#creatorGate: The influence of controversial science, culture, and norms on altmetric results.

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A recent article (Liu, Xiong, Xiong & Huangthe, 2015) published in the open access journal PLoS One was retracted due in part because of social media activity on Twitter questioning the validity of the research because of controversial language used to describe the design of the human hand. The retraction occurred three months after the article was published; it was discovered and noted on Twitter that the authors had referred to the “Creator” several times in the paper when discussing the design of the human hand. The controversy grew, as criticisms for PLoS One, the peer review process, and those opposed to (and supportive of) the combination of science and religion flooded online social media platforms. Editors at PLoS One (The PLOS ONE Staff, 2016) acted quickly and subsequently retracted the publication, stating on the article webpage that after further evaluation there were “concerns with the scientific rationale, presentation and language, which were not adequately addressed during peer review.”

The PLoS One statement speaks to the failure of the peer review process to point out and challenge the language, presentation, and scientific rationale of the work. This failure speaks to the scientific process and has serious consequences for the academic reward system. As researchers continue to face greater pressures from universities, organizations, and private funding to conduct research that is both accessible to a wider audience and produces some form of societal impact, there is additional pressure for authors stemming from adhering to the norms of the academic reward system to produce research rapidly and to publish in large, reputable journals. That pressure, however, is also felt by the journals, as they are inundated with more submissions and struggle to identify appropriate peer review participants. This cycle can result in instances that result in controversies such as this example, leading to public outcry and further distrust of the mechanisms of science.

To examine this phenomenon, the Twitter Streaming API was used to collect 5,644 tweets and the Twitter Search API was used to collect profile information from 4,836 users who tweeted about this phenomenon. Tweets were retrieved from Twitter using a search query in which tweets containing at least one of three hashtags: #creatorGate, #PLOSone, and #handofgod were downloaded, stored in a relational database, and subsequently identified by the authors as being related to the creatorGate issue. Two codebooks were designed using an inductive thematic approach to analyze both tweets and profile information, respectively. The tweets were coded based on eight categories and the Twitter profiles of the users who were discovered to tweet about this phenomenon were coded first as either person, organization, or unknown, and then further coded to determine how the user represented themselves.
This analysis sheds light on the way in which Twitter users are discussing the wider concerns facing the public impressions of the open science movement, the peer review process, and Science in general. In addition, it highlights the potential for other factors besides scientific merit that may lead to altmetric events, speaking to the criticisms on the use of altmetric events as indicators of societal impact of research. As of June 14, 2016 this retracted article had an altmetric score of 1886, which would place it in the top 10 of altmetric scores from 2015. Clearly this article has been discussed quite often on social media, yet it has been retracted. Questions for altmetric researchers could be: (1) What type of impact does this research have on society and what do these altmetric counts actually indicate? and (2) Is this representative of societal impact and should the authors of this paper represent these altmetric scores on their curriculum vitae?

References
