

Science in the News

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I have spent a great deal of time this year questioning how science is portrayed in the news media and whether or not we should be satisfied by the status quo. This is certainly not a new discussion and those with an interest in science generally claim that science reporting is both infrequent and misleading. The easier of these two problems to address, I argue, is the quantity problem. As a society we invest a great many resources into the creation and maintenance of science; we invest hundreds of millions dollars in the form of federal grants, we fund organizations like the CSIRO and the offices of the Chief Scientists, we devote a significant proportion of time in class rooms to its teaching, and we actively pursue international collaborations on matters of scientific and social importance. And yet we hear little of these matters from our news sources. Considering the degree to which we fund our science, it seems a reasonable position to ask for more science representation in the news. But to begin to understand the position science holds in the news landscape a more basic question needs to be addressed: 'What is the role of the news, anyway?'. This question has many good answers but few adequately inform the role science ought to play within the current framework. The 'And in Science' campaign, which I and a number of notable others have created, is designed to address this aspect of a complicated problem: We are not satisfied by the status quo and are actively campaigning for the inclusion of more science into our news.

'And in Science' is a petition asking the ABC's Youth Radio Station, Triple J, to increase their coverage of science in their hourly news updates. We have found a great deal of support and interest from the public, and have so far received only minimal response from Triple J (but we're hopeful). In the first month of campaigning we collected over 2000 signatures, received endorsements from various entertainers and public figures, including Wil Anderson, Adam Spencer, and Lawrence Leung, and received media attention from ABC National. It is interesting to note that when I first raised the idea of campaigning for more science in the news with a friend (in a private conversation at – importantly – a showcase of modern dance) a patron in an adjacent row turned around and said "I'm sorry to interrupt, but that's an excellent idea and I think you should do it". In an environment such as that – one which, while not unfriendly towards science, at best shares only a passing acquaintance – could I do anything else but act?

It is difficult to know exactly what role editors think [their] news fulfils within society. At the most basic level it is to keep people informed, and at a more abstract level it is to critique and evaluate happenings within the world and to provide an informed public commentary. Between either extreme, at any point, it seems reasonable to expect that the news not only appropriately represents the content of a story, but also the quantity of the type of story. Certainly some issues are more salient and pressing than others, such as our recent Federal Election, but science too addresses

pressing and relevant issues, and the production of science is itself an issue of social and political significance. Let us consider the role of news as simply as satisfying only the need to inform: The Australian Research Council (ARC) during 2011 – 2012 administered \$800 million worth of grants, in the same period CSIRO generated \$1476 million in revenue, half of which was derived from the government, and half from other sources. While it is not an easy task to reckon the quantity of science that these values represent, it certainly isn't small, and such values are obviously nationally significant (if only from an economic perspective - which of course is not a good way to measure science). If the role of the news is to inform, then a conservative estimate for the current year would be that there is around \$800 million dollars worth of domestic science to report on; given that scientific output represents several years worth of time and financial investment. To the extent that science is something our government demonstrably values, and that the massive quantity of science produced is the product of hundreds of millions of dollars of annual investment, it warrants a fair representation in the media – if only so we know that science is something we are paying for and benefitting (economically) from.

If the news serves to do more than just inform, and aspires to critically evaluate and provide commentary of important issues, then science, again, needs increased coverage. Enquiry into, and scrutiny of science can reveal the values we as a society hold. Prior to the election the Liberal Party infamously promised to cut wasteful funding for 'obscure' research topics in favour of medical research (such as dementia and diabetes). This, in my opinion, is a cynical and populist promise and woefully misrepresents the value of science. It does, however, reveal how science is valued. While I certainly do not equate obscurity with a lack of worth, I do argue that we *should* be critically evaluating research and that obligation should be fulfilled, in part, by our news media. There should be more science in the news, and that news should focus not only on outcomes, but the process, the funding, and the questions. This is a point to which I will return, but in the meantime it will suffice to say that we need a critical and investigative media, parsing the state of affairs, and providing informed public commentary. We need more science in the news if we're to understand the way in which we value science – if only to better protect against ignorant but genuine threats.

