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ALEXIS MADRIGAL - Alexis Madrigal is a senior editor at The Atlantic. He's the author of Powering the Dream: The History and Promise of Green Technology. More ALL POSTS | EMAIL MADRIGAL | RSS FEED | Follow @alexismadrigal 84.1K foll

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'Highly Tweeted Articles Were 11 Times More Likely to Be Highly Cited'

JAN 13 2012, 9:05 AM ET 6 +1 8 f Recommend Confirm

We have a new study for those who argue that social media, whatever its virtues may be, doesn't correlate very well with the real world. It comes from the Journal of Medical Internet Research and is based on a three-year study of that journal's articles' relative success in the Twitter and academic worlds.

The bottom line is simple: articles that many people tweeted about were 11 times more likely to be highly cited than those who few people tweeted about. Its implications are even more interesting. It generally takes months and years for papers to be cited by other scientific publications. Thus, on the day an article comes out, it would seem to be difficult to tell whether it will have a real impact on a given field. However, because the majority of tweets about journal articles occur within the first two days of publication, we now have an early signal about which research is likely to be significant.

The authors of the article suggest a new metric for scientific publishing they call the twimpact factor, after the standard impact factor:

Tweets can predict highly cited articles within the first 3 days of article publication. Social media activity either increases citations or reflects the underlying qualities of the article that also predict citations, but the true use of these metrics is to measure the distinct concept of social impact. Social impact measures based on tweets are proposed to complement traditional citation metrics. The proposed twimpact factor may be a useful and timely metric to measure uptake of research findings and to filter research findings resonating with the public in real time.

Now, it's certainly possible that not all journals will be subject to these same rules. This journal, in particular, has 'Internet' in the title, so its authors, readers, and tweeters may be more Twitter-savvy than most. However, if anything like this kind of correlation is found in other fields, a hidden value of Twitter's network will be revealed. Want to peer a year or two into the future of a scientific field? Fire up Tweetie and start searching.

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RiverVox 4 days ago

My concern is that the most tweeted articles by the public would be the most sensational and "cool" rather than those which actually take longer to digest and might have deeper impact on their respective fields. Not to mention that the negative or "no correlation" type of findings would be under-reported.

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Eva14 3 days ago in reply to RiverVox

Obviously there's a lot of lowest-common-denominator stuff on Twitter (see the trending topics on pretty much any day of the week) but I've been really impressed by its ability to bring great work to the fore. I find useful, thoughtful, and straight enjoyable things to read on the Twitter all the time. These findings don't really surprise me, to be honest.

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rick jones 4 days ago

From the study:

"Correlation is not causation, and it harder to decide whether extra citations are a result of the social media buzz, or whether it is the underlying quality of an article or newsworthiness that drives both the buzz and the citations—it is likely a combination of both. It is not inconceivable that exposure on Twitter leads to a few extra citations: social media are often used by scientists "to catch useful citations...scholars might not otherwise be exposed to" [24], and many scientists see the value of Twitter in being a constant live literature alert service crowdsourced from peers. Tweets contain hyperlinks to articles, and hyperlinks may affect the ranking in search engines such as Google and increase the visibility for researchers."

Indeed. One trusts this won't become a case of quantity having a quality all its own.

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Matthias L. Jugel 4 days ago

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The authors paper is now declared a manuscript (now its corrected) after some glitches in the research appeared and it seems to be biased. Additionally, TWIMPACT has already been proposed as an impact factor for users in the twitter sphere years ago, see twimpact.com

<http://scholarlykitchen.sspnet...>

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Gunther Eysenbach 1 day ago in reply to Matthias L. Jugel

It is incorrect that the paper has been "declared a manuscript". It is a published manuscript. It is also incorrect that "glitches in the research appeared ". All we did in the correction statement was moving the cited references from the end of the article into an extra file, to avoid skewing the impact factor of the journal (<http://www.jmir.org/2012/1/e7/...> This is a presentation issue and has absolutely no bearing on the validity of the research. I also don't know why Mr Junker throws out that "it seems to be biased". Speaking of bias, twimpact.com is a social media analytics company (Mr Jugel is its CEO), which has nothing to do with the article, the proposed impact factor, or the author of the research (Eysenbach = myself). If I understand this correctly, his company calculates user relevance based on retweets. This has absolutely nothing to do with the twimpact factor we proposed, which is merely the number of times a scientific article is mentioned on Twitter within the first week of publication, which we have shown is somewhat predictive for the number of citations received by this article..

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