

What happens when we remain silent?

Letter to "Agricultural Science", Dec 2014

by Mr Shaun Coffey, Chair, Navigator Ltd. www.navigatorconnect.com

Recently I read *Farmageddon: The True Cost of Cheap Meat*.¹ The book, at once, is an engaging and infuriating read. The parts covering topics on which I am well informed have many deficiencies and, whilst I am more comfortable with those parts of which I am less familiar, I am sure others would find them annoying too. I am not going to review the book: rather I would like to reflect on the way we engage in public communication relating to contentious issues in this age of digital connection.

There are two other pieces of work that I will draw on in doing this. Jackie Fatka's recent article entitled "Science Silenced in GMO Debate"² and the paper "A Meta-Analysis of the Impacts of Genetically Modified Crops", by Klümper and Qaim³.

Fatka asks: *Do you ever hear someone make a negative comment on biotechnology and instead of reading them the riot act you just keep quiet?* Guilty, I plead. I often choose not to have the debate with people I perceive as unwilling to listen. Well, I can take some solace, as I am apparently not alone.

Fatka has introduced me to the work of German researcher Elizabeth Noelle-Neumann who has developed a model, the **spiral of silence** to explain why people are reluctant to engage in public debate and express unpopular opinions. People fear isolating themselves in social settings so they keep quiet. In the Spiral of Silence model, the closer a person believes the opinion they hold is similar to prevailing public opinion, the more they are willing to openly disclose that opinion in public. Consequently too many people get their information from narrowly ideological sources, rather than from informed sources.

It is easy to conclude that when we remain silent we encourage continued isolation from the facts.

Alison Van Eenennaam, recipient of the 2000 CAST Borlaug Communication Award (quoted in Fatka) contends that it is vital to inject truths into the information void, and to try to tackle the very little factual information that gets circulated in the community and social media. "Even if you have one person supporting a minority position, that tends to deplete much of the power of those in the majority", she says.

I would suggest, however, that we need to be careful about what constitutes truth. For example, one of the major annoyances I have had with public communication of complex issues is the use of single data point extrapolation to turn a fact into advocacy.

Let's return to *Farmageddon* and its first chapter (California Girls: a vision of the future?) as an example. This is based on intensive or, in the words of the author, industrial dairying in California. Then it extrapolates; the extreme example suddenly becomes the norm. It is used to bring into question all industrial agriculture. Apart from the fact that agriculture has been industrialising since, at least, the enclosures of the 1750s, there is no attempt to balance the argument. The conclusion is inferred that all industrial dairying will have the impacts of the Californian example. There is no room for a middle ground. Why, for example, not compare and contrast the Californian situation with industrial dairy establishments in, say, South Dakota, or in Arizona. I have seen intensive dairying operations in both those locations and would contend that a different set of conclusions would be possible to those made in the Californian situation. There is no detailed analysis and integration of the total picture. Rather a compelling story depicting one example becomes the norm.

What now, would your response be if I stated: *on average, GM technology adoption has reduced chemical pesticide use by 37%, increased crop yields by 22%, and increased farmer profits by 68%*.

¹ Lymbery P and Oakeshott I (2014) *Farmageddon. The True Cost of Cheap Meat*. London: Bloomsbury ISBN: 9781408846445

² <http://farmfutures.com/blogs-science-silenced-gmo-debate-9061> Accessed 17 November 2014

³ Klümper W, Qaim M (2014) A Meta-Analysis of the Impacts of Genetically Modified Crops. *PLoS ONE* 9(11): e111629. DOI: 10.1371/journal.pone.0111629

I hope it would be to ask me to show you the evidence. The above statement is drawn from information in the analysis of 147 original studies of GM soybean, maize and cotton made by Klumper and Qaim. Like all meta-analyses this paper loses some of the detail, and putting the actual figure aside, this study reveals reliable evidence of significant benefits to agriculture and farmers in both the developed and the developing world.

This is not a single point extrapolation, but even so when I tried to discuss it with an anti-GM advocate I got the immediate response that this was just one paper and that I was ignoring the many other reports of harmful impacts. I have had similar responses on social media in the past. I'm ignoring the "other evidence" and I'm in the keep of the nasty biotech multinational. Then, typically, I'm "blocked" so that I could not engage even if I wanted to.

Many other reports? Other evidence? More often than not these are multiple postings of the same study on social media. This is how the mythology builds and the ideologies are created. One article posted several times has credibility. One article analysing 147 other original studies does not. Fiction becomes fact, and facts become isolated. I can hear the criticisms that I am exaggerating the position. But look at this quote from Fatka.

"Remember the rat study that anti-GMO activists regularly cite? Within hours of the study being released, it had been shared 1.5 million times, she said. Never mind that the study had no control group shown in the images of rats with tumors for the 200 rats that they studied, the type of rats used in the study were already prone to have tumors and two years is a long time for a rat to live, which is an important consideration in touting a long-term two-year study. But how many clicks on the Internet did the retraction receive?"

What could happen if we joined, one voice at a time, as Van Eenennaam suggests? How much longer can we afford to let the ideological stances distort the public debates on many issues, such as global warming and climate change, sustainability, water, land degradation, land tenure, gender and social inclusion, animal welfare, farm debt, and true cost accounting in food pricing?

I would like to conclude by reflecting on another example: the recent story on the Commodities webpage of the Weekly Times⁴ entitled *CSIRO-developed GM cowpea crop being trialled in African countries*. This recent article talks about the use of GM cowpeas in Africa and we might anticipate it being criticised on two fronts. First, from the anti-GM advocates, and second, the anti-development advocates. I don't need to comment on the former. With regard to the latter, a common criticism is likely to be that this is another example of the developed world imposing its technology on the developing world. The reality is that many parts of Africa are showing a healthy hospitality to new technologies such as GM, and assessing them on a case by case basis. The second reality is this technology is not being imposed on Africa; rather the project involves working with and assisting African scientists to develop their own solutions to their own problems.

Will the critics emerge? Maybe. But the folks working in this, and many other areas of complex science might not need to fear their critics. They may have more to fear from silent friends, or rather the silence of friends in important public debates.

⁴ http://www.weeklytimesnow.com.au/business/grain-and-hay/csiro-developed-gm-cow-pea-crop-being-trialled-in-african-countries/story-fnker6ee-1227120642398?from=public_rss Accessed 17 November 2014.