

Comment

INSIGHTS ON THE FUTURE OF SCIENCE JOURNALISM

Has blogging changed science writing?

Alice Bell

ABSTRACT: Rather than crystal ball gazing into the future of science journalism, this essay invites critical discussion over how much, if at all, has the web changed the way science is discussed in public? The short answer is no, or only slightly. Drawing on basic tenants of the social studies of technology, I argue there have always been more options than action when it comes to innovation in science writing. This essay takes three stories of the impact of the web on science journalism which I believe to be overstated, as well as three areas where I do think we can see change. None are clear-cut, as my chief aim here is to argue that our future is up for debate.

Introduction

There is an oft-made joke that the answers to questions posed by news headlines are always, when take time to consider them, a simple ‘no’. Moreover, posing of these sorts of deliberately provocative rhetorical questions has increased in the era of ‘linkbait’¹ news production. This was parodied by Martin Robbins² on the Guardian website, in the sub-heading of a spoof science article:

I will make a fairly obvious pun about the subject matter before posing an inane question I have no intention of really answering: is this an important scientific finding?

Here is my headline question, for which I think the answer is, roughly, no: Has blogging changed science communication? My negativity is not rooted in simple contraryism, but rather based on the basic tenants of the social history of technology (e.g. MacKenzie & Wajcman³); a sense that groups of people not only made the web and associated online media technologies, but such groups, and others, have gone on to collaborate, disagree, inspire and challenge each other to build the set of intersecting technologies, cultural norms and communities which we now associate with online communication. Moreover, people choose from – and often ignore – a range of innovations. The history of technology is as much a story of what innovations we haven’t taken up as those we have.⁴

The various technologies of online communication, and cultural changes surrounding them, mean we can do new things in science communication, but there have always been more options than activity when it comes to innovation in science communication. There is a big difference between normative ideas of what people want or fear in terms of science online, and what is actually happening. Although the normative view should not be discounted – our hopes, nightmares and other depictions about the future of technology are part of the processes that shape our contemporary use of them (c.f. Brown et al.⁵) – it is important to remember that these are open for debate. The future not only remains to be seen, but to draw on the more liberating aspects of the sociology of technology, remains to be chosen too.

With an eye on increasing discussion, I offer three stories of the impact of the web on science communication which I believe to be overstated, and posit three areas where I do think we can see change.

Considering journagers vs bloggialists

Perhaps the most simplistic story about online science writing is the idea that bloggers and science journalists are in conflict. As many writers have argued, these two identities are so intertwined it’s meaningless to talk of

one or the other (e.g. Yong⁶). Indeed, it seems that for almost any definition which attempts to delineate the two, some counter example can readily be found. Perhaps you think journalists are edited, or charge for content, are independent from mainstream media brands, or work for free? See then the Guardian's *Notes and Theories*,⁷ an edited blog housed on mainstream media site, which pays contributors.

That said, to discount the idea of journalists versus bloggers entirely is simplistic too. There are, for some at least, cultural divides and distinct identities at work. For all that many people feel they are both a blogger and a journalist, others identify strongly as one or the other. This not just a matter of journalists desperately holding to a traditionally defined space for themselves, there is a thread within blogging (especially science blogging one might argue) that aims to critique and/or subvert professional journalism, and so takes its not-a-journalist identity very seriously. A post from the pseudonymous 'Gimpy'⁸ calling for bloggers to 'say no' to working within mainstream media brands exemplifies this neatly. Similarly, from my own in-progress research on people who blog about the brain:

we've actively resisted being part of any formal network despite frequent offers to 'buy us out', 'brand us' or 'sponsor us'. If we're part of anything, we're part of an informal online network of bloggers, science writers and the like – now mainly defined by Twitter – although it existed previously simply through being fellow bloggers.

(Anon blogger, 2011, personal communication).

Anonymity doesn't destroy trust

Another story of online science to be wary of is idea that the anonymity/ pseudonymity of some writers makes them unreliable. A deliberately obscured trail of traceable identity may de-anchor writers from some traditional ways we trace trust, but this is not without precedent. Print journalism may be published without a named author, or with one author when in fact several writers, researcher and editors were involved in its composition. We might also argue that forms of anonymity of online communication sit well with a certain idea of science, especially the critique of reliance on symbols of expertise. The HolfordWatch blog includes a good example of this, from its 'about us' page:

*We're not over-sharing on biographical details – this is not because we subscribe to a PoMo idea that individual credit for creative work is bourgeois but because we find that it distracts from a critique of the science and ideas. Ultimately, it doesn't matter whether we are the pride of our mothers and the despair of our schoolfriends because we are so laden down with academic honours that we can't get our heads through a standard doorway – or if we don't have a 25m swimming certificate between us. It's the ideas, science and analysis that count.*⁹

I would argue that presented in this way, the lack of information provided about the identities of HolfordWatch fits into a particular sense of scientific discourse which aims to detach a sense of personal identity, one that reaches back to the 17th century (c.f. Shapin & Schaffer¹⁰). Arguably, this is a rather naïve sense of scientific discourse, and as the long thread of comments (181 at last count) under HolfordWatch's 'about us' statement demonstrates, it is not without its problems. The HolfordWatch writers do seem to still see a need to anchor themselves within a community of trust symbols: the statement above is preceded with links to 'nice things' people have said about them.

