategy? What would a sentiment analysis reveal about the journals' Tweets regarding the impact factor, and what does the result imply for a 'culture change' that would lead research evaluation away from journal-based metrics? Whatever the practical implications and future research avenues, the speculations confirm the starting premise of this paper: the use of Twitter by scientific journals is not a trivial issue.

**Data accessibility statement**
The dataset and the codes used for the summary statistics are available at GitHub under a Creative Commons licence (CC0): https://github.com/andreaspacher/journals-on-twitter. The GitHub repository can be used, inter alia, for suggesting amendments to the dataset in the 'Issues"-section.

**Abbreviations and Acronyms**
A list of the abbreviations and acronyms used in this and other *Insights* articles can be accessed here – click on the URL below and then select the 'full list of industry A&As' link: http://www.uksg.org/publications#aa.

**Competing interests**
The author has declared no competing interests.

**References**


1. Aravinthan Coomarasamy et al., "Medical Journals and Effective Dissemination of Health Research," *Health Information & Libraries Journal* 18, no. 4 (2001): 183–91, DOI: https://doi.org/10.1046/j.1471-1842.2001.00349.x (accessed 15 November 2022).

2. Kyle M. Fargen et al., "Expanding the Social Media Presence of the *Journal of Neurointerventional Surgery*: Editor's Report," *Journal of NeuroInterventional Surgery* 9, no. 2 (1 February 2017): 215–18, DOI: https://doi.org/10.1136/neurintsurg-2015-012251 (accessed 15 November 2022); Kelly A. Cawcutt et al., "Use of a Coordinated Social Media Strategy to Improve Dissemination of Research and Collect Solutions Related to Workforce Gender Equity," *Journal of Women's Health* 28, no. 6 (2019): 849–62, DOI: https://doi.org/10.1089/jwh.2018.7515 (accessed 15 November 2022); Cassidy R. Sugimoto et al., "Scholarly Use of Social Media and Altmetrics: A Review of the Literature," *Journal of the Association for Information Science and Technology* 68, no. 9 (2017): 2037–62, DOI: https://doi.org/10.1002/asi.23833 (accessed 15 November 2022).

3. Judit Bar-Ilan, Gali Halevi, and Staša Milojević, "Differences between Altmetric Data Sources – A Case Study," *Journal of Altmetrics* 2, no. 1 (2019): 1, DOI: https://doi.org/10.29024/joa.4 (accessed 15 November 2022); José-Luis Ortega, "Altmetrics data providers: A meta-analysis review of the coverage of metrics and publication," *El Profesional de la Información* 29, no. 1 (2020), DOI: https://doi.org/10.3145/epi.2020.ene.07 (accessed 15 November 2022).

4. John Ellis et al., "Recent Trends in the Use of Social Media in Parasitology and the Application of Alternative Metrics," *Current Research in Parasitology & Vector-Borne Diseases* 1 (2021): 10, DOI: https://doi.org/10.1016/j.crpvbd.2021.100013 (accessed 15 November 2022).

5. Nicolás Robinson-García et al., "New Data, New Possibilities: Exploring the Insides of Altmetric.Com," *Profesional de La Información* 23, no. 4 (2014): 359–366, DOI: https://doi.org/10.3145/epi.2014.jul.03 (accessed 15 November 2022).

6. Paul Studenic and Caroline Ospelt, "Do You Tweet?: Trailing the Connection between Altmetric and Research Impact!," *RMD Open* 6, no. e001034 (2020): 2, DOI: https://doi.org/10.1136/rmdopen-2019-001034 (accessed 15 November 2022); Zhichao Fang and Rodrigo Costas, "Studying the Accumulation Velocity of Altmetric Data Tracked by Altmetric.Com," *Scientometrics* 123 (2020): 1083, DOI: https://doi.org/10.1007/s11192-020-03405-9 (accessed 15 November 2022).

7. Zhichao Fang et al., "An Extensive Analysis of the Presence of Altmetric Data for Web of Science Publications across Subject Fields and Research Topics," *Scientometrics* 124, no. 3 (2020): 2519–49, DOI: https://doi.org/10.1007/s11192-020-03564-9 (accessed 15 November 2022).

8. Mike Thelwall, "Measuring Societal Impacts of Research with Altmetrics? Common Problems and Mistakes," *Journal of Economic Surveys* 35, no. 5 (2021): 1302–14, DOI: https://doi.org/10.1111/joes.12381 (accessed 15 November 2022); Hyejin Park and Han Woo Park, "Research Evaluation of Asian Countries Using Altmetrics: Comparing South Korea, Japan, Taiwan, Singapore, and China," *Scientometrics* 117, no. 2 (1 November 2018): 771–88, DOI: https://doi.org/10.1007/s11192-018-2884-6 (accessed 15 November 2022).

