

Sector Connector

Evidence for the masses

Science is a subject close to the heart and a life long interest. Indeed, I graduated in biology.

Rather than a career in science, life took another path. But I've always followed developments, especially discoveries that heighten our understanding of human nature or what evolutionary path we seem to be on.

I also enjoy reading the more esoteric such as theoretical physics, where much is counter-intuitive but plausible, hard to imagine and difficult to pin down. A little like politics.

Systems of belief

What is science? Well, it's not a thing. Science is a process. By and large, it's a process of falsification to eventually agree on a most probable truth. If enough attempts to disprove an idea fail, it's probably right.

Tens, hundreds, even thousands of researchers across the world conduct experiments to falsify each other's theories and experiments. This process happens in every field, from medicine to climatology. So, science is not a system of belief, but one for creating it.

This is a powerful path to knowledge, but not a natural one. As humans, we tend to think the other way round – decide on a truth and find evidence to support it.

Onus

The biggest difference between science and politics is how rigorous you think proof needs to be.

The onus of proof is fundamental to science, in that you're likely to be ridiculed and professionally ostracised



Illustration by Kathryn Steel.

if pushing unsupportable theories. That hardly matters in politics, and it can work for you if constituents become polarised on an issue, or can be made so.

This goes as far as cherry picking science. First, put aside any consensus that weakens the veracity of your belief, then create a body of selective evidence (and opinion), which supports it and/or casts doubt on the alternatives.

The basic technique is to say plausibility is sufficient evidence, doubt is disproof enough, and to put the burden of proof always on the other.

Evidence?

With these observations in mind, I find the notion of evidence-based policy making pretty scary.

When policy makers seek evidence to support a stance, they may well look for best practice but not necessarily for testable truth. They'll seek validation for the starting point, not falsification. The risk of ending up with a fallacious policy is pretty high I'd say.

Scientists are human and act politically too. What they can't do though is ignore the evidence, say the earth is flat and keep their jobs. They'd have to become lobbyists. The most influential politicians can and do though.

Debate on the ifs and whats of global warming are an example. Another, the Creationists who deny evolution (especially in the USA), and of course in the mid 20th century, theories of racial supremacy changed everything. Political method, not scientific, is to blame for it all.

Improvements in science education might help, so that journalists and Jo Public understand better what is and isn't good evidence. I'd agree, but that may still not do the trick.

Humans want the comfort of certainty even more than righteousness, and science can't help with that. **N**