Indeed social media can be very powerful in the building of trust. The various characters behind HolfordWatch all engage in discussion in the comment function in the blog. They also use twitter, and through this readers can gradually learn a bit about where they come from culturally, politically and intellectually, if not personal details which would actually identify them. A better example is perhaps another pseudonymous blogger, Scicurious¹¹. I don't know her real name, or where she works, and she rather playfully references ideas of identity with the image of a brain scan where others might put a picture of their face (e.g. on a twitter profile). However, from reading her online outputs, I can guess she is a post-doc in the USA in an area of neuroscience research. I know she loves coffee, that she gets tired at work and wants both it and on occasion chocolate. I know some of what she's reading from links she posts, and some of the people she's talking to from conversations on social media too. I see other people trust her; ask her questions and share her work. I can talk to her too via these forums, and she'll reply. Thus, there are ways in which I can build a sense of Scicurious as trustworthy because she is accessible

and, in respects to aspects of her identity which wouldn't make her individually identifiable, actually very open despite (or perhaps because) of her pseudonymity.

Hypertext hasn't transformed science writing

Hypertext hasn't transformed science writing. Or at least it hasn't transformed it as much as it could. This isn't necessarily a criticism. There have always been more options than actions when it comes to science writing. The link is a form of rhetoric like any other form of communication.¹² Placing one, thinking about what you'll link to, how and when, is arguably part of the craft of modern writing. However, it is underused. Content management systems many professional writer work with can be hard to work, constraining a writer's hypertextual expression. Links change and so become broken, and writers do not have time to keep track. A lot of text online has to also be available in print. When it comes to online content, are used to increase search engine optimization, automatically generated self-promotion or even paid-for links to external advertisers. Writers criticized for not linking often also ask the simple question 'link to what: a paywalled document no one will understand?' echoing further questions in the complexity of so-called 'open access' (i.e. that simply being able to download information is only one step).

In a recent study of BBC science coverage conducted for the BBC Trust¹³ we noticed it was rare that the broadcast news items ever explicitly directed viewers to even the BBC website for further information about science items. In the online news, there were automatically generated links to other BBC reports on similar topics, but only 21 items (16%) included links to other BBC reports within the body of the text. However, almost 90% of online news items included at least one link to the source of the story, such as the laboratory where the research was carried out or the journal where it was published, but 70 items (54%) included no links to other external sources. So, over half of online news items the reader is not offered opportunities to find further information relevant to a science story other than that provided by the source.¹⁴

Blogs in particular could offer the opportunity of linking to other sources and, by enabling journalists to "show their working", may help make visible the process of reporting too. Some of the BBC reporters' blogs we looked at made use of this, particularly those of Jonathan Amos and Richard Black, but only one of Tom Feilden's blogposts in our sample period contained any in-text links to sites other than the Today programme. Blogs also allow journalists to post longer quotes from sources than the edited versions included in broadcast reports, include links to other sources of information that the journalist has used to build their story, or track unfolding stories (as with the *Guardian's* Science Story Tracker, see Jha¹⁵ for description of this), but we found few examples of this type of usage in the BBC blogs we looked at.¹⁶

What has, perhaps, changed with the web?

To temper some of the cynicism above, I want to end by briefly suggesting three ways in which I think the web may have fostered change in science journalism.

I think we can see signs of a greater reflexivity in science journalism. By reflexivity I mean we can see science writers engaging in critique and debate about the meanings and methods of their work. The impact of the bad science blogging community – a set of well networked bloggers inspired by the work of Ben Goldacre and especially critical of the way the mass media covers science – is interesting here.¹⁷ Martin Robbins, who started off as part of the bad science community with his own personal blog but now posts on the Guardian science blogging network, makes for a particularly good case study here (for more on this network, in particular the way it aims to bring in outside voices, see Garber¹⁸). There is¹⁹ the parody I started this essay with which according to Robbins (personal communication) accounted for 15% of traffic to the site for 2 days; about a quarter million hits per day. Also, because his twitter feed are relayed on to the Guardian site, he can place comments to position a critique of Guardian content on their own site²⁰.

