

The Science for What is Fundamental

By: Gilbert Leon Joseph Beaudry

Fundamental is generally what the academic community of science accepts to be a measurement, concept, or law, discovered or supported by empirical systems of investigative and/or with the best known rational scientific methodologies to describe realities and phenomena.

Present fundamental laws and concepts support whole branches and subfields of science. However, science should never be laissez-faire as new science using breakthrough thinking in combination with improved methods of investigation, and new observations can overturn what had been accepted previously as a fundamental concept.

A scientific revolution could occur with new branches of scientific breakthroughs, or new fields of study revealed, if a scientist notices a problem, looks for abnormalities, or makes an observation, with the goal of formulating a replacement hypothesis for an existing fundamental concept or phenomenon description that is on shaky ground, or poorly supported - for what is, the real and correct science behind an observation, a phenomenon, or force.

Thomas Kuhn in his 1962 publication of, The Structure of Scientific Revolutions, warned of what he called normal science. Scientist conducting academic science without questioning or challenging the underlying assumptions for observations, experiments, theories, or current explanations.

Normal science practised by academia tends to continue into a psychological phenomenon that is known as group thinking, which is very dangerous as it also actively suppresses dissenting viewpoints and puts up institutionalised barriers to block or prevent outside influences. Leaders and entrepreneurs of the open science movement are working to eliminate group thinking and the institutionalised barriers by opening the doors of access and disseminating of ideas, research, and knowledge.

The progression of the internet is an important opening door that can be used for solving foundational questions in physics and cosmology as data and knowledge are released into the world, available for research and building blocks that previous generations did not possess or had the opportunity to utilise.

The internet, open science, and increased knowledge are pose to contribute or correct what is presently fundamental by the fact it is becoming the way to practice and propagate scientific knowledge from the practical and philosophically fields.

What is considered as fundamental in science or used in our understanding of cosmology can be rooted on a solid foundation of scientific methodologies, measurements, and data, or on various degrees of certainty. It, however, can also be based on precarious hunches or of questionable conclusions which academia continues as lemmings to propagate as the science, but really, it is doubtful, or suspicion, or problematic, or complicated, or puzzling.

The public and the science community should be aware of what type of universe to which scientist offer their ideas, conclusions, and predictions for acceptance. These scientific pursuits relies upon fundamental foundations which may be solid, or faulty, or doubtful.

Nature can be described on different levels, and the relationship between them can be profound. These differences should be useful in creating a system to judge between the various ideas, models, science statements, hypotheses, mathematical calculations, theories, etc., that are used to describe phenomena or the universe and the fundamentals on which their support, conclusions and predictions are based upon.

The Visual Universe is our first impressions of what is observed by our human visual senses. Our visual senses are fundamentally flawed in perceiving reality correctly. The past is repeatedly littered with wrong conclusions by first impressions of what was visually seen, and therefore should be recognised as a continuous on-going logic problem to be overcome. The Visual Universe is fundamentally an incomplete understanding of the universe because of our limitation of what we visually see, and our human limitations for making correct conclusions. Historically wrong visual impressions can be corrected and revised as science advanced.

The Detectable Universe is supported by the scientific methods, philosophies of science, research, investigation, data collecting, and the use of new instruments. The Detectable Universe is observed affecting the Visual Universe by instrumentation or by methodology, however occupying the space beyond our visual senses to observe it.

The Mathematical Proposed Universe is purely exploratory mathematics – seeking an explanation for phenomena that may or may not exist.

The Speculative Universe is not observed at all and is of the imagination, or of pure speculation.

Also, in the philosophy of physics and science the effects on observations and phenomena because of phenomenalism is weakly considered. Astrophysics phenomenalism should be expanded upon as a fundamental scientific methodology to be seriously considered when making conclusions or predictions for observations and measurements.

Phenomenalism from the Greek *phainomenon* (appearance) philosophically means any system of thought that has to do with appearances.

The Dictionary of Philosophy and Religion Eastern and Western Thought, W.L. Reese, Humanities Press says, “The difficulties present in the dualism of phenomenon and object have led a number of philosophers to the position of phenomenalism.”

Astrophysics Phenomenalism defined as; An observation may be contemporaneous, appearing at the observation level to the senses an apparent observation and descriptive experience seen, but occurring from the source some distance further and time earlier – the original true and whole phenomenon, unlike our summarised description and conclusions. Contemporaneous defined as when two or more events are occurring, or processes are taking place at the same time. The descriptive observation and the source are two separate electromagnetic spectrum events but incorrectly described as being the same, in a flawed conclusion and description of the source and the phenomenon observed.

Fundamentals on which our conclusions for theories and hypotheses are based on, need to explore, to identify, and to recognised causes and effects from Astrophysics Phenomenalism that may prevent defining the true fundamentals for a theory or hypothesis.

Certain astrophysics phenomenalism can be overcome by the development of observation principles that an earth observer or a scientist should consider that may be affecting the observation before offering a theory or hypothesis.

The toolbox that a scientist can utilise to describe the effects and causes from astrophysics phenomenalism is incomplete, and that is why incorrect fundamentals proposed to describe certain phenomena and observations are producing no empirical evidence from instruments, direct measurements, and experiments used to support the suggested causes.

It is safe to say science is missing one or more fundamental “keys” needed to unlock the mysteries of the universe that continues to perplex physicists and frustrate experimenter seeking for the fundamentals suggested, but not finding the empