Science and Editorial Procedures Are Stifling Dissenting Voices

Martin Cohen

Should fossil fuels be banned? Should Covid vaccines be made mandatory – even for kids? Should birth certificates no longer specify gender? It doesn't matter what the issue is, these days the final arbiter is supposed to be science, not politics. The authority for action will come not from a political leader but from a scientific study published in an academic journal.

Only, of course, this view of neutral facts and untainted scientific method is a myth: science is deeply political, and most of what counts as settled science today will have been revised within our lifetimes. That's why even scientists pay lip-service to the idea that they are open to revision and reflection. Yet such things require free debate and dissenting views, and the latter are not allowed either in the institutions or the academic journals. The medical journal *The Lancet*, for example, under its activist (and vegan) editor has been publishing articles that monomaniacally seek to prove that cows cause global warming; while *Nature's bien pensant* editors have enthusiastically taken up the line that anti-vaxxers are killing you. Likewise, the mainstream media can always find a professor to authoritatively confirm that whatever is the latest political wheeze is impeccably scientific.

Three years ago I was invited to write an opinion article for Palgrave Communications, publishers of the suite of *Nature* journals. What started out as a rather mundane, academic request became instead for me an opportunity to see first hand how 'scientific' knowledge is framed and constructed in today's society.

Eventually I came up with a detailed outline for a piece arguing that apparently scientific claims about food and health can easily be co-opted as part of a political or mercenary programme, and that there needs to be a much more sceptical approach to scientific claims made both for food policy and for food safety. I suggested that consumers and public-health bodies alike need to resolutely guard against treating science as a final arbiter, but instead recognise it more as an entity easily co-opted by the interests of both industry and politicians.

In other words, it was an opinion piece about how 'science' is political. Not controversial in social science circles; but there's a gulf between social science and science generally – and despite having requested the piece, the journal ultimately refused to print it. As I say, this wasn't a submission in the normal sense. I was invited to write the article, and allowed to choose the topic, and had a detailed outline accepted. But it seemed that the journal would not allow any challenge to the myth of apolitical science! Recent events, such as the scientific arguments over corona virus policy,[1] show why, on the contrary, challenge must be allowed.

So, bear with me while I delve into all this and try to share a little bit of the usually hidden workings of journals like *Nature*. I should emphasise that it's really not about 'me'. I'm not on the academic treadmill and I don't really need to write pieces for journals or their websites – even prestigious ones like *Nature*. I've no CV to pad, no research output committee to please. Actually, early on, wondering about whether to invest my time in the project, I checked the readership for their opinion pieces; they are barely in the hundreds. By contrast, as an author I have hundreds of thousands of readers. Indeed, recent articles I have written for the less grand but rather more democratic 'Conversation' website have racked up, over time, some two million readers. So no, this is not about me. It is about experts, paradigms and the construction of scientific facts.

It so happens that some years earlier than all this, I had written a book about paradigms in science and social science. It's a topic that has long interested me, ever since I read Thomas Kuhn's classic book on scientific revolutions.[2] But one of the things that also attracts me to the issue is that this is an area where there is a great deal of confusion and misunderstanding. (It would be nice to think that when *S&S* editor Richard House and I recently discussed my *Paradigm Shift* book,[3] we helped clarify it a bit for a few people!) I remember reading that Kuhn himself was not clear about what he meant by paradigm shifts, and used several different definitions which were incompatible. The most radical version of the theory says that people cannot 'see' issues from two perspectives at once, that they are literally locked within one paradigm, one view. Think of the visual puzzle of the vase,[4] that turns into two faces, offered by the Danish psychologist Edgar Rubin in 1915 to illustrate how you cannot see two things at the same time.

Yet the vase also illustrates how we are able to switch from one mode to the other – even if, in some sense, we cannot 'see' or believe two opposed things simultaneously. I think it was this idea that drove me to suggest in my article that policy makers should seek out two opposed perspectives on issues before deciding on a matter. Illogical? Perhaps. After all, two mutually incompatible, contradictory positions logically implies that one view is wrong.

Equally, thinking that your view is correct and all others are wrong is the enemy of social and scientific progress, because it obstructs progress and entrenches knowledge at whatever point you happen to be at. This is something that the academic publishing industry in particular should understand – yet I think that on the contrary, it proceeds as if knowledge is an edifice being steadily constructed brick by brick, without constant revision and rethinking being necessary.

So now let me share the little story with you of how Palgrave Communications, publishers of the *Nature* range of journals, amongst other things, approached me for an opinion piece on science and public policy. They contacted me because they were interested in a short piece I had published via the 'Conversation' website, demonstrating how the obesity epidemic correlated very closely to social class. In England, for example, of the ten worst areas in terms of overweight or obese children, half are also in the worst ten for child poverty.