This is not to argue that such critique is always useful, valid or listened to. Just that it's there. It's also worth noting that much of this sort of critique is of the kind that both the scientific community and media producers have made for years. It is just more overtly embedded alongside the work itself now, and arguably more public and more networked.

Another powerful example of such reflexivity is the US-based EmbargoWatch blog²¹, run by science journalist and science writing tutor, Ivan Oransky. This tracks interesting examples of embargo policies

in mainly science journalism. Its audience is generally quite limited, but has accrued a small regular audience of readers working in and around science journalism. What makes this blog possible is my second way in which I think the web has fostered change in science journalism, the ability to connect with niche audiences. I could have put this in the list of points that are overused. It's certainly a well-trodden story of online communication (e.g. Anderson²²), but I do think it's important with respect to science communication. To summarise the issue if you have missed it, in the era of 'mass media' you had to provide for what most people wanted (or most people would be happy with), because it cost a lot to produce a newspaper, you had to please as many as possible. Now search technologies put even the obscure at your fingertips and viral 'passing on' culture allows unexpected connections between users and products, niche products can reach out to enough people to cover costs, a bulk of culture and economy is shifting to 'a long tail'. As Ivan Oransky put it in an interview recently (personal communication) blogging 'lowers the activation energy of the story'. Aside from reflexive pieces like Oransky's blogging, it also means that all the science news content which had, for years, been written by science journalists but knocked off print editions by bigger stories still has a home online. Another good example of this is the way citizen science projects which tap into the small amount of spare time of a lot of people and/ or the enthusiasm of a small percentage of the world have (e.g. Galaxy Zoo²³).

There is arguably a negative side to this capacity for niche communication, as it can also allow audiences to simply keep to people like themselves. With data hard to develop around such slippery issues to measure, such debates are likely to be ongoing. Brian Trench put it well in 2008 when he argued that the way online communication may encourage both connection and yet also balkanisation within sciences is just one of the forms many paradoxes.²⁴ More discernable than broad-brush discussions of whether the internet causes social cohesion or alienation, are the perceptions and views science bloggers themselves hold about issue, such as debates over whether science blogging is or is not an 'echochamber' and/ or manages to do 'public engagement'.^{25,26} Or, as geologist/blogger Chris Rowan put it: 'The very fact that our echo chamber is on the internet makes it more than a little leaky'.²⁷ Rowan's sense of leakiness helps point us towards my final point here, the way in which online communication maybe challenges our idea of what we mean by the public. For many, the big message of science communication used to be 'know your audience', target niche publics rather than the amorphous and largely imaginary idea of 'the public'. However, with a public website, much as you may tailor content, someone unexpected might always stumble across you. That challenges science communications to make their text as accessible as possible to the interested party they simply didn't know about. If they don't, they risk only reaching the people they already knew were interested, cutting themselves off from the possibility of more. Maybe that vague rhetorical imaginary idea of 'the public' is not so bad as it once seems?

Conclude

Science online is a large cultural space: aspects of the above will be more or less true depending on where you look. My general point is that blogging is part of a longer and larger story of changes, constantly contestable. I have considered the blogging vs journalism, ideas of trust in anonymity, hypertext for science storytelling, reflexivity in science journalism, niche audiences and the way vague definition of 'the public' may actually be useful. I have only scratched the surface of each topic, but have tried to show how each is debatable.

Has science blogging changed science writing? I still stand by the no, or at least a not much, and to follow that through to ideas about the future, we don't know yet. It is up for debate. Obviously here are natural, technical, political and cultural constraints, but there are options within this, and we should think carefully about the science media we want, not what we're given or simply left with after the accruing of accidents.

I don't claim to know though. The thing I personally enjoy most about science blogging is that it seems to have made it more socially acceptable to finish with questions: so, what do you think?

Notes and references

¹ Linkbait: online media content designed to provoke a quick, often emotional, reaction which will lead audiences not only to click on the link to view it, but share this link with peers, so others link too.

