What If Anything Has Changed About Human Nature In the Last 2000 Years?

Post by “Martin” of January 8, 2024 at 4:49 AM

There are other scientists (e.g. physicist and nobel prize winner Weinberger) who think that science is progressing toward Truth. I am not among them. Even if that Truth existed, we would not know whether we have found it. Older theories of physics have rather been abandoned than refuted in all possible variants. E.g., the theories around "phlogiston" and the "ether" appear to be wrong but only from the perspective of the more fruitful theories which have replaced them. It appears unlikely, but further advanced theories might revive one of them.

The only criticism of Cicero in "On Ends" which was substantial at his time and not just a strawman argument was:
"Epicurus says the atoms swerve without a cause, — yet this is the capital offence in a natural philosopher, to speak of something taking place uncaused."
This objection was shattered when physicists came up with quantum indeterminacy. There is a strong analogy between Epicurus' swerve and quantum indeterminacy. The swerve is the most spectacular anticipation of modern physics by Epicurus. However, if in another twist, the hard determinists among today's physicists find a way the measure their pilot waves or other means of saving determinism, this would again take a dramatic turn. At no point along this line of development could we be sure that we found the "Truth".

The maybe most spectacular example of multiple twists in the development of physical theories is the cosmological constant: Epicurus and Einstein both assumed that the universe is essentially static. When Einstein applied his general theory of relativity to cosmology, he needed to arbitrarily introduce the cosmological constant into the equation to obtain a static universe. A few years later, the expansion of the universe was discovered. As a consequence, Einstein himself declared the introduction of that constant as his biggest stupidity ("Eselei"). Subsequent models of cosmology typically did not use the cosmological constant, i.e. set it to 0. A few decades ago, the accelerated expansion of the universe was discovered. As a consequence, the cosmological constant reappeared as a necessary ingredient but with the opposite sign expected by Einstein.
However, there is Milgrom's theory, which does away with the apparent expansion, big bang, dark matter and dark energy and returns to the static universe. The catch is that it is only an ad-hoc theory. However, if eventually experiments confirm that the law of gravity is actually of the form assumed by Milgrom, his theory would become fashionable.
Again, at no point along this line of development could we be sure that we found the "Truth".

Anything more on Truth than "the way things are" according to our best models requires a considerable leap of faith and has an unknown date of expiry.