

## Media Reviews

### Social Media Trends in Medical History

#### Tweets as Sources in the History of Contemporary Science

What was once the ultimate in the fleeting world of ephemera, the tweet, is now being archived by the most august library in the land. The Library of Congress is archiving about 500 million tweets per day, up from 140 million per day just two years ago. As Twitter processes 58 million tweets per day, this is still only about ten times the number of tweets that continue to be tweeted every day. But as of January 2013, the Library of Congress had archived a total of 170 billion tweets in 133.2 terabytes. A more extensive textual repository of ephemera related to today's world – a treasure trove for Twitterstorians – can scarcely be imagined.

That said, I'm not entirely sure what exactly a Twitterstorian is. I don't tweet, I don't have a Twitter account, I don't follow anyone, and no one follows me. (I believe that in technology-speak this would classify me as a 'late adopter'.) But I *have* found Twitter to be a very useful source in writing the history of contemporary science. For the past decade, I have been following an emerging field of biological engineering known as 'synthetic biology'. While I don't live-tweet conferences myself, I complement my historical fieldwork by following the conference Twitter feed. Twitter has been remarkably useful to me in writing this history, serving as a 'silent spring' of information that has enabled me to learn more in real time about events and conversations not visible or audible even while sitting in the conference room itself (about activists outside a meeting who were distributing an open letter of protest, eg.). I have even used tweets as sources in my published work to highlight certain dynamics of the conference and the community. At one recent conference at Stanford, the public presentation of a paper that was not being simultaneously webcast led to a series of fascinating tweets debating the nature of disclosure, which made for the perfect beginning of a paper on intellectual property issues.<sup>1</sup>

Twitter has thus been very useful to me in my own scholarly path, figuring out how to fit together archival work with historical fieldwork when writing the history of contemporary science. When a historian cites a textual source, it is recognisable as history. But when a historian cites something that happened in their presence, and the only textual remnant of it is in their own notes, the status of that kind of important historical fieldwork remains less established. Twitter thus provides a new kind of 'archive' available to all and sundry, and which exists as an independent and complementary textual source for other historians to use. Being able to refer to a tweet as a source simply makes our jobs as historians that much easier. Moreover, unlike questions that might emerge about the use of some kinds of information encountered while conducting historical fieldwork – what about something overheard during a coffee break? – public tweets are eminently public. The use of a conference hashtag is a clear marker of the intent to distribute one's tweet to as broad an interested audience as possible. Indeed, a large plurality of Twitter users – 40% – don't actually tweet themselves but only read what others tweet. The public function of tweets – with their many varied and real-world consequences, as detailed in our daily newspapers – seems today to be clearly established.

<sup>1</sup> Luis Campos, 'The BioBrick™ Road', *Biosocieties*, 7.2 (2012), 115–39.

But I think this shifting spectrum of private and public utterances is nevertheless something worth thinking more carefully about. Some utterances (papers delivered at conferences, off-hand remarks) used to disappear into the past. It is all too easy to forget that tweets, too, used to disappear into the ether. In a most remarkable shift, that which was ephemeral and would disappear without a trace into the past is becoming fixed. With tweets being ‘published’ by our national library, that which was once considered private is now becoming public in the most public of ways. In many senses, this shift from the ephemeral to the archival is not new. We are used to archives collecting ephemera – flyers, pamphlets, and other things that no one expected would ever be saved for the future – and historians have often found these to be rich and useful sources. We now simply have the means whereby even the most evanescent and briefest digital communications – tweets – will be preserved indefinitely.

But not everything is uttered, written or tweeted with an eye to future archival storage, and nor would everyone want everything to be. An earlier generation would have expected that though its ephemera were public, they were also generally ephemeral. Some things might happen to be preserved in an archive, but certainly not everything. What place is there for the expectation that ephemera remain ephemeral? Is there an ethics of the ephemeral? If it is our historical duty to preserve and interpret the past, is there also an ethical duty to permit some things to pass? (As Ingrid Bergman once said, ‘Happiness is good health and a bad memory’, suggesting perhaps that historians are the unhappiest people in the world.) Is this conversion of the ephemeral into the archival a useful new research method, or is it one likely to cause personal affront – as when Facebook upgraded me to Timeline against my will and resurrected all my past posts, making them searchable to all and sundry?

