

Perfect vs. Good in Science

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Abstract

In experimental science there are occasions where elegant perfection is properly demanded, ideally involving one variable. In much research practice there are often parallel agendas involving anything but good science: Critical science is either not done, or done inadequately, because corrupted research programs often focus on micro-measurable progress within incorrect paradigms, instead of the whole problem itself. Worst of all are studies designed to reinforce previous paradigm errors.

Perfect versus Good in General

Long before experimental science became a big cash cow for institutional incrementalists, [the question of perfection versus the good](#) was examined by philosophers in various cultures. The wisest among them said it is better to seek the meaningful good, than to seek elusive perfection and not achieve it.

The original aphorism is said to have come from Confucius. There is some question as to who was the real Confucius, or even if his analects were a composite of earlier Chinese philosophers. Nevertheless, what we have translated from him is the following: "It is better to be a diamond with a flaw, than a perfect pebble."

Voltaire may have been the first to write: "The best is the enemy of the good." He may have acquired this enemy/friend perspective from an Italian folk proverb. It is important to distinguish "the perfect," an elusive unicorn, from "the best." For example, completing a very good task may be the best we can do, even if it's not perfectly elegant.

Both Shakespeare, and Montesquieu [a father of America's endangered separation of powers], said similar things. There is a general agreement among these and other sages that wisdom is not always equal to the expedient perfect. Modern laboratory methodology seldom follows the perfect path toward wisdom, only that of incremental funding goals.

In the 20th century Winston Churchill said, "Perfection is the enemy of progress." WWII was a bloody mess, and anything but perfect. Defeating armies promoting Teutonic racism was real progress, even if Europe was left with Stalinism and Russian paranoid nationalism. Historical reality (and life itself) is much more complex and messy than any laboratory experiment. Only a profound knowledge of human histories and general systems theory captures the [pseudo-logical elements of systematic racism](#).

Perfect versus Good in Science

Although pure science ideally embraces every thing, and every force, experimental science encounters only a myopic subset from which we blindly generalize. For example, the fantasy goal of astrophysicists is to achieve a verifiable Theory of Everything. Full knowledge of every thing since the primordial Big Bang in our visible universe is envisioned as the goal of scientific knowledge. However, full knowledge of the much greater 4D multiverse is forever beyond our powers of verification, both quantitatively and qualitatively. The "beyond" is where comforting mysticism rules.

Institutional physics also incorrectly models both time and size dimensions. Indeed, the more we think we know, the less we know for sure from within our physics cloud castles. Sadly, the huge gap between the quest and the holy grail of omniscience is just what gullible donors are drawn to when they blindly fund correlative, but not causative, research studies. Pretty correlative data becomes the goal itself – not the understanding of objective cause-and-effect underlying “adjusted” congruent formulas.

For many reasons scientific omniscience will never be possible. There can be no set of perfectly verifiable physics experiments, because the tools required for such verification on a real-world scale are not available to our powers, and never will be. Our visible photon technology can never verify phenomena below the Planck dimension of 10^{-35} m; nor can we multiversally verify any data beyond our local universe. Experimental science prefers to live cozily within its metaphorical castle in the clouds, knowing neither the real base, nor the totality beyond. If you don't know the real possible, you can never fully know the probable.

The multiverse within which our visible universe resides is not very amenable to our controlled experiments – although there are disdained avenues of evidence to support good theory on this matter, as I have reported in other essays. Even the great James Webb Space Telescope (JWST) may not bring understanding of the multiverse beyond our visible universe. Within so-called perfect science is imperfection which we can manage through logical possibility, but not probability. Meanwhile, the JWST should yield very good data, and a big surprise or two.

Within the realm of what is possible is dialectical emergence into a higher level of wisdom and consciousness, but not up to ever-receding omniscience. The best experimental data we can muster may yield good local hypotheses with high-quality data, yielding heuristic probability estimates. Repeating the same or similar experiments never increases cosmic probabilistic accuracy, as we are always at the short end of understanding possibility.