'It's poverty, not individual choice, that is driving extraordinary obesity levels' was the title,[5] and the piece noted (without using the 'p' word) that there were two paradigms at work. Obesity was interpreted and approached as a diet issue by nutritionists, whereas issues of social inequality were the domain of sociologists and economists. This first piece displayed a very conventional (but still useful) kind of science: the figures were largely uncontroversial, the correlation unmistakable. The statistics pointed remorselessly towards obesity being a symptom with an underlying social cause, and that should have completely changed the approach to dealing with it; but it didn't, perhaps because experts tended to remain locked within their own particular paradigms.

To the point, then. In March 2018, an assistant editor at Palgrave, Jessica Torr, wrote to invite me to write a piece. She explained that they were looking not for 'a research paper' but for 'personal, agenda-setting and provocative analyses or syntheses offering calls for action and/or thought-provoking observations on topical issues', although 'ideas and arguments should be underpinned by reference to the surrounding academic literature'.

Torr explained that their editorial procedure was for 'a short outline in the first instance, which would be considered' by the editors. Clearly this part was open to rejection of the idea. However, later, 'on submission, Comment articles are assessed by the Editorial Board; *revisions may therefore be requested'* (my italics). Note that there was no reference to seeking outside 'expert' readers, let alone any suggestion that the Editorial Board might abruptly withdraw the

offer to publish the opinion piece. On the contrary, publication was implied after acceptance of the outline, which was, at nearly 2,000 words, already half as long as the article itself.

Yet despite apparently accepting the outline and asking me to complete the longer version, my article calling for the promotion of wider scientific debate and challenging the status of experts was indeed referred to outside expert readers, who disagreed with it. And why wouldn't they? In line with my views on paradigms, I argued that in no field should there be considered to be a settled hierarchy of expertise, but rather different views should be actively sought by policy makers in order to weaken the domination of one kind of thinking and improve decision making. The essence of journal peer review (as it is called) is to instead protect 'the consensus', identified by insiders, from challenge by outsiders.

Don't get me wrong; there is a place for expert review, and we can all benefit from constructive criticism! However, there is a lot more destructive criticism out there. Journal editors know this, and sometimes invite authors to suggest referees whom they may or may not then choose as expert readers. There's a trick here, though: it gives the journal editors a very easy way to skew the response to a paper by either using or not using the author's recommendations.

And then, as a journal editor myself, also occasionally seeking reader reports, I know that there is an iron tendency in review for new and original ideas to be disagreed with, and old and stale ideas to be approved. Even using reviewers to check 'facts' is rather futile, as it is inevitable that given two statements, one of which is a commonplace and one which is novel, to impose much higher standards of proof on the latter. The result is that bland, conventional (within-paradigm) papers, books and articles are published, while new ideas and approaches struggle to get aired.

Actually, my article, let me repeat, was not even saying something new or radical! It was only a quick potter through the history of science to show that there has been a stilting, cloying effect on knowledge from over-dominant paradigms.

But let's use my paper, conventional or not, as a case study, and see how the editors of the *Nature* group handled a Comment piece that they had originally requested but now found was not arguing what they would have liked to have argued. So, of course, despite this being contrary to earlier communications with me, they reached for the censor's favourite tool – the referee's report.

Actually, notwithstanding its comments to me by email, I don't know if Palgrave Communications really do seek reader reports on all its Comment pieces, some of which (particularly by celebrated Harvard professors) are extremely thin and sketchy, to the extent that any review process would seem absurd; but I do know as a journal editor myself that when an editor chooses the referees, they largely decide the eventual fate of the article.

Anyway, this is how Palgrave eventually ruled on my article. Notice how they seek to present the process as the impartial, mechanical application of rules:

> Given the nature of the ideas presented in your paper, the Associate Editor sought advice from three independent academics representing different areas of expertise, so as to solicit a range of perspectives on your arguments. In weighing up the feedback obtained, the Associate Editor felt that the style and tone of your work were not the overarching issue – but rather (s)he had concerns with *the robustness of the arguments presented and the lack of substantiation of some assertions.* (My italics.)

The expert reviewers had identified 'issues with the way your arguments are presented', including 'unsubstantiated statements or assertions that are presented without sufficient anchorage in the wider literature'. This is clearly a topic on which you have much

expertise and hold strong opinions, they added paternally, 'yet at times we feel there is a lack of nuance and rigour in the way the arguments are constructed. In some instances lines of argument are presented that appear to be too weak to close scrutiny.'

Pause there, for a moment, and let's take a quick look at two pieces which the editors had sent me earlier as examples of properly grounded, scientific commentary that *had* been acceptable to the editorial board. First, an opinion piece by Mimi Yang published on 14 November 2017 entitled 'Crossing between the Great Wall of China and the "Great" Trump Wall'.[6]

One section in the piece ran:

> Across the Pacific thousand miles way and across a time span of more than two millennia, the Great Wall of China and the 'Great' Trump Wall meet in the midst of the resurgence of the neo-Nazi and the white supremacism, the anti-immigration sentiment, the Muslim ban, the transgender ban, the anti-Semitism wave, and the misogynic<> and sexist repercussions.

