

The ironclad logic of conspiracy theories and how to break it

October 6 2014, by Peter Ellerton



Conspiracy theories are so hard to debunk because they use science. Credit: Flickr/dexterd, CC BY

As the United Nations warns of the [dire consequences](#) of global warming, the commitment of the current Australian government to the reality of climate change remains unclear, with a [history](#) of disturbingly uninformed commentary on the issue and a climate policy with a decidedly ad hoc flavour.

Even the prime minister's business adviser, Maurice Newman, [suspects](#) the World Meteorological Organisation of [conspiracy](#) and propaganda.

Let's be very clear – to deny the science of climate change is to believe in a conspiracy. It may be thought of as a conspiracy between scientists and "the left", the UN, or all of them, but it is a necessary part of any such position.

Those in public life who deny climate science have long had a free reign in the media, appealing to the right for alternative views to be heard, claiming that this or that study is [flawed](#), or [explicitly claiming](#) that a conspiracy exists.

The genius of conspiracy theories is that you can't prove them wrong, and this is true for two reasons.

The foundations of conspiracy theories

The first is that most conspiracy theorists base their beliefs on values other than science, and sometimes on fear. They are [motivated to believe](#) what they do, and unless those motivations change, it is unlikely they will be swayed by rational argument.

After all, in a world in which so much is known, and so little of it by us individually, it's tempting and empowering to think you have inside knowledge of what's really going on.

We know that [entire industries](#) are built on giving people excuses not to believe in science, excuses that allow them to maintain their delusions. We also know that believing in one [conspiracy theory](#) makes you [more likely](#) to believe in others.

The second reason is that their logic is self-sealing, designed to be

impermeable to external reasoning. Let's take a look at how this works for conspiracies to do with science.

Science vs conspiracy

We may consider two general premises: the first, premise S, represents what the scientific community in general thinks is the case. The second, premise C, is what conspiracy theorists think is true.

Let's initially look at climate change. Premise S, the scientific position, is that the planet is warming and that humans are contributing to this effect.

Premise C, the conspiracy position, is that scientists are motivated to increase their funding (or support a green ideology, or both) by making extreme and unwarranted predictions about the dire consequences of [global warming](#).

The devilish part is that confirming instances of Premise S are also confirming instances of Premise C. Whenever a result is published supporting that the planet is warming and that humans are in part responsible, that result also supports the idea that scientists are once again feathering their collective nests by appealing to fear. Each theory is strengthened, according to its proponents.

Premise S could be [falsified](#) if we found [evidence](#) showing either that the planet is cooling or that humans are not responsible for increasing temperatures. But that same evidence would be seen by conspiracy theorists as the truth finally emerging from beneath the layers of suppression.

Either way, it's a win for supporters of Premise C.

Any attempt to falsify Premise C is doomed to failure, as each new result that supports Premise S is simply seen as another instance of a conspiracy among scientists.

In the case of evolution, Premise S is that evolution has occurred and natural selection is its mechanism. Premise C, developed by religious fundamentalists, is identical to the [climate change](#) example, except that in this case scientists are said to be motivated to perpetuate the [myth of evolution](#) in order to promote their ideology and their atheism.

Again, evidence in support of Premise S (evolution) is also evidence in support of Premise C (conspiracy). Likewise, any evidence against Premise S, however weak, is seen as the truth coming out by supporters of Premise C.

How to topple a conspiracy theory

But there is a strategy that may change people's minds (or at least expose faulty thinking) when dealing with conspiracy theories in science; one loose scale in the logical armour that can be worked free.

Rather than look for more instances confirming Premise S, it is more effective to appeal to the rationality of conspiracy theorists – not because they are necessarily rational, but because they believe themselves to be – and ask them to state what would falsify their belief. It would work like this:

- Step One – Agree on a phrasing of Premise S and Premise C for the issue at hand. The earlier examples show how this can be done.
- Step Two – Agree that a theory should be able to be falsified for it to be scientific. There should be a sentence that says "if I am wrong, we would expect to see [...]". If there is no such sentence,

- the theory is not scientific (with very few arguable exceptions).
- Step Three – Ask what evidence would falsify Premise S, which is usually an easy task (even more so since most theorists think the evidence already exists).
 - Step Four – Ask them what would falsify Premise C. It is here they will falter. The conditions of falsification need to be clear and achievable, phrased in the language of the here and now. No shifting of goal posts and no redefining of terms.

And your answer is...?

Consider what evidence a global warming or evolution conspiracist would accept that shows scientists are not involved in a conspiracy. I invite the reader to suggest some. We could easily extend this to the topic of vaccination.

Consider also what evidence would falsify Premise C in terms of aliens visiting Earth, ghosts or any other situations in which there is an absence of any definite evidence.

This process demonstrates that conspiracy theorists are not behaving rationally, in as much as we might think of rationality being in line with scientific methodologies, not only towards others, but also to themselves.

Journalists may find their job more interesting, and audiences might better enjoy the outcome, if they shaped interviews with this process in mind. And politicians and others who hold to conspiracy theories might have to admit, when pressed, that their beliefs are at best unscientific, and at worst deluded.

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Source: The Conversation

Citation: The ironclad logic of conspiracy theories and how to break it (2014, October 6)
retrieved 25 April 2024 from

<https://phys.org/news/2014-10-ironclad-logic-conspiracy-theories.html>

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