The best we can do is to fill in gaps we can perceive, and to infer from our data what we cannot honestly deduce, assuming the constancy of fundamental physics everywhere. Thus, good and properly designed experimental science is forever with us.

Causation is Reality. Correlation is the math we have created to help us mirror things and forces outside our air castles. Very clever mathematicians in astrophysics have constructed maths involving renormalization and other gimmicks to mirror what they don't know.

For example, it took over a thousand years for the Ptolemaic correlation of the heavens to be replaced by irrefutable observational science. Why? The Ptolemaic model "worked," and Galileo's discovery of Jupiter's moons orbiting Jupiter was not enough to win the day. It took Galileo's irrefutable discovery of the phases of Venus to win the science. Nevertheless, Galileo spent the rest of his life under superstitious house arrest.

For millions of years people "knew" the Earth as flat, with our sun, planets, and moon all drifting close above us. Ancient gods conveniently placed favored tribes at the center of it all. Each cozy model seemingly correlated with causation as we knew it. Life on Earth was easily understood. Anthropocentric religions spun ideas that supported all sorts of fake superiority among diverse peoples. Bronze Age texts also said god gives our tribes dominion over everything. It was only when emerging science developed objective tools that serious causal doubts arose.

Some consider Aristotle to be the greatest thinker of ancient civilization. However, [his ideas in physics](#) and medicine were nearly all wrong. It took post-Galilean experimental science and theory to give us the proper perspective, erasing the lingering influence of his corrupt and lazy thinking.

Our modern world is populated by people of all types who are mainly driven by the core elements of their limbic systems. We all are essentially Stone Age people living in this modern world.

Modern computer society is so hyper-addictive that the typical human attention span is like that of a house fly. Video game thrills are much more valued than the thrills of wise discovery.

The less intelligent we are, the more intelligent we think we are. The more wise we are, the less intelligent we know we are. Having childlike curiosity about the visible and invisible universe, such as when we gaze in open awe at the cosmos – alienates the open minded from those who know for sure that this flat blue planet is 10,000 years old, and that God made it all in seven busy days for us to dominate in His name.

If I didn't personally know some people who literally believe such garbage, the paragraph above would be borderline insanity. I would love to be wrong here – in trade for a biosphere full of ethical, enlightened people seeking Truth within global peace and harmony. Instead, the world is bulging with armed know-it-all crazies who almost guarantee the nuclear extinction of humanity, starting soon in Russia or China.

Those who consider authentic science to be for eggheads misunderstand the cultural value of science. It is science that transcends our limbic systems, challenges ossified institutions, and points the technical way to our ideal global future. We don't need to be omniscient to appreciate science, just oriented toward Reality. Here is the true survival value of very good science.

The pre-science of the past went by different names, but had the opposite effect on humanity's optimal path toward wisdom. Ancient "science" paraded not as superstition, but as blind faith to species narcissism found in tribal texts, or lazy pontifications. This fundamental error also has been, and still is, found in various forms of pseudo-precise astrology and necromancing.

Whereas there will always be an honest space for possibilistic spiritualism in science, its honest tail should not wag that dog. Narcissistic metaphysics persists because it is very easy and comforting, which is hardly the basis for any objective truth

seeking. Real science is done because it is objectively proper. In contrast, we embrace anthropocentric metaphysics because we are mentally lazy toward the unknown.

Science itself does not thrive on myopic incrementalism at the expense of the search for truth. Money wasted on experiments designed to generate “publish or perish” credits could be much better spent on less-than-perfect experiments that are properly designed to conform with the scientific method. Our best cultural future will never be given to us by the research model of learning more and more about less and less.

This discussion is not about a black-or-white science world, as there have been many excellent experiments that embody both multi-variable precision and the good, such as with the JWST. The challenge for funded science in areas such as astrophysics and medicine is to both design and execute very good studies.

I have written on aspects of this topic in various ways and times. For the sake of brevity in this general essay, I invite you to visit astronomy-links.net, and therein go to the “Clark’s Web Pages” section. You are invited to peruse my many essays with the balanced science model in mind. Feedback is welcome.