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Remembering what it Means to be Scientific, (Because Some of us Appear to have Forgotten)

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In the now distant past, prevailing systems of natural philosophy relied all to often on fanciful guessing and the mere citing of authorities to establish truths of science, (e. g., Aristotle or ecclesiastical authority.) For centuries now, knowledge of nature, to be deemed scientific, must derive from observation, not from abstract reasoning.

The work of a scientist consists in part of the creation of a narrative, (theory,) accounting for and consistent with a set of observed facts. More than one narrative may fit the given set of facts. When there are competing narratives, the work of the scientist becomes a search for an additional observable fact that falsifies one of the two narratives, possibly by devising a decisive experiment. Sometimes an additional observed fact will falsify a narrative in the absence of a competing narrative, necessitating revision or replacement of the narrative.

In any case, the possibility of eventual falsification must be recognized for every theory. So, to say "we know" in some absolute sense is rather unscientific. Further, to say a theory is "confirmed" by an observation that does not falsify it is rather silly and unscientific as it fails to remove the possibility of falsification. So, what are we to make of so-called physicists who say we know the universe began with a "big bang" or we know the universe is expanding, or who say Einstein's relativity has been repeatedly confirmed. Why do some say, "as Einstein predicted," by way of supporting their findings, especially when said without specific citation.

Thomas S. Kuhn, author of "The Structure of Scientific Revolutions," noted the historical reluctance of the scientific community to abandon a falsified theory, preferring to ignore or deny the falsification. Some of the claimed confirmations of relativity are in simple fact falsifications of it, de Sitter's astronomical proof of the constancy of light speed, for example. Relativity theory claims light speed is the same relative to each and every inertial reference frame, but de Sitter showed that it is not: as the proper inertial frame of a star changes, the speed of the light it emits remains constant not relative to the star but relative to an unchanging frame of reference. The Sagnac effect falsifies Einstein's relativity, yet some prefer to dismiss it as irrelevant. They also ignore the falsifying measurement of one-way light speed anisotropy by bureau of standards scientists Torr and Kolen. In 1905, Einstein did not cite any empirical basis for his special relativity paper only the failure of efforts to detect what his theory denied, namely the reference frame relative to which light speed is isotropic, (the so-called "luminiferous ether",) which has since then been detected, (Torr and Kolen, 1982.)

Big Bang cosmology arose as an unnecessary extrapolation of the doctrine of expansion of the universe, which arose as a speculation about the cosmic red shift. The cosmic background radiation is cited as supporting evidence. But the red shift may well be due to differential attenuation with shorter wavelengths more attenuated than longer wavelengths. Cosmic background radiation resembles and may be black body radiation from cold matter (dark matter... like the cosmic clouds that block light from more distant sources. [see http://physicsfixes.elementfx.com/index6.html])

The claimed bending of light by gravity may in fact be refraction by the stellar corona; Eddington is known to have cherry-picked data to support Einstein's conjecture.

There are reasons to question other currently accepted notions, too, but let me not go on at tiresome length but to say there is no shortage of alternative theories and falsifying observations, but a shortage of scientific integrity...afraid so.

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