Don’t quote me on this...

The phone, gathering dust on the side of my desk (I prefer e-mail), made me jump when it gave its sharp and unexpected trill. I answered, and found myself listening to a Public Relations Officer from a medical charity. The charity had been approached by a widely read newspaper, for comment and quotes about an “amazing breakthrough”: essentially the newspaper said that someone had printed a functional human organ. Knowing nothing in advance about the news, a public relations officer from the charity phoned me as the person on their books they reckoned most likely to know about the breakthrough. I had heard nothing either, but the newspaper had sent a web link to the news, so she asked me if I would agree to look at it and provide a quote for them. Of course I agreed, although I knew it would take at least an hour out of an already busy day, because the one thing worse than a newspaper asking a scientist about a story is a newspaper not asking, and printing anyway.

The web link was not to a peer-reviewed publication. It was not even to a press release mentioning such a publication, but was instead to a short video clip. This video clip had some interview segments with a colleague of mine in another part of the world, and a lot of pictures of a printing nozzle placing cells accurately in culture vessels, over and over again, for the purposes of making standard organoids in high numbers. The video then ended with a brief and reasonably subtle pitch for more funding. There was nothing whatever about someone printing a functional human organ, or about any “breakthrough”. Instead, there was the small advance, already quite well known on the conference circuit, of someone adapting a print head to set cultures up at high speed without making some poor technician do masses of manual pipetting. And to be fair, at no point did the scientist featured on the video make any claim to do any of those things the newspaper said had been done. I think the problem is that words like “bioprinter” and “organoid”, that were in the report, were strung together in a reporter's mind to make a sentence they never originally made.

I wrote a short piece to explain this: a 'not for quotation' section that explained what had really been done, and similar things that had been done elsewhere (to give the reporter a realistic idea of what was and was not novel), and also advice on why it is sensible to find scientific stories in peer-reviewed journals rather than the general internet. I then added an anodyne quote in case they still wanted to run the story (as far as I know, they did not, though I did not go as far as buying the next

day's paper to find out).

When it comes to science, that particular newspaper has got hold of the wrong end of the stick so many times it ought by now to have the wrong end of a woodland, and it is far from alone in its fondness for creative writing. On rare occasions, I am phoned up by a reporter who has found a genuine story reporting a genuine advance (this is usually a science correspondent who takes the trouble to read research journals). More often, the person on the end of the line is a general journalist working from a press release or, worse, a 'tweet', that bears little relation to the actual news and is usually a wild exaggeration of of what was achieved and its novelty. That is presumably why newspapers seem forever to be trumpeting the latest miracle cure for something (often a miracle food or exercise of some sort) or the lethal danger of something (again, often a food or beverage or very common household thing, typically accused of causing cancer).

Every time I get involved with these things, I am left with a very disquieting thought about news coverage in general. In science, I have access to original publications and superb computer-assisted information searching, and have benefited from a free (and indeed grant-supported) university education to help me know what to do with that information. This helps me and other scientists see very clearly how inaccurate most science reporting is (specialist science reporters are a noble exception, but for some stupid reason the 'big' stories seem not to be written by them but by general journalists used to being on the front page). This is not just a biology problem: my colleagues in physics, computing etc report the same. So this raises the worrying question, is the reporting of economics, or politics, or union activity, or military manoeuvring equally terrible? Even my usual source of daily news, BBC radios 3 and 4 and BBC World Service, can be pretty bad at reporting science in their main bulletins. Radio 4's flagship *Today* programme, in particular, has for the last year or so taken to shoe-horning a medical/ health piece into almost every day's programme and, as far as I can see, draws mainly from press releases instead of proper research. It's such a shame because the radio 4 network has truly outstanding science correspondents who produce world-class specialist science programmes, but whose critical faculties never seem to be called upon when news bulletins are being written. Again, this makes me worry, when I hear a piece about a movement in the stock market or a political argument, that what I am hearing may bear as little relation to reality as the piece I just heard in the medical slot.

Newspapers and radio bulletins (and even that young upstart, television news) are important to the

proper working of democracies. I really hope that my fears are unfounded, and that the poor reporting is in fact a problem unique to science, perhaps a result of the arts-bias prevalent among mainstream journalists. And at least we can be glad that some journalists, like the one yesterday, do have the sense to phone around to check a story before running it. If all did that, reporting would be much better.

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Edinburgh
January 2019