

LENRs versus “cold fusion” and the search for scientific ‘truth’

A philosophical comment for 2012

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While the realm of religious faith may not be able to explain all the myriad objective facts comprising the inner workings of Nature uncovered in the gradual progression of secular science over time, the world's great religions do have some very important things to say about the conduct of human beings engaged in the pursuit of science and the ultimate goals of such work. Two such references are exemplary:

"And ye shall know the truth, and the truth shall make you free," John 8:32 in the American King James Version of the Holy Bible.

A somewhat similar statement is made in chapter 7 verse 33 in a version of the *Holy Qur'an* translated by Abdullah Yusuf Ali where it is said that, *"...things that my lord hath indeed forbidden are ... sins and trespasses against truth or reason ..."*

Elaborating further in that vein, the devoutly religious Arab mathematician and brilliant polymath Ibn Al-Haytham (Arabic: أبو علي، الحسن بن الحسن بن الهيثم), considered by many historians of science to be the father of the modern scientific method, said the following in his famous 7-volume treatise on optics, *Kitab Al-Manadhir* (written ca. 1011 - 1021, purportedly while under house arrest in Egypt):

"We start by observing reality ... we try to select solid (unchanging) observations that are not affected by how we perceive (measure) them. We then proceed by increasing our research and measurement, subjecting premises to criticism, and being cautious in drawing conclusions ... In all we do, our purpose should be balanced not arbitrary, the search for truth, not support of opinions ... Hopefully, by following this method ... (we can find a) road to the truth that we can be confident in ..."

Tracing that line of thought closer to the present era, in Chapter 3 of his secular 1781 book, *"The Critique of Pure Reason,"* the famous German philosopher and geographer Immanuel Kant commented that:

"We have now not only traversed the region of the pure understanding and carefully surveyed every part of it, but we have also measured it, and assigned to everything therein its proper place. But this land is an island, and enclosed by nature herself within unchangeable limits. It is the land of truth (an attractive word), surrounded by a wide and stormy ocean, the region of illusion, where many a fog-bank, many an iceberg, seems to the mariner, on his voyage of discovery, a new country, and, while constantly deluding him with vain hopes, engages him in dangerous adventures, from which he never can desist, and which yet he never can bring to a termination. But before venturing upon this sea, in order to explore it in its whole extent, and to arrive at a certainty whether anything is to be discovered there, it will not be without advantage if we cast our eyes upon the chart of the land that we are about to leave, and to ask ourselves, firstly, whether we cannot rest perfectly contented with what it contains, or whether we must not of necessity be contented with it, if we can find nowhere else a solid foundation to build upon; and, secondly, by what title we possess this land itself, and how we hold it secure against all hostile claims?"

Lastly, fast forwarding from the 1700s to the near-present, on page 216 in his fascinating and well-documented 1994 book, *"Forbidden Science: Exposing the secrets of suppressed research,"* science writer Richard Milton commented insightfully that:

*"None of the facts of science - even though they have been arrived at empirically or inductively - can claim to be rational in themselves ... That [an] effect is predicted by scientific theory does not make it a rational fact - it merely confirms that scientists are thinking along productive lines ... But the facts of Nature themselves ... [are] ... often far from clear. Not unnaturally, scientists like to think that the predictions of their theories are rational expectations. **But only Nature is the [final] arbiter of what is and what is not.**"*