

PHILOSOPHY

WHAT IS PSEUDOSCIENCE?

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A recent [Nature commentary](#) defines pseudoscience as everything that cannot be empirically tested. [Wikipedia](#) is more comprehensive

Pseudoscience consists of statements, beliefs, or practices that claim to be both scientific and factual but are incompatible with the scientific method

with a long footnote pointing towards Oxford English Dictionary 1989

A pretended or spurious science; a collection of related beliefs about the world mistakenly regarded as being based on scientific method or as having the status that scientific truths now have.

[Fads and Fallacies in the Name of Science](#) 1988 gives probably the best definition

[w]hat is objectionable about these beliefs is that they masquerade as genuinely scientific ones... claims presented so that they appear [to be] scientific even though they lack supporting evidence and plausibility” ... In contrast, science is “a set of methods designed to describe and interpret observed and inferred phenomena, past or present, and aimed at building a testable body of knowledge open to rejection or confirmation”.

Here is my own definition of the scientific method in the ethics lecture 2021 (which is close to the initial statement).

The **scientific method** is an empirical method of acquiring researcher independent knowledge of occurrences/objects/procedures since at least the 17th century. It involves **careful observation**, applying **rigorous skepticism** about what is observed, given that **cognitive assumptions** can distort how one interprets the observation. It involves **formulating hypotheses**, via induction, based on observations; **experimental** and **measurement**-based **testing of deductions** drawn from the hypotheses; and **refinement (or elimination) of the hypotheses** based on the most recent findings.