Now I've no problem with that. It's a fine piece of political rhetoric; but how does it work as an example for me in preparing my piece in terms of successfully avoiding the pitfall of 'lack of substantiation of some assertions'? The piece clearly is accusing the core Trump administration (because the wall was a core policy) of being neo-Nazi, white supremacist, misogynist etc. etc. I imagine the Editorial Board also think this. But is it really 'properly grounded, scientific commentary'?

So let's take the Board's other recommendation to me, a piece by Michael Higgins entitled 'Mediated populism, culture and media form', published on 24 October 2017.[7] After the ritual denouncement of President Trump, a central claim is that, 'the production of fake news is a useful tactic of dark political campaigning, and that recent studies have shown that its distribution is as much a tactic of the political left as it is the right'.

The conclusion, for want of a better word, was as follows: 'Going forward, any such news cultures should be as expressively robust as populism and as exploitative of new media: unabashed in their commitment to environmental care, to freedom with responsibility, and to the abiding principles of human decency.'

Again, one can imagine the Editorial Board all nodding in agreement with that, and confusing agreeing with someone with having seen an argument demonstrated. For me, though, the factual claim at the heart of the article rang an alarm bell as (without having made a great study of it) I doubted whether fake news *was* as common on the left as on the right, although of course it is definitely an issue. How much climate-change news is 'fake news', for example? The Himalayas were supposed to have melted by the end of this decade…. Actually, as that story illustrates, my impression is that often, the left tends to have dodgy scientific studies or some kind of basis for its fake news, whereas it seems that the right literally just makes it up. Anyway, the opinion piece included a source for this big claim, but it was not a scientific study at all, but a blog[8] at the BBC. I checked it out, and it seemed that the piece was attempting (BBC-style) to 'balance' its reporting of Trump's fake news of tens of thousands of Mexicans invading America with reports of an 'unflattering, digitally manipulated image, which suggested that US President Donald Trump had diarrhoea during a recent golf outing'.

You may say this is harmless stuff. Yet this piece was offered as demonstrating how to avoid the pitfall of 'unsubstantiated statements or assertions that are presented without sufficient anchorage in the wider literature'.

I suspect the reality was that assertions did not need backing up if they were also the opinion of the Editorial Board. But this is the problem: powerful groups should not be controlling debate and stifling views simply on the basis of whether they personally agree or benefit from them. That people dress up their prejudices as

being 'driven by evidence', 'objective and scientific', 'neutral and dispassionate' and so on, is to cloak subjectivity in layers of empty rhetoric. In my view, we must resist that.

The Expert View?

What precisely (you may be wondering), then, did the reviewers of my piece challenging scientific expertise say? I can't quote the reports at length as per all such matters, journals and publishers hide behind the 'cloak of confidentially'. However, the residual rights we have to 'fair use' allow me to just summarise with little snippets of the reports.

Many academics who have been through similar review processes will sigh and recognise the kind of response. **Reviewer #1** wrote that they found: 'many of the arguments presented here weak and unconvincing, *often based on a fundamental misunderstanding of the scientific process* and at times displaying faulty logic'. (My italics.)

Ignoring the journal's instruction to limit themselves to issues of whether my position is backed by arguments, this referee gave their own firm opinion:

'I find the recommendation that "all policy advice should come with an independent, contrary view" and that "scientific facts are never really more than opinions" naïve and even dangerous: this is the sort of "both sides deserve equal attention" position that drives much irresponsible journalism and which ends up doing such things as giving climate change or AIDS deniers attention and consideration they do not deserve, and should not have. While the scientific process is imperfect, there are in fact cases where a scientific consensus is justified and should be supported politically.'

Reviewer #2 starts by saying that the article makes a series of attacks on the way that scientific evidence relating to food is hijacked by business and governments to support their preferred policies, adding,

'Whilst I agree that may have happened I am not convinced by the evidence presented by the author. There are many completely unsubstantiated statements which, ironically, are examples of not properly and objectively evaluating the evidence. *The author appears to have no understanding of science or what scientific evidence is*.' (My italics.)

Since the point of the article was to challenge the conventional view of what 'scientific evidence' is, it would seem, put another way, that the reviewer just disagreed. Per the guidelines, though, just disagreeing is not enough, and so they also offered some specifics, which they bulleted with numbers, for effect:

'1. Rapeseed oil. There is no substantiated evidence that it is unsafe for human consumption.
2. Fats, sugar and heart disease. The depiction of this issue is superficial and shows a total lack of understanding.'

Two issues that clearly are matters of public debate, presented here as 'beyond debate'. And yet, having just asserted that there was some kind of body of settled knowledge that I was not keeping up with, the reviewer closed with this: 'lastly, and most importantly, the relationship between diet and disease is extremely complicated. We do not understand the chain of events at the biochemical and genetic levels. Nothing is proven because of the huge knowledge gaps.'

Ironically, this is the very point of the article. Am I surprised that a reviewer would contradict themselves like this? Not at all. Many referees are not thinking, but merely rehearsing their prejudices. And likewise the editors who sought their opinions.

Finally, **Reviewer #3**. They start by saying that the paper is 'interesting' and that 'I'm quite amused by the paper – it's a fun read, and I'm sure the author is aware that he or she has deliberately exaggerated for effect, and why not'. However, they also suggest that:

'…there needs to be a recognition that (a) scientists are not a homogenous group, (b) science allows for multiple competing theories. Indeed, that is the point. (c) it is entirely possible that the evidence does point in a different direction now than in the past, and future.'

These three experts' points are all rather good. However, they are also all points my article was making. So where's the disagreement? Indeed, Reviewer #3 goes on:

'I mention this not to point out that this is not a very original argument (which it isn't) but more to ask: So what? What's the big deal? Why does it matter? Is everyone stupid except the author? What does he or she think is a better solution?'

The report turns into its own mini-opinion piece: 'Literally no scientist anywhere ever thinks that science is certain, and the entire premise of the scientific method is about undermining certainty.

Popper, by the way, never set foot in a lab in his life…'.

The expert reader closes in the manner of a barking dog defending the terrain: 'Have you ever met a scientist? This is SO FAR from how most academics think about their research. We think in terms of hypotheses; models; probabilities.'

Reader #3 would not agree with John Ioannidis, professor of medicine at Stanford University, who specialises in the 'scientific study of scientific studies', and who has argued that the 'majority of papers that get published, even in serious journals, are pretty sloppy', nor that 'Diet is one of the most horrible areas of biomedical investigation'.

Ioannidis, however, is a long-time iconoclast, allowed a long leash. The style of debate today is framed by the anonymous editors of the publishing houses. And here, it is as though scientific truth is best served by factionalism and hierarchies.

Notes and References

1 See Peter Hotez, 'COVID vaccines: time to confront anti-vax aggression', *Nature*, 592, 661, 27 April 2021; available at https://tinyurl.com/yjz99dk5 (accessed 12 October 2021).
2 Thomas S. Kuhn, *The Structure of Scientific Revolutions*, Chicago University Press, Chicago, 1962.
3 Martin Cohen with Richard House, 'Interview: Paradigms, paradigms...', *AHP Magazine for Self & Society*, 7, 2021; available at https://tinyurl.com/3f9j3czm (accessed 9 September 2021).
4 See https://tinyurl.com/vcwhmkrn.
5 See Martin Cohen, 'It's poverty, not individual choice, that is driving extraordinary obesity levels', The Conversation, 19 February 2018; available at https://tinyurl.com/3pr75a3s (accessed 12 October 2021).
6 Mimi Yang, 'Crossing between the Great Wall of China and the "Great" Trump Wall', Palgrave Communications, 3, 25, 2017. https://doi.org/10.1057/s41599-017-0031-2; available at https://tinyurl.com/vt8y3ss (accessed 12 October 2021).
7 Michael Higgins, 'Mediated populism, culture and media form', Palgrave Communications, 3, 3, 2017; https://doi.org/10.1057/s41599-017-0005-4; available at https://tinyurl.com/zh6mbckm (accessed 12 October 2021).
8 BBC Trending, 'The rise of left-wing, anti-Trump fake news', BBC News website, 15 April 2017; available at https://tinyurl.com/phwmthj8 (accessed 12 October 2021).
9 Ivan Couronne, 'Beware those scientific studies – most are wrong, researcher warns', Phys.org News, 5 July 2018; available at https://tinyurl.com/cteb8vm2 (accessed 12 October 2021).

About the contributor

Dr Martin Cohen is an author specialising in popular books in philosophy and social science. His writing ranges widely, as he likes to make connections between different areas and ideas. As well as *Paradigm Shift*, featured in the previous issue (AHPb online magazine no. 7), his books include *101 Philosophy Problems, Critical Thinking Skills for Dummies, I Think Therefore I Eat* and even a book on nuclear economics called *The Doomsday Machine*. *I Think Therefore I Eat,* in particular, combines philosophy and food, offering surprising insights into why everything we eat makes us fat, and seems to have more to do with laboratories than farms!

SOME HUMANISTIC WISDOM

"Whoever undertakes to set himself up as judge in the field of truth and knowledge is shipwrecked by the laughter of the Gods."

Albert Einstein (1879–1955)