

## **The War on science from both sides of the political divide and even elsewhere.**

Science has become an enigma and almost everyone is at war with it. Neither the right nor the left wants to accept it. On the right we see climate change denial, denial of evolution and denial of reproduction science. The left is almost as anti-scientific with its frequently excessive support for alternative medicine, refusal of vaccines, New Age beliefs and post-modernism in education.

Even the press refuses to touch science. Part of the reason is that neither politicians nor the press know any science. Of the 435 representatives in the House less than a dozen have scientific qualifications. Politicians were mostly trained to be lawyers or trained to win arguments and not to seek the truth. As has been widely reported, it has become a 'post-truth society'.

Science is increasingly seen as an elite activity for the super-smart and the super-logical. To make matters worse, science education in the US is at all all-time low. My book argues for a close connection between life in general and doing science. I present science as a natural extension of life not an alien force within it. I claim that science, like life itself, is governed by trial and error, by incremental changes, not by brilliant minds that make dramatic revolutionary discoveries.

I document this with seven case studies from unknown scientists who were wrong on most of what they believed and yet their ideas led to major scientific progress. I argue for an evolutionary model of how scientific knowledge develops in a unified manner even though it is being conducted by hundreds of thousands of competing scientists.

One of Donald Trump's transition team aides, Anthony Scaramucci, recently said. "Science doesn't always get it right. Science once thought the Earth was flat and that the Earth was the center of the world". This represents a failure to understand the provisional nature of scientific knowledge. It is also a gross mistake since in the second case it was not the overwhelming scientific opinion that argued for an earth centered world but the overwhelming religious opinion.

Scaramucci's views are also highly selective as to what parts of science to accept. Scaramucci and his colleagues would probably not hesitate to board an airplane due to a belief that science might have aerodynamics wrong. They would probably not hesitate to take a medical doctor's advice because medical science might have it wrong.

Science progresses through mistakes. My book argues that mistakes add up to progress.