
Reports of Meetings

Crystal ball gazing: the future of medical publishing

Oxford, 10 February 2010

Medical communications professionals from around Oxford gathered at the hugely successful regular networking event hosted by Peter Llewellyn of NetworkPharma. This particular event attracted rather more than the usual number of attendees to hear Richard Smith (former editor of the *BMJ* and now editor of *Cases Journal*) share with us his vision of “The Future of Scientific Communication” – or as it was billed, “a spot of crystal ball gazing”.

For those of you who have not had the privilege of hearing Richard speak, he is highly entertaining, managing to weave together hard facts and comic anecdotes seamlessly, and I can honestly say that he kept his audience fully engaged throughout.

He started by pointing out the inherent difficulties in looking to the future – many things just cannot be predicted, others are predicted wrongly, and events that no one ever considered do happen. For instance, Lord Kelvin, president of the Royal Society in the 1890s, predicted that radio would have no future, and no one could have foreseen the tragic events of 9/11. Richard expressed that this failure to correctly predict future events could be due to our tendency not to consider possibilities in the context of their associated probabilities, and also to our inclination to think linearly – extrapolating in only one direction. Perhaps we all need to develop our imaginations to their full and four-dimensional potential?

The future belongs to the unreasonable ones, the ones who look forward not backward, who are certain only of uncertainty, and who have the ability and the confidence to think completely differently. (Adapted from George Bernard Shaw)

Of course, the whole point of conjecture is not simply to know what might happen, but rather to be prepared for whatever comes, and also to be able to influence the shape it takes.

How does this apply to the world of medical publishing? We are living in an age in which information is being accumulated at a phenomenal rate, so fast in fact that we cannot use it effectively – a quote from Al Gore sums this up rather nicely: “Our current information policy resembles the worst aspects of our old agricultural policy, which left grain rotting in thousands of storage silos while people were starving. We have warehouses of unused information rotting while critical questions are left unanswered and critical problems are left unresolved.”

Is this a simple case of information overload, or lack of good publishing practice?

Richard described the effects of the information paradox in the field of medicine. For instance 40% of doctors read 1–10% of all the medical information they are bombarded with, and a further 40% read 11–50%. A shocking 8% read

less than 1%. When asked how their information supply makes them feel, a sample of 41 doctors almost all gave negative answers, with “impossible” and “overwhelming” heading the list of adjectives.

Clearly, there is something wrong with the way that medical information is offered to those who need it. Among the criticisms of medical journals were that they are “too much rubbish”, “boring”, “expensive”, “biased”, “pompous”, “awful to look at”, “don’t add value”, and “slow everything down”. Perhaps most damning was the comment: “and anyway, nobody reads them”. Clearly the system is broken, and we need to fix it. But how?

Overcoming resistance to change – challenging the status quo – is an issue, so drivers for change need to be identified. Not least, there needs to be a vision of something better, itself driven by the failures of the present system, such as slowness and Balkanisation of the literature, and of course there is the usual suspect – money.

Open access advocate Stevan Harnad has such a vision – a resource utopia: “It’s easy to say what would be the ideal online resource for scholars and scientists: all papers in all fields, systematically interconnected, effortlessly accessible and rationally navigable, from any researcher’s desk, worldwide for free.”

Richard has his own vision of the future of publishing, the overriding themes being accessibility and transparency. Scientific papers should be posted on the web in databases, with the raw data being fully accessible; the software used to analyse them should be named; and full use of multimedia should be possible. Instead of blinded peer review, an open system should be adopted, with post-publication discussion rather than a “filter and publish” system. And everything should be open access. These principles should be applied also to clinical trials, where increased transparency would almost certainly result in reduced bias and more rapid dissemination of the data.

Far-reaching visions indeed.

Richard’s last slide presented a sobering thought: “When the future comes through you’re either part of the roller or part of the road.”

I know which I would prefer. What about you?

