Why Science Reporting Needs to Change

The coronavirus pandemic has revealed serious issues with how the media reports science

By Christian Kirkham

“Following the science” - it is a phrase all of us will have heard many, many times but what does it really mean? Instead of being a one-way street where we follow the scientists’ advice with each new discovery made, science is a labyrinth with dead-ends and circular loops. The scientific method can be frustrating as promising leads fizzle out and circumstances change, destroying previous work. Sometimes new evidence is found which allows the scientists to offer valuable advice, but these times can be few and far between.

For scientists, this is just part of their daily life. They have devoted their lives to their subject and so understand the trials and tribulations of pioneering new science. The

issue comes when each step of the scientific process is picked up by journalists and thrown onto the front page of newspapers. Since studies which have not been peer reviewed get printed in newspapers, members of the public are given advice that is contradicted by a new study the next week. For those unfamiliar with the scientific method, the reality of “following the science” is laid bare and some people start to lose faith in science and the scientists.

Never have the problems of science reporting been more apparent than now, amid the coronavirus pandemic. The advice given by scientists is now, for some, a matter of life and death, and fear of putting yourself in danger could be crippling with so many conflicting reports. However, there is a new group of people who have started rejecting the scientific advice altogether. Found protesting the lockdown measures in large groups, these people have lost faith in science and have taken matters into their own hands. The confusion caused by the media’s handling of the science has begun to put people in danger.

One of the main issues with the media is that newspapers have started to publish results from preprints. A preprint is an academic paper that is released freely before the paper has been peer-reviewed and published in a journal. The purpose of the preprint is to circulate possibly important results more quickly than would otherwise be possible since the peer-review and publication process can take weeks, months or even years. However, the results printed in preprint papers must always been treated with suspicion since, without peer-review, the paper could have errors or the methods themselves could have issues. When a newspaper reports on results from a preprint, there is none of the required suspicion and the results may be quoted as fact. As a result, erroneous results may be published in a newspaper that the public then read and accept as correct advice.

Poor science reporting is far from a new phenomenon and is not limited solely to medical advice. On the 17th May 2020, the Daily Star published a story entitled “NASA Scientists Detect Parallel Universe ‘Next To Ours’ Where Time Runs Backwards” [1] which claimed that scientists from the University of Hawaii had discovered tau neutrinos which were travelling backwards in time, proving the existence of a parallel universe. The Universe of Hawaii later released a statement [2] detailing that journalists from the Daily Star had misinterpreted a UH News story and that the research in question in fact did not reveal the existence of a parallel universe not claimed to do so. By the time the statement had been released, other news outlets such as the New York Post had already printed the same with the same headline.

Never has there been a time when science has so drastically changed our daily lives. Following the advice of scientists, entire populations have stayed indoors and exercised social distancing measures in order to beat the coronavirus. This has thrown science and scientists directly into the media spotlight with discussion of the results of scientific studies hitting the front pages of newspapers and social media. Despite this new focus on science, science stories continue to be reported badly with

facts twisted and journalists misunderstanding the facts. Now, more than ever, bad science journalism is putting people in danger as misinterpreted reports and lies are being presented as scientific facts and advice. Science journalists have a duty to tell people the facts without confusion or mistruths, yet they continue to abuse their power.

On the 26th April 2020, Professor Brian Cox appeared on the Andrew Marr Show [4] and suggested that the coronavirus pandemic may inspire a future generation of scientists, empowered by the scientists whose ingenuity will end these troubled times. Despite this, the poor science journalism exhibited during this crisis has made many people give up on science, rejecting it in favour of protecting the economy. All of us have lessons to be learned from the pandemic, but journalists need to be held accountable for their destruction of public trust in science.

References:

[1] https://www.dailystar.co.uk/news/weird-news/nasa-scientists-detect-parallel-universe-21996849

[2] https://www.hawaii.edu/news/2020/05/21/media-incorrectly-connects-uh-research/

[3] https://nypost.com/2020/05/19/nasa-finds-evidence-of-parallel-universe-where-time-runs-backwards-report/

[4] https://www.bbc.co.uk/programmes/p08bjv37/