9. Grischa Fraumann, "The Values and Limits of Altmetrics," *New Directions for Institutional Research* 2018, no. 178 (2018): 56, DOI: https://doi.org/10.1002/ir.20267 (accessed 24 November 2022).

10. Fraumann, "The Values and Limits of Altmetrics," 56.

11. National Information Standards Organization, "NISO Altmetrics Standards Project White Paper," (NISO, 2014), cited after Lutz Bornmann and Robin Haunschild, "To What Extent Does the Leiden Manifesto Also Apply to Altmetrics? A Discussion of the Manifesto against the Background of Research into Altmetrics," *Online Information Review* 40, no. 4 (8 August 2016): 531, DOI: https://doi.org/10.1108/OIR-09-2015-0314 (accessed 15 November 2022).

12. Cristina García-Villar, "A Critical Review on Altmetrics: Can We Measure the Social Impact Factor?," *Insights into Imaging* 12, no. 1 (2021): 92, DOI: https://doi.org/10.1186/s13244-021-01033-2 (accessed 15 November 2022).

13. Varsha K. Khodiyar, Karen A. Rowlett, and Rebecca N. Lawrence, "Altmetrics as a Means of Assessing Scholarly Output," *Learned Publishing* 27, no. 5 (2014): 31, DOI: https://doi.org/10.1087/20140505 (accessed 15 November 2022).

14. Nicolas Robinson-Garcia et al., "The Unbearable Emptiness of Tweeting—About Journal Articles," *PLoS ONE* 12, no. 8 (2017): e0183551, DOI: https://doi.org/10.1371/journal.pone.0183551 (accessed 15 November 2022).

15. Simon Wakeling et al., "Academic Communities: The Role of Journals and Open-Access Mega-Journals in Scholarly Communication," *Journal of Documentation* 75, no. 1 (2018): 120–39, DOI: https://doi.org/10.1108/JD-05-2018-0067 (accessed 15 November 2022).

16. Saeed-Ul Hassan et al., "Sentiment Analysis of Tweets through Altmetrics: A Machine Learning Approach," *Journal of Information Science* 47, no. 6 (2021): 712–26, DOI: https://doi.org/10.1177/0165551520930917 (accessed 18 November 2022).

17. Ritu Thamman et al., "Roles and Impact of Journal's Social Media Editors," *Circulation: Cardiovascular Quality and Outcomes* 14, no. 11 (2021): e007443, DOI: https://doi.org/10.1161/CIRCOUTCOMES.120.007443 (accessed 18 November 2022).

18. Winnie M Y Chen et al., "The Relationship between Citations, Downloads and Alternative Metrics in Rheumatology Publications: A Bibliometric Study," *Rheumatology* 59, no. 2 (2020): 277–80, DOI: https://doi.org/10.1093/rheumatology/kez163 (accessed 18 November 2022); Stefanie Haustein, Rodrigo Costas, and Vincent Larivière, "Characterizing Social Media Metrics of Scholarly Papers: The Effect of Document Properties and Collaboration Patterns," *PLOS ONE* 10, no. 3 (2015): e0120495, DOI: https://doi.org/10.1371/journal.pone.0120495 (accessed 18 November 2022).

19. A. Gorska et al., "The Role of Social Media in Scholarly Collaboration: An Enabler of International Research Team's Activation?," *Journal of Global Information Technology Management* 23, no. 4 (2020): 273–91, DOI: https://doi.org/10.1080/1097198X.2020.1817684 (accessed 18 November 2022); Qing Ke, Yong-Yeol Ahn, and Cassidy R. Sugimoto, "A Systematic Identification and Analysis of Scientists on Twitter," *PLOS ONE* 12, no. 4 (2017): e0175368, DOI: https://doi.org/10.1371/journal.pone.0175368 (accessed 18 November 2022).

20. Jafar Kolahi et al., "Analysis of Highly Tweeted Dental Journals and Articles: A Science Mapping Approach," *British Dental Journal* 226 (2019): 673–78, DOI: https://doi.org/10.1038/s41415-019-0212-z (accessed 18 November 2022); Houqiang Yu et al., "Who Posts Scientific Tweets? An Investigation into the Productivity, Locations, and Identities of Scientific Tweeters," *Journal of Informetrics* 13, no. 3 (1 August 2019): 841–55, DOI: https://doi.org/10.1016/j.joi.2019.08.001 (accessed 18 November 2022).

