

Human Knowledge of Reality: The Big Picture

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Modern humans have existed on Earth for about 275,000 years. Mostly in just the last 100 years, science has determined that:

- 1) Our physical universe is:
 - a. enormous – at least 93 billion light years in breadth,
 - b. about 13.8 billion years old with our solar system being relatively young,
 - c. expanding at an accelerating rate,
 - d. totally connected and integrated both materially and energetically,
 - e. constantly changing at every scale – micro to macro,
- 2) Our physical universe constitutes less than 5% of reality,
- 3) 95% of our universe is made up of dark energy and dark matter which we do not yet understand or know how to account for in any of our theories,
- 4) Our universe is quite possibly only one among many in a multiverse,
- 5) Earth is one rocky planet in a medium size solar system in the Milky Way Galaxy – one among hundreds of billions of galaxies in the universe,
- 6) Humans are a late species to evolve on Earth where all complex species eventually have gone extinct,
- 7) Humans as a species and even Earth as a planet are so minuscule as to be essentially irrelevant in this vast – as well as mostly unknown – reality.
- 8) Human perception is extraordinarily limited. The primary human sense – vision – perceives only 0.0035% of the electromagnetic spectrum.
- 9) The epigenetic component of the human genome responds to experiential pressure and plays a critical administrative role in gene activation.

These scientific revelations are impressive, but they also reveal the following:

- 1) Our current scientific theories account for only a tiny part of reality,
- 2) Humans are ignoring their insignificance and continuing to celebrate themselves and their theories as being very important and “advanced,”
- 3) Our physicists, astrophysics, and cosmologists persist in trying to develop a “Theory of Everything” based on 5% of reality – the Standard Model.
- 4) All of our scientific theories of reality depend on assumed constants. This pervasive approach to explanation conflicts directly with the fundamental paradigm principle that everything in our reality is always changing and that there are no constants. The history of science demonstrates repeatedly that what seem to be constants at certain scales become variables at other scales [e.g. time, gravity].
- 5) If in reality everything is both totally connected materially and energetically and completely integrated at every scale, and if the system of all “things” is in a perpetual state of change, then no thing is in fact separate. It follows

that the pervasive assumptions in science of separate variables, causes, laws, and scales, as well as researchers being objective and separate from their experiments are inherently false. Reality is One System!

- 6) Beware the impact of language! Our languages are extremely important in allowing for human communication, but the categories of differentiated things and actions that our languages create are dependent upon our senses, and our human senses are extraordinarily limited. Vision is our primary human sense, but our vision perceives only the tiny “visible” light section within the electromagnetic spectrum; it fails to perceive 99.9965% of the rest of that spectrum. So, the “things” we differentiate/separate from one another, name in our language, and assume in large measure to reflect the reality that is “out there” are in essence entirely artificial constructs. If our perception included all of the electromagnetic spectrum, our visual world would be so dense we would be able to find no separation whatsoever. That is the reality of infinite connection/unification that our perception, language, and for the most part our prevailing view of reality misses. Our theories in the physical sciences remain caught in the conceptual conflict between our limited perceptual reality of separate things and the vastly expanded alternative reality of both physical and energetic unification that our technology has revealed.
- 7) Resolved: nature and nurture are active in human genomic evolution.

How do we respond creatively to the fact that modern science has at one and the same time achieved so much while exposing both the colossal insignificance of humans and the gross limitations of its own current scientific theories? Do we withdraw, accept existing in perpetual ignorance, and seek the comfort of religious belief? Or do we accept the enormous scope of the task before us, and:

- 1) Bring our scientific theories into compliance with the much larger domain of reality that must be included,
- 2) Evaluate the impact of assumptions about constants and separateness in all experimental results, if continuing to make these assumptions is deemed necessary in conceiving and conducting scientific research. Encourage broad system perspective investigation, analysis, and interpretation,
- 3) Make a much greater effort to educate the global public regarding science, its methods, its goals, and its consensus discoveries,
- 4) Accept the very delicate and challenging task of genetically engineering our species a) to become more productive and responsible in our human societies on Earth, and b) to see our species – probably in different variants and with the assistance of sophisticated robotics – eventually populate other planets, solar systems, and even other galaxies. Humans will have enormous potential to be successful in alternative environments when they are able to realize their own species’ options in evolution.

Conclusion

In a very short period of time, science and its associated technology – which have emerged within complex society – have made extraordinary progress in what they have revealed about our physical world – an important 5% of our reality. But at the global level, complex human societies are very young and behaving in a way that reflects their immaturity. If these societies do not grow up and stop both disrespecting the limits of Earth's ecology and acting aggressively in behalf of their exclusive self-interests, the conditions will not be present to support the continued investigation of the 95% of reality that we do not yet understand as well as the potential for greater human participation in that much expanded reality.

The ability of science to persist in its quest to reveal the full nature of reality depends on current humans – including scientists – rejecting their narrow-minded hubris and collectively pursuing and achieving the above identified global societal, ecological, and species' goals. Otherwise, we humans will most likely be reduced to just another short term, complex species confined to planet Earth and headed for an ignominious extinction.