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For more details about MedComms Networking, please contact Peter Llewellyn via <http://www.medcommsnetworking.co.uk>

To download Richard’s presentation (not *entirely* plagiarised in this brief report) go to http://www.medcommsnetworking.co.uk/docs/smith_100210.pdf

Science reporting: is it good for you?

Royal Institution, London, 16 September 2009

Science is badly reported in the British media. This was the subject of a debate at the Royal Institution on 16 September 2009. There to defend science reporting was Lord Drayson, the science minister, and his opponent was Ben Goldacre, author of *Bad Science*. The debate arose from a Twitter exchange between Lord Drayson and readers of *Times Higher Education*, who took exception to his claim at the World Conference of Science Journalists that UK science journalists were “the best in the world”.

Lord Drayson started off the debate by praising science journalists, who, he feels, are doing a great job. He said that a lot has improved since the controversy about whether the triple vaccine against measles, mumps, and rubella is associated with autism. We only need to look at the great coverage of swine flu and the Large Hadron Collider this year compared with MMR, BSE, and GM foods to see how much science reporting has changed. It is crucial not to rubbish all science reporting and focus only on the bad because scientific journalism is hugely important to the health and happiness of our country. People’s readiness to accept changes and new technologies is affected by their trust in science reporting. Lord Drayson also spoke in support of sensationalism, as long as it is accurate. It is what grabs people’s attention and puts science on the front pages, he thinks.

Ben Goldacre’s argument was that a problem does not go away just because you pretend that it’s not there. Although he accepts that much has improved, the media are still full of scare stories and dodgy scientific journalism. This is eroding the public’s faith in common-sense health advice. He sees this as a systems problem because journalists

feel pressurised into writing stories they don’t want to, headlines are written by someone other than the author of the story, and press releases are often inaccurate. He argued that we need more “nerd capital”, by which he meant more facts, figures, and accurate data. He said he was jealous of sports fans who have reams and reams of information available to them about their sport of interest. What we need is more intellectual information available about science, he added.

Both speakers agreed that scientists themselves need to become more involved in science reporting. They spoke of a duty that scientists have to communicate the results of their publicly funded research. Ben Goldacre also pointed out that there are many people writing and blogging outside the mainstream media who are making very valuable contributions to scientific reporting, and who deserve more recognition, not least because many of them have a large readership. Technologies such as Twitter, YouTube, and blogs should be used by scientists to engage with the community. The fact that this debate took place as a result of a Twitter exchange, and was broadcast live online, shows the value of new forms of communication.

Overall I was more convinced by Ben Goldacre’s argument. There was no vote at the end, but the webcast is still available at <http://www.timeshighereducation.co.uk/webcast.html>, so you can make up your own mind as to who was most persuasive.

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Measuring the health of science journalism

City University, London, 31 March 2010

“Science in the Media: Rude or Ailing Health?” compared the role of mainstream science journalism with that of blogs and other forms of science communication.

The aim of the event was to deliberate the findings of a report by the Science Media Centre and the Department for Business, Innovation and Skills: *Science and the Media: Securing the Future*.¹ Encouragingly, the expert working group behind the report “found more reason to champion specialist science reporting in the UK than to despair” and “judged science in the media to be in rude health”. Nevertheless, the report makes various recommendations on how to improve science journalism in the key areas of scientific training, science broadcasting, openness and transparency, and future science journalism.

The report didn’t involve a full public consultation, so this debate was a chance for comment. On the panel were Natasha Loder, science and technology correspondent for the *Economist*; Andrew Jack, pharmaceuticals

correspondent for the *Financial Times*; Ed Yong, author of the blog Not Exactly Rocket Science; and Fiona Fox, director of the Science Media Centre and author of the report.

Fiona Fox outlined the findings of the report—overall, the state of science journalism is good. The public has a huge appetite for stories on science, and plenty of good journalism is around to feed it. Also, editors now often defer to science reporters on specialist stories.

However, science journalism is being affected by changes in the wider world of media: “journalism is in crisis and the business model is collapsing,” stated Fiona Fox. Fewer jobs are available across the media, and the journalists who are left are being asked to squeeze in more and more work, leading to a rise in “churnalism”—the act of hurriedly producing news stories from press releases and wire stories without doing further research or checking.