21. Maged N. Kamel Boulos and Patricia F. Anderson, "Preliminary Survey of Leading General Medicine Journals' Use of Facebook and Twitter," *Journal of the Canadian Health Libraries* 33, no. 2 (2012): 38–47, DOI: https://doi.org/10.5596/c2012-010 (accessed 18 November 2022); Theodore D. Cosco, "Medical Journals, Impact and Social Media: An Ecological Study of the Twittersphere," *Canadian Medical Association Journal* 187, no. 18 (2015): 1353–57, DOI: https://doi.org/10.1503/cmaj.150976 (accessed 18 November 2022); Brendan S. Kelly et al., "The Use of Twitter by Radiology Journals: An Analysis of Twitter Activity and Impact Factor," *Journal of the American College of Radiology* 13, no. 11 (1 November 2016): 1391–96, DOI: https://doi.org/10.1016/j.jacr.2016.06.041 (accessed 18 November 2022).

22. Aravind Sesagiri Raamkumar et al., "Understanding the Twitter Usage of Humanities and Social Sciences Academic Journals," *Proceedings of the Association for Information Science and Technology* 55, no. 1 (2018): 430–39, DOI: https://doi.org/10.1002/pra2.2018.14505501047 (accessed 18 November 2022); Han Zheng et al., "Social Media Presence of Scholarly Journals," *Journal of the Association for Information Science and Technology* 70, no. 3 (2019): 256–70, DOI: https://doi.org/10.1002/asi.24124 (accessed 18 November 2022).

23. Mark D. Wilkinson et al., "The FAIR Guiding Principles for Scientific Data Management and Stewardship," *Scientific Data* 3, no. 1 (2016): 160018, DOI: https://doi.org/10.1038/sdata.2016.18 (accessed 18 November 2022).

24. Paul McNamara and Kim Usher, "Share or Perish: Social Media and the International Journal of Mental Health Nursing," *International Journal of Mental Health Nursing* 28, no. 4 (2019): 960–70, DOI: https://doi.org/10.1111/inm.12600 (accessed 18 November 2022); R. Jay Widmer et al., "Effect of Promotion via Social Media on Access of Articles in an Academic Medical Journal: A Randomized Controlled Trial," *Academic Medicine* 94, no. 10 (2019): 1546–53, DOI: https://doi.org/10.1097/ACM.0000000000002811 (accessed 18 November 2022).

25. Jose Luis Ortega, "The Presence of Academic Journals on Twitter and Its Relationship with Dissemination (Tweets) and Research Impact (Citations)," *Aslib Journal of Information Management* 69, no. 6 (2017): 674–87, DOI: https://doi.org/10.1108/AJIM-02-2017-0055 (accessed 18 November 2022); Austin Lee Chiang et al., "The Patterns and Impact of Social Media Exposure of Journal Publications in Gastroenterology: Retrospective Cohort Study," *Journal of Medical Internet Research* 23, no. 5 (2021): e25252, DOI: https://doi.org/10.2196/25252 (accessed 18 November 2022).

26. F. O'Kelly et al., "The Effect of Social Media (#SoMe) on Journal Impact Factor and Parental Awareness in Paediatric Urology," *Journal of Pediatric Urology* 13, no. 5 (2017): 513.e1–513.e7, DOI: https://doi.org/10.1016/j.jpurol.2017.03.027 (accessed 18 November 2022); Gregory J. Nason et al., "The Emerging Use of Twitter by Urological Journals," *BJU International* 115, no. 3 (2015): 486–90, DOI: https://doi.org/10.1111/bju.12840 (accessed 18 November 2022).

27. Raamkumar et al., "Understanding the Twitter Usage of Humanities and Social Sciences Academic Journals."

28. V. Wadhwa et al., "Maximizing the Tweet Engagement Rate in Academia: Analysis of the AJNR Twitter Feed," *American Journal of Neuroradiology* 38, no. 10 (2017): 1866–68, DOI: https://doi.org/10.3174/ajnr.A5283 (accessed 18 November 2022).

29. Matthew S. Robbins et al., "@HeadacheJournal Tweets On," *Headache: The Journal of Head and Face Pain* 59, no. 6 (2019): 828–33, DOI: https://doi.org/10.1111/head.13539 (accessed 18 November 2022).

