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You've tweeted about your hot new paper! Don't expect many clicks

By [Jeffrey Brainard](#) | Feb. 12, 2021 , 11:20 AM

Seeking to spread the word about a hot new study, some scientists take to Twitter to share a link. But Twitter links rarely attract eyeballs to papers, a recent study finds.

A review of 1.1 million Twitter links to scholarly articles found that **half drew no clicks**, and an additional 22% attracted just one or two. Only about 10% of the links received more than 10 clicks, according to the 23 January study in the *Journal of the Association for Information Science and Technology*.

Such meager click rates are not unusual, other studies of Twitter have found. Tweets highlighting stories in media outlets don't fare much better, on average. But although most research papers included in the new study prompted no clicks, a small minority went viral: An article about **freshwater fish contaminated** by radioactive cesium released by the 2011 Fukushima nuclear disaster received more than 25,000.

The Twitter study broke new ground by being one of the first to measure how users of the social media platform respond to tweeted scientific papers by using a metric other than clicks on the like or retweet buttons. Other research had indicated that because of

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Twitter's limit of 242 characters per tweet, many tweets about papers display only its title, and as a result a like or retweet can represent just a fleeting gesture of interest based on limited information. In contrast, clicking on a link provides a sign—although not proof—that someone actually read the paper, say the authors of the new study, which was led by Zhichao Fang of Leiden University.

Because of technical issues, the researchers could only examine links to papers published from 2012 to 2017. So, they couldn't access data about whether clicks have increased since the beginning of the COVID-19 pandemic, during which many researchers have turned to Twitter to share and comment on papers.

Another data limitation: The team only examined a subset of all links, those created by the bit.ly link-shortening service, which allows social media users to compress longer URLs. About 15% of all tweets during the study period contained bit.ly links. (Twitter introduced its own link-shortening feature in 2017 but does not make data about clicks on those links widely available.)

Even with such limitations, Fang's team found that even the hottest tweets, as measured by clicks and likes, don't appear to have much impact on subsequent scholarship. Papers mentioned in popular tweets, for example, didn't get appreciably more citations. That may reflect that tweets are typically posted quickly with little deliberation, whereas citations are often chosen after careful consideration, other research indicates. "Science and social media conform to two different spaces of engagement," says Rodrigo Costas Comesana of Leiden University, who co-authored the new study. "Each of them has its own rules."

Costas Comesana and Fang say that if Twitter was willing to provide them with more data on links, they could help them better understand why scientists—and nonscientists—click on and engage with some tweeted papers but not others. They wonder, for example, whether the prominence of the tweeter, or the journal where the paper is published, makes a difference. (Using existing data, the research team couldn't determine how many scientists clicked on links.)

The new study adds to understanding of how science is communicated on Twitter, says Nicolás Robinson-García of the University of Granada, who was not involved in the study. He and colleagues published [a separate analysis](#) in 2017 that found it was

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“impossible” to use just the content of a Tweet to “infer that there was any kind of engagement with the paper itself,” he noted in an email. In contrast, he wrote, examining link clicks can give a clearer, but not complete, picture of what users are doing.

Robinson-García’s own work suggests Twitter is not an effective medium for catalyzing meaningful, sustained consideration of new findings. A 2017 analysis he conducted with colleagues examined the content of 8247 tweets referencing 4358 articles published in dentistry journals. They found that many tweets were simply retweets or duplicates sent from the same account, some likely by robots. Just 6% of the tweets, which came from only 1% of the studied Twitter accounts, showed evidence that the tweeter had read the paper, as indicated by comments in the tweet about the article’s conclusion or other aspects.

It would be interesting, they wrote, “to identify the tweets and accounts that are truly informative, relevant, and indicative of reception and discussion of research.”

Posted in: [Scientific Community](#)
doi:10.1126/science.abh0573



Jeffrey Brainard

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Table of Contents

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Pandemic hit academic mothers hard, data show

EVOLUTION

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