

What is Science?

Southport PiPs, Wednesday 11th May 2022.

Why have I suggested this?

- 1) It links (in my opinion) to the recent topic of, “Are Values the New Religion?”
- 2) The “God is dead” quote by Nietzsche (I believe is often misapplied).
- 3) My previous experience in/with education and the topic, “[Medicalisation & Morality](#)^{1,2}”.
- 4) I noted a previous PiPs topic, Logical Positivism.

Three Categories of Follow Up Questions

Category 1: Scientific expertise

What is a scientific expert? Who are scientific experts? How should we judge scientific experts? How do people judge which are ‘real’ scientists and ‘pseudoscientists’?

Category 2: Different or Demarcate?

Are social sciences science, such as (but not limited to): anthropology, sociology, psychology, political science and economics? If not, then why does no one complain about and why do many respect the academic standing of the London School of Economics and Political Science (i.e. the LSE)?

Is mathematics a science? If the sciences require empirical evidence and mathematics (I believe I’m very bad at mathematics) does not, then should mathematics be considered together with the sciences?

Is medicine and medical practice a science? If yes then how? If not, then how not and why not

Category 3: Trust

Why do we trust some sciences and scientists over others? Why do we favour some sciences and scientists over others?

Real World Application and Analysis

Consider how the world has reacted to COVID, who they’ve considered to be experts and why they trust or distrust particular opinions.

A particular person I like to point out is Jeremy Corbyn’s brother, [Piers Corbyn](#). He has a BSc in physics from Imperial College London and an MSc in astrophysics from Queen Mary University of London.

He is/was a professional meteorologist. And, as the linked article to the The Independent says: “[This anti-mask song about farting in your trousers, featuring Piers Corbyn, has to \[be\] heard to be believed](#)³”.

¹All links are to Wikipedia, if not the full link will be here in the footnotes.

https://warwick.ac.uk/fac/arts/history/students/modules/hi176/programme/week_18/ From the Uni. of Warwick’s course: Mind, Body, and Society: The History of Medicine and Health (HI176) from the uni’s History’s Department’s Centre for the History of Medicine.

² Alternative article titled, “Gawande (Acclaimed Stanford Surgeon & Author) discusses problems of ‘medicalized’ mortality in the U.S.” <https://med.stanford.edu/news/all-news/2015/03/gawande-discusses-problems-of-medicalized-mortality-in-the-us>

³ <https://www.indy100.com/news/piers-corbyn-anti-mask-song-fart-b1965847>. Alternative 1 min clip <https://youtu.be/WN5DNubXmiM?t=59> or two Piers for the price of one 12 minute clip https://www.youtube.com/watch?v=elf6h_K4JH0

I use him as he can be seen as a fully qualified and experienced scientist from academically respected institutions.

The views we have about science and its implications have effects on all of us. This can be in terms world economics, economies and eco-systems, our health and the health of friends and family. In short, it can be and is a matter of life and death. Hence, I ask: "What is Science?"

Background on Topics Mentioned

The Logical Positivists

The [Logical Positivists](#) were a group of academically acclaimed individuals. In layman's terms they could be seen as super smart scholars with schooling in the sciences (both physical and social sciences) and philosophy. Notable members and talks were known as the [Vienna Circle](#). Two interesting individuals, who were seen to be in different parts of Vienna's Circle, were [Ludwig Wittgenstein](#) and [Karl Popper](#). Wittgenstein was seen to be in the circle's centre and praised by the Logical Positivists. His book '[Tractatus Logico-Philosophicus](#)', could be considered the Logical Positivists bible. Karl Popper was younger and less influential, and could be seen to be outside their circle. However, both criticised the Circle. Wittgenstein wrote a follow up book to explain his stance called '[Philosophical Investigations](#)'. Karl Popper's criticism became one of the 20th century's most influential ideas on what is science. Popper coined the term 'pseudoscience' and put forth the idea of [empirical falsifiability](#) in which he says: "if you can't prove it wrong then it's not science".

Nietzsche's Noted Quote

"God is dead. God remains dead. And we have killed him. How shall we comfort ourselves, the murderer of all murderers? What was holiest and mightiest of all that the world has yet owned has bled to death under our knives: who will wipe this blood off us? What water is there for us to clean ourselves? What festivals of atonement, what sacred games shall we have to invent? Is not the greatness of this deed too great for us? Must we ourselves not become gods simply to appear worthy of it?"

My interpretation of Nietzsche's Quote

I interpret the English quote and context as Nietzsche blaming the 17th to 18th Century '[Age of Enlightenment](#)', with its focus on science and reasoning, to have killed the authority and idea of religion. This death is important as religion and its experts were previously society's underlying basis for understanding the universe (i.e. epistemology and ethics). With the Age of Enlightenment killing religion (i.e. God is dead) the result is each of us, individually, having to understand the world and the universe ourselves (i.e. establish our individual epistemologies and ethics⁴).

The quote was originally in German⁵ from the 1882 book: '[Die fröhliche Wissenschaft](#)'. The English title can be known as either: 'The Joyful Pursuit of Knowledge and Understanding Science', 'The Gay Science (i.e. The Happy science)' etc. And can also be found in '[Sprach Zarathustra: Ein Buch für Alle und Keinen](#)' (Thus Spoke Zarathustra: A book for everyone and no one)'.

Amante.

⁴ In terms of personal ethics, Linda Whitehead's used the term Personal Values, and the premise that now people without religion focus on the individualistic-ish ethic of 'Living Your [own] Life' (simplistically summarised).

⁵ Note: I can barely read my first language English, let alone another language such as German. (a parrot lee, at least 5 experts, and 4 tests say, I'm difinitely dyslexia).