30. Natalie Erskine and Sharief Hendricks, "The Use of Twitter by Medical Journals: Systematic Review of the Literature," *Journal of Medical Internet Research* 23, no. 7 (2021): e26378, DOI: https://doi.org/10.2196/26378 (accessed 18 November 2022); Aarti Sarwal et al., "Twitter Journal Club Impact on Engagement Metrics of the Neurocritical Care Journal," *Neurocritical Care* 37 (2022): 129–39, DOI: https://doi.org/10.1007/s12028-022-01458-7 (accessed 18 November 2022); Douglas P. Lasch and Pamela C. Heaton, "Development of a Visual Abstract Template to Enhance Journal Article Circulation on Social Media," *Journal of the American Pharmacists Association* 62, no. 1 (1 January 2022): 8–9, DOI: https://doi.org/10.1016/j.japh.2021.11.026 (accessed 18 November 2022).

31. ISO, "Rules for the Abbreviation of Title Words and Titles of Publications' (International Organization for Standardization, 1997), DOI: https://www.iso.org/standard/3569.html (accessed 24 November 2022).

32. Marina Bondi, "Dialogicity in Individual and Institutional Scientific Blogs," *Publications* 10, no. 1 (2022): 9, DOI: https://doi.org/10.3390/publications10010009 (accessed 18 November 2022).

33. Mansoor Iqbal, "Twitter Revenue and Usage Statistics (2022)," Business of Apps, 30 June 2022, https://www.businessofapps.com/data/twitter-statistics/ (accessed 18 November 2022).

34. Kolahi et al., "Analysis of Highly Tweeted Dental Journals and Articles."

35. Yunxue Cui, Zhichao Fang, and Xianwen Wang, "Article Promotion on Twitter and Facebook: A Case Study of Cell Journal," *Journal of Information Science*, 2021, 01655515211059772, DOI: https://doi.org/10.1177/01655515211059772 (accessed 18 November 2022).

36. Mike Thelwall, "Altmetric Prevalence in the Social Sciences, Arts and Humanities: Where Are the Online Discussions?," *Journal of Altmetrics* 1, no. 1, (28 November 2018): 3, DOI: https://doi.org/10.29024/joa.6 (accessed 18 November 2022).

37. Paul Capriotti and Laura Ruesja, "How CEOs Use Twitter: A Comparative Analysis of Global and Latin American Companies," *International Journal of Information Management* 39 (2018): 244, DOI: https://doi.org/10.1016/j.ijinfomgt.2018.01.003 (accessed 18 November 2022).

38. Gillespie, "The Relevance of Algorithms."

39. Adam Coates, "Academic Journals' Usernames and the Threat of Fraudulent Accounts on Social Media," *Learned Publishing* 35, no. 2 (2022): 140–48, DOI: https://doi.org/10.1002/leap.1430 (accessed 18 November 2022).

40. Stewart Manley, "Predatory Journals on Trial: Allegations, Responses, and Lessons for Scholarly Publishing from FTC v. OMICS," *Journal of Scholarly Publishing* 50, no. 3 (April 2019): 183–200, DOI: https://doi.org/10.3138/jsp.50.3.02 (accessed 18 November 2022); Foad Nahai, "The Rise of Predatory Journals: What Difference Does It Make?,"

*Aesthetic Surgery Journal* 35, no. 8 (2015): 1043, DOI: https://doi.org/10.1093/asj/sjv085 (accessed 18 November 2022); Jason Roberts, "Predatory Journals: Illegitimate Publishing and Its Threat to All Readers and Authors," *The Journal of Sexual Medicine* 13, no. 12 (1 December 2016): 1831, DOI: https://doi.org/10.1016/j.jsxm.2016.10.008 (accessed 18 November 2022).