How to deal with the question of ephemera and the archive is not a new question, but I think the shift from tweets being ephemeral to tweets being archived, searchable, public sources, may raise these questions in a new form. It is also worth bearing in mind how we historians are becoming subject to the same methods of twittering reportage that we might choose to use to study our historical actors, and what implications this might have for our own practice of scholarship. To make my point here about Twitter, I have searched Facebook’s Timeline to do exactly what I have just complained about, and note that our colleague Betty Smocovitis wrote on Facebook this past June:

Wow. Weird. People are coming up and conversing about the talk I gave yesterday, never having attended it. Apparently, a bunch of people were tweeting!

The issue, therefore, seems to be one of expectations. How many people are in the room? How will they hear about your talk? What if someone took notes from your talk and shared it with others? What if someone recorded your talk without your knowledge and shared it? Tweeting seems to fit into these longstanding practices, whatever we might think of them. But things seem to change still further when tweets are archived, and when they can be searched and used by anyone anywhere – not simply by anyone in the room who happens to be there at the moment. The Library of Congress is thus in the middle of pulling a ‘Timeline’ moment for all Twitter users and for all scholars whose talks might be mentioned, discussed or live-tweeted. We are all potentially Twitterfied, whether or not we are Twitterstorians.

And while the Library of Congress amasses a tremendous cacophony of silent tweets, we should remember that the European Union has recently considered whether one has a ‘right to be forgotten’ in digital media. The recent Edward Snowden revelations regarding

the NSA's archiving of all of our private emails, telephone calls and Skype conversations no matter where we live in the world highlights this question in perhaps even starker forms.

I find myself thus in the awkward position of being both on the cutting-edge of using tweets as sources in the history of science, and as a technological curmudgeon at the same time. Not having a Twitter account myself, I am nevertheless concerned about shifting practices that – while they are a boon to the historian – may also lead to troubling losses of privacy or to challenging questions about liminal spaces such as the conference room. Is there still a space to workshop one's ideas before they become distributed in fixed and permanent form, through tweets not of your own making? (Twitter enables all the same risks of mischaracterisation as other more traditional forms of audition, only with a broader and permanent reach.)

The question of whether tweets are public and whether tweets are sources is thus inherently related to the question of how tweets are like and not like publications – and to whether a conference paper, or a roundtable contribution, is something that should be shared beyond the doors of the room. I have, after all, edited this very piece – initially given as a conference presentation – prior to its publication in the form in which you are now reading it. But soon you will be able to go back and recover the entire session's Twitter feed for yourself. Which is the more accessible or better text? For which purposes?

Let me conclude these musings by finishing with a few final thoughts from my world of practice. There seems to be something appropriately reflexive in the case of my own Twitter-inclusive research on synthetic biology, in that Twitter is but the latest mechanism that synthetic biologists have used to share their thoughts with each other in digital form. In the early years of the field, around 2005, one collective dream was to have all laboratory notes, discussion notes and data, available online through what was called OpenWetWare. This radical kind of open-source documentation of the field matched the ethos of one of the founders of synthetic biology, who routinely included a signature at the end of his email saying that any emails sent to him could be made publicly available, and also matched one of the initial proposed names for the field. It has thus seemed only appropriate and eminently suitable that Twitter – founded in 2006 and 'built on open source software, from the back-end to the front-end' – be used to study the field that even as late as 2005 was being called 'open source biology'. In sum, I would tweet:

A liminal moment. Twitter now central for history, but resurrects old question about ephemera & archives that far exceed 140-character limit.

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### **Some Comments on 'Social Media Trends in Medical History'**

In what follows I wish to briefly discuss some ideas that came to me while reading the seven papers in the series 'Social Media Trends in Medical History'. It would be impossible, in the space allotted to me, to adequately discuss the majority of the insights and experiences the authors offer. I thus urge interested readers to engage directly with the original papers.