If we accept that science isn't reported frequently enough, we have to question what kinds of stories we are missing out on. In 2005 Ben Goldacre published an article, now recognized as a classic (insofar as blogposts can be 'classic') with The Guardian describing and lamenting the quality and characteristics of science news. He observes that three kinds of stories get published: Whacky stories, Scare Stories, and 'Breakthroughs'. This is the kind of science we see reported, and it serves to misrepresent what science actually is. Scare Stories and Breakthroughs intuitively satisfy our need for personally relevant information (e.g., that cancer will kill us, or that we can kill cancer); whereas 'Whacky Stories' are distinct and more closely aligned with what *isn't* reported: the commonplace. Despite the fact that other commonplace topics are reported reliably (like sport and crime, neither of which have direct impact on our lives) we shun the commonplace occurrences of science. Instead, we are told in passing that there is a 'consensus on climate change' but are not actually given a sense of

consensus due to its infrequent presentation. Presumably we value the commonplace as synecdoche: individual crime stories are a barometer for social wellbeing, political reporting provides us a sense for our leaders, and weekly sports are a part of greater leagues. Yet, commonplace science – the kind of science that is actually happening every day, that we actually pay for, and that we as a society benefit from in the long-term – is not reported on. The parts presented do not represent the whole. We need more commonplace science if we are to develop a sense for what the general body of scientific endeavour has to say about our world.

When presented with arguments for more science in the news, a common response is that 'science is *already* reported in the news'. Unfortunately, the science that is reported is not what a scientist would recognize as science. Coverage consistent with the status quo has skewed how the public has come to understand the nature of the beast. Ben Goldacre, in the aforementioned blogpost casually made the following point: "*The problems here all stem from one central theme: there is no useful information in most science stories*". He's right, and it speaks to the third (and considerably less noble) role news plays within society: to entertain. Within the current framework science is only reported when it's whacky (e.g., '*scientist create glow in the dark kittens*'), or to provide personally relevant information (e.g., '*how to can kill cancer or how cancer will kill*'). I won't labour this point as my central thesis is less about the quality problem than the quantity problem, but I will say that I don't think the lack of quality in science reporting is intrinsically related to the kind of information science produces (common arguments include that it's too complex, or that there is too great an expectation of assumed knowledge). The quality problem, in my opinion, relates to how the news treats scientific information. The status quo is to prioritize answers over question. The news currently places great emphasis on the purpose an answer serves (e.g., '*how can we cure diabetes?*') at the expense of the motivation for the question, or the generation of the question in the first place. As a process, science is driven by questions. The 'breakthroughs' are valuable only because they resolve important questions. The reporting of science news ought to focus on these questions, and in so doing, engage the public in a conversation regarding what we, as a society, values answers to. When the news aims to entertain and treats the product of science as a curio to be displayed in a window, we miss the real value of the object; it trivialises the entire process for the sake of quirky by-line. And so to return to my point regarding 'obscure' research: Rather than the news misrepresenting the 'answers' science provides we ought to focus on the kinds of projects we are funding and the long-term gains we can realistically expect. In so doing we more carefully articulate and question the value of science, and the role of science in society. More importantly this provides a way for journalists and the news media to examine the decisions and values of our society through the lens of scientific endeavour, while simultaneously representing the current state of Australian science and critically informing the public.

Finally, science is popular enough to hold its own as a unique category of news. It doesn't require much searching to find data on how science is perceived. In 2010 the Australian National University found that science news was reported as being 'more interesting' than sport, politics and

music, and to some degree more interesting than crime. These results are not unique. A 2010 'Special Eurobarometer Report', commissioned by the European Commission (who represents the interests of the European Union) reported very similar results. Science is popular enough to satisfy even the least noble motivation for producing news (if that's the standard we're going to accept): science *is* entertaining.

Editors and journalists seem well aware of their duty to inform, critique, and entertain in the domains of crime and sport and politics, but they seem to have relegated science news to the occasional and the quirky. This lack of coverage is totally disproportionate to the public's investment and interest in science. In the long-term we need the frame of science news to shift, we need fewer answers for the sake of answers and more questioning of questions. We need an appreciation of the commonplace in the same way sport, politics and crime is afforded appreciation, and we possibly even need a more critical evaluation of the role science plays within our society as a way for understanding the values of society. This starts by addressing the quantity problem. Right now, I believe we need one thing: *more science in the news*.

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