41. Hana Beckerle, Rachel Finston, and Benjamin Sussman, "Social Media Debate Position 1: Against the Use of Social Media as a Credible Source of Information," *Internet Reference Services Quarterly* 25, no. 1–2 (2021): 25–35, DOI: https://doi.org/10.1080/10875301.2021.1937438 (accessed 18 November 2022); Sangho Lee and Jong Kim, "Early Filtering of Ephemeral Malicious Accounts on Twitter," *Computer Communications* 54 (2014): 48–57, DOI: https://doi.org/10.1016/j.comcom.2014.08.006 (accessed 18 November 2022).
42. Indraneil Paul et al., "Elites Tweet? Characterizing the Twitter Verified User Network," in *2019 IEEE 35th International Conference on Data Engineering Workshops (ICDEW)*, 2019, 278–85, DOI: https://doi.org/10.1109/ICDEW.2019.00006 (accessed 18 November 2022).
43. Cássio Cardoso Pereira, "Twitter: A Blue Badge for Scientists?," *Nature* 605, no. 7908 (2022): 30, DOI: https://doi.org/10.1038/d41586-022-01188-y (accessed 18 November 2022).
44. Jaime A. Teixeira da Silva and Panagiotis Tsigaris, "What Value Do Journal Whitelists and Blacklists Have in Academia?," *The Journal of Academic Librarianship* 44, no. 6 (1 November 2018): 781–92, DOI: https://doi.org/10.1016/j.acalib.2018.09.017 (accessed 18 November 2022); Michaela Strinzel et al., "Blacklists and Whitelists To Tackle Predatory Publishing: A Cross-Sectional Comparison and Thematic Analysis," *mBio* 10, no. 3 (2019): e00411-19, DOI: https://doi.org/10.1128/mBio.00411-19 (accessed 18 November 2022).
45. Ludo Waltman, "Journal Observatory: Toward Systematic High-Quality Information on Scientific Journals," 7, DOI: https://doi.org/10.5281/zenodo.6352978 (accessed 18 November 2022).
46. Jason Potts et al., "A Journal Is a Club: A New Economic Model for Scholarly Publishing," *Prometheus* 35, no. 1 (2017): 75–92, DOI: https://doi.org/10.1080/08109028.2017.1386949 (accessed 18 November 2022); John Hartley et al., "Do We Need to Move from Communication Technology to User Community? A New Economic Model of the Journal as a Club," *Learned Publishing* 32, no. 1 (2019): 27–35, DOI: https://doi.org/10.1002/leap.1228 (accessed 18 November 2022).
47. Alberto Baccini et al., "Intellectual and Social Similarity among Scholarly Journals: An Exploratory Comparison of the Networks of Editors, Authors and Co-Citations," *Quantitative Science Studies* 1, no. 1 (2019): 277–89, DOI: https://doi.org/10.1162/qss_a_00006 (accessed 18 November 2022).
48. Serge Horbach, Wytske Hepkema, and Willem Halffman, "Hundreds of Journals' Editorial Practices Captured in Database," *Nature* 582, no. 7810 (2020): 32–32, DOI: https://doi.org/10.1038/d41586-020-01628-7 (accessed 18 November 2022).
49. Heather Morrison et al., "Open Access Article Processing Charges: DOAJ Survey May 2014," *Publications* 3, no. 1 (2015): 1–16, DOI: https://doi.org/10.3390/publications3010001 (accessed 18 November 2022); Andreas Pacher, Tamara Heck, and Kerstin Schoch, "Open Editors: A Dataset of Scholarly Journals' Editorial Board Positions," *SocArXiV*, 2021, DOI: https://doi.org/10.31235/osf.io/jvzq7 (accessed 18 November 2022); Amanda Kay Montoya, William Leo Donald Krenzer, and Jessica Louise Fossum, "Opening the Door to Registered Reports: Census of Journals Publishing Registered Reports (2013–2020)," *Collabra: Psychology* 7, no. 1 (2021): 24404, DOI: https://doi.org/10.1525/collabra.24404 (accessed 18 November 2022); Dietmar Wolfram et al., "Open Peer Review: Promoting Transparency in Open Science," *Scientometrics* 125, no. 2 (2020): 1033–51, DOI: https://doi.org/10.1007/s11192-020-03488-4 (accessed 18 November 2022); Kyle Siler and Koen Frenken, "The Pricing of Open Access Journals: Diverse Niches and Sources of Value in Academic Publishing," *Quantitative Science Studies* 1, no. 1 (1 February 2020): 28–59, DOI: https://doi.org/10.1162/qss_a_00016 (accessed 18 November 2022).
50. Andreas Nishikawa-Pacher, "A Typology of Research Discovery Tools," *Journal of Information Science*, 2021, 01655515211040654, DOI: https://doi.org/10.1177/01655515211040654 (accessed 18 November 2022).

Corresponding author:
Andreas Nishikawa-Pacher
Knowledge Manager
TU Wien
Bibliothek
Vienna, AT
E-mail: andreas.pacher@tuwien.ac.at
ORCID ID: https://orcid.org/0000-0001-5149-6294

To cite this article:
Nishikawa-Pacher A, "The Twitter accounts of scientific journals: a dataset," *Insights*, 2023, 36: 1, 1–15; DOI: https://doi.org/10.1629/uksg.593

Submitted on 09 June 2022 Accepted on 22 July 2022 Published on 10 January 2023

Published by UKSG in association with Ubiquity Press.