- ² M. Robbins (2010), *This is a news website article about a scientific paper, Lay Science Blog, Guardian Science Blogging Network*, 27 September 2010 <http://www.guardian.co.uk/science/the-lay-scientist/2010/sep/24/1>.
- ³ D. MacKenzie and J. Wajcman (1999), *The Social Shaping of Technology*, 2nd edition, Buckingham & Philadelphia, Open University Press.
- ⁴ D. Edgerton (2006), *The Shock of the Old: Technology and Global History Since 1900*, London, Profile.
- ⁵ N. Brown, B. Rappert and A. Webster (eds.) (2000), *Contested Futures*, Aldershot, Ashgate.
- ⁶ E. Yong (2010), *On the bowls versus ice-cream debate, Ed Yong's Posterous* 14 April 2010, <http://edyong.posterous.com/on-the-bowls-versus-ice-cream-debate>.
- ⁷ <http://www.guardian.co.uk/science/blog>.
- ⁸ Gimpy (2010), *Gatekeepers and the Guardian – say no to blogging collectives*, 15 September 2010, <http://gimpyblog.posterous.com/gatekeepers-and-the-guardian-say-no-to-bloggi>.
- ⁹ HolfordWatch (2007), *About Us Archive, HolfordWatch*, <http://holfordwatch.info/about-us/about/>.
- ¹⁰ S. Shapin and S. Schaffer (1985), *Leviathan and the Air-Pump: Hobbes, Boyle, and The Experimental Life*, Princeton, Princeton University Press.
- ¹¹ For her about page, see <http://scientopia.org/blogs/scicurious/about/> and for her twitter account, see <http://twitter.com/scicurious>.
- ¹² N.C. Burbules (1997), *Rhetorics of the Web: Hyperreading and Critical Literacy*, online at <http://faculty.ed.uiuc.edu/burbules/papers/rhetorics.html> and published in Ilana Snyder (ed) *Page to Screen: Taking Literacy Into the Electronic Era*, New South Wales, Allen and Unwin.
- ¹³ F. Mellor, S. Webster and A. Bell (2011), *Review of impartiality and accuracy of the BBC's coverage of science, Appendix A: Content analysis of the BBC's science coverage*, Download from http://www.bbc.co.uk/bbctrust/our_work/other/science_impartiality.shtml.
- ¹⁴ Mellor et al (2011), pg. 33-38.
- ¹⁵ A. Jha (2010), *Story Trackers: Guardian Notes and Theories Science Blog*, 9 June 2010, <http://www.guardian.co.uk/science/blog/2010/jun/09/science-story-trackers>,
- ¹⁶ Mellor et al (2011), pg. 33-38.
- ¹⁷ H. Riesch and J. Mendel (2010), *Science blogging and teh internets: Networks, boundaries and limitations*, paper presented at Science and the Public Conference 2010 (3-4 July 2010). Publication currently in peer review.
- ¹⁸ M. Garber (2010), "A completely new model for us": *The Guardian gives outsiders the power to publish for the first time, Nieman Journalism Lab blog*, 7 September 2010, <http://www.niemanlab.org/2010/09/a-completely-new-model-for-us-the-guardian-gives-outsiders-the-power-to-publish-for-the-first-time/>.
- ¹⁹ <http://www.guardian.co.uk/science/the-lay-scientist/2010/sep/24/1>
- ²⁰ Screen grab of Guardian webpage posted 18 April 2011, <http://yfrog.com/h06rgp>.
- ²¹ <http://embargowatch.wordpress.com/>.
- ²² C. Anderson (2004), *The Long Tail, Wired, 12.10 (October 2004)* <http://www.wired.com/wired/archive/12.10/tail.html>.
- ²³ <http://www.galaxyzoo.org/>.
- ²⁴ B. Trench (2008), *Internet: Turning science communication inside out?*, M. Bucchi and B. Trench (eds), *Handbook of Public Communication of Science and Technology*, Abingdon, Routledge, pg. 186.
- ²⁵ E. Yong (2011), *Are science blogs stuck in an echo chamber? Chamber? Chamber?, Not Exactly Rocket Science*, January 18th 2011, <http://blogs.discovermagazine.com/notrocketscience/2011/01/18/are-science-blogs-stuck-in-an-echo-chamber-chamber-chamber/>.
- ²⁶ B. Zivkovic (2010), *Science blogs and public engagement with science, A Blog Around the Clock*, March 8th 2010 http://scienceblogs.com/clock/2010/03/science_blogs_and_public_engag.php.
- ²⁷ C. Rowan (2011), *Comment on Emily Anthes' As Science Bloggers, Who Are We Really Writing For?, Wonderland, PLoS blogs*, January 17th 2011, <http://blogs.plos.org/wonderland/2011/01/17/as-science-bloggers-who-are-we-really-writing-for/#comment-585>.

Author

Dr Alice Bell teaches science and the web on Imperial College's MSc in Science Communication, and has worked as a professional science writer, mainly online, for over a decade. Her research centers around the rhetorics and communities of popular science writing. Her PhD explored children's science books and, more recently, she had developed research into communities of science bloggers. She keeps a blog cover science communication and policy issues at <http://alicerosebell.wordpress.com/>. E-mail: alice.bell@imperial.ac.uk.

HOW TO CITE: A. Bell, *Has blogging changed science writing?*, *Jcom* 11(01) (2012) C02