On the panel, Andrew Jack thought that science journalism was in good health, but there is a crisis structurally

in the media, not just in science coverage. Natasha Loder likewise felt that the “crisis” in science journalism has been overstated. For example, a study published alongside this report found that the number of full time science journalists in the UK has almost doubled between 1989 and 2009: from 43 to 82.5.² The major problem is time: workloads are rising and a fifth of science, health, environment, and technology news journalists have reported not having to time to fact check or follow up stories adequately.²

Loder then raised the issue of whether “direct to the public” outreach, such as that conducted by charities or bloggers, constitutes journalism. She was of the opinion that journalists and groups that communicate directly to the public both take part in “truth telling”, so there’s no point getting fixated on the title “journalist”.

Blogger Ed Yong pointed out that the report, crucially, doesn’t cover online media such as blogs and direct to the public communication such as that done by universities and charities. He felt that mainstream media is just one of many channels available now. We are going through a “Cambrian explosion” of science journalism, with lots of new “species”—means of communication—coming out of the woodwork.

Yong’s comments sparked a lengthy and heated debate on whether blogging and other forms of science communication outside of the mass media count as journalism. The report deliberately omitted “the explosion of direct to the public science communication by way of websites, blogging, tweeting, etc” in favour of “science communicated through journalism in mainstream media settings”, suggesting that the experts who contributed to the report, most of whom are entrenched in the traditional media, think not.

Fiona Fox resolutely did not believe that blogs should be considered journalism. She thought that the role of the journalist is to provide objective standards. The more “noise” there is on the web, the more we need objective journalists to navigate and filter the material. Andrew Jack agreed and pointed out that journalists are trained to be objective, whereas blogs grew out of opinion writing.

Ed Yong countered that blogs have been stereotyped as being opinion, not journalism. Natasha Loder made another point against traditional media: no-one can be objective. As a journalist at the *Economist*, for example, she is subject to the political leanings of her organisation.

The difference between journalism and blogging seems to be objectivity, but then the issue of credibility is brought up. Yong suggested that traditional media sources aren’t as reliable or accountable as those online: bloggers link to their sources whereas journalists don’t. For example, Ben Goldacre of the Bad Science blog has been campaigning to get BBC News to provide hyperlinks from science and health stories to the source research,³ but has been met with resistance so far.⁴ Blogging encourages a culture of investigation and scrutiny, whereas the mainstream media works from a top-down authoritative standpoint.

Unsurprisingly, the people in the room who had made their careers in the mainstream media tried to defend the exalted position of journalists in the new science media ecosystem, whereas those who worked online argued that

other approaches should also be considered journalism. One of the more open minded was the *Guardian*’s science and environment correspondent, Alok Jha. He cited *Guardian* editor Alan Rusbridger’s Hugh Cudlipp lecture,⁵ in which Rusbridger talked about “mutualisation” of the media. The mainstream media could improve stories by communicating and collaborating with the audience on social media such as Twitter. Journalists would still be needed, but as “gate keepers,” guiding audiences to interesting writing and mediating their responses. In the realm of science communication, the mass media can direct people who aren’t into science towards science blogs.

The fact that the Science Media Centre report ignored any forms of communication that weren’t mainstream press or broadcast was rightfully a point of contention in this debate. Furthermore, it got a bit tiring hearing people from traditional media trying stubbornly to defend their turf from other forms of communication, rarely willing to concede that other approaches might likewise be skilfully disseminating science news.

As far as I’m concerned, whether blogs “count” as science journalism is a bit of a moot point. Anyone interested in science and science communication should just care about getting information into the public domain in a clear and accurate way; the medium they use isn’t so important.

Science in mainstream media seems to be suffering, thanks not to shortcomings of professional journalists and their reporting but as a result of wider changes in the media, whereas other forms of science coverage, mostly online, are thriving. Overall, science in the media seems to be doing fine and, more pertinently, science *communication* seems to be growing exponentially thanks to the internet.

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