

## Information, “fake news”, fact, theory and the line between science and belief<sup>1</sup>

With Internet, information is instantly **available** about everything and from everywhere. This is amazing and new in history. But we must be careful with what we find. Not all sources are **reliable** and reliable sources may be wrong. It is therefore important to check sources, and **cross-check** information.

Usually official institutions in open, pluralistic societies are fairly trustworthy. The information and analysis they **release** normally follows the established scientific process in a particular discipline. For example, the **WHO** would normally be expected to respect proper scientific procedures. The information they publish should be reliable – but it is not **infallible**. The same could be said about public statistical institutes like Eurostat, and about other recognised scientific institutions and leading academic journals.

Similarly, reputable media organisations normally follow journalistic codes of conduct about checking information and reporting the facts as they occurred – to the best of their ability. However, these news **outlets** rely on sales and advertising revenue. They need interesting and exciting stories “**to sell copy**”. This is especially true for 24-hour TV news channels, which are constantly “**breaking news**”. Also, they often broadcast instant commentary by **pundits**. Some such channels specialise in disseminating clearly-**biased** opinion, or even “fake news”. The same is very true for social media which is unchecked.

That is why it is important to cross-check sources and information, and think about what ideological position they may have. Wikipedia may sometimes help, especially for fact-checking. It is an incredible, international, collaborative encyclopaedia, with a [Universal Code of Conduct](#) to promote mutual respect, and a verification process to ensure neutrality. But again, it is only one source.

In addition, it is important to realise that views expressed in one culture, or at one particular time, may turn out to be wrong in different situations. Often dominant views in a society also express power relationships and prejudices, or as Yuval Harari argues pessimistically “complex human societies seem to require imagined hierarchies and unjust discrimination”.<sup>2</sup> Moreover, renowned experts in one field may be wrong in other areas or have prejudices. For example, the Nobel Prize winner Paul Krugman reckons that Keynes’s *General Theory*, was “probably the most important book in economics”.<sup>3</sup> Yet, it is now largely forgotten that Keynes was a committed **eugenicist**.

Indeed, the **veracity** of information and facts is questionable by definition, as they do not really exist **per se**, but only within the way we perceive them, against the background of the ideas and theories we already know. As Thomas Kuhn has pointed out, simple “fact-collecting” without a theoretical framework of analysis just “produces a **morass**”.<sup>4</sup>

For Karl Popper, our “observation is always selective” and we are always interpreting what we see, because “we are born with expectations; with ‘knowledge’ which, although not *valid a priori*, is *psychologically or genetically a priori*, i.e., prior to all observational experience”.<sup>5</sup> All we can do therefore is to make **conjectures**, to **hypothesise** about what may be true, and then test these. If a hypothesis is proved wrong, we need to formulate a new one, but experiments cannot absolutely prove a hypothesis.

This ability to test a hypothesis and maybe prove it wrong is the definition of science today: we can observe and test that the sun rises every day. Ideas which cannot be tested and **refuted** are beliefs: people may hold them strongly, but they are not scientific. As a result, modern society is characterised by the uneasy situation of “radical doubt”.<sup>6</sup>

**Available:** accessible, at hand  
**Reliable:** dependable, trustworthy  
**Cross-check:** compare with other sources

**Release:** set free, issue, make available  
**WHO:** [World Health Organisation](#)  
**Infallible:** never wrong

**Outlet:** a place of exit, a point of sale  
**“to sell copy”:** to sell papers, books, etc.  
**“breaking news”:** to announce news, a scoop.  
**Pundit:** someone who gives informed opinion  
**Biased:** partial, one-sided

**Eugenicist:** someone who believes in eugenics – i.e., the view that certain people with undesirable characteristics should be discouraged from having children.  
**Veracity:** truthfulness  
**Per se:** in or by itself

**Morass:** flat, wet ground; something which is unclear

**Conjecture:** opinion, judgement, conclusion  
**To hypothesise:** to put forward a hypothesis

**To refute:** to prove false, wrong, to falsify

<sup>1</sup> Thanks go to Goulven Rubin, Pierre-Charles Pradier and Horatiu Burcea for comments. The usual disclaimer applies (i.e., remaining mistakes are mine).

<sup>2</sup> Yuval N. Harari, *Sapiens: A Brief History of Humankind*, London, Vintage, 2014, p 153.

<sup>3</sup> Paul Krugman (2007) discussing his introduction to a new edition of Keynes’s *General Theory* (1936), <https://www.youtube.com/watch?v=CVHWInbJsC4>, retrieved 26 January 2022.

<sup>4</sup> Thomas S. Kuhn, *The Structure of Scientific Revolutions*, 4<sup>th</sup> edition, Chicago, University of Chicago Press, 2012 (1962), p 17.

<sup>5</sup> Karl Popper, [Conjectures and Refutations: The Growth of Scientific Knowledge](#), London, Routledge, 2002 (1962), pp 61-2.

<sup>6</sup> Anthony Giddens, *Modernity and Self-Identity: Self and Society in the Late Modern Age*, Cambridge, Polity, 2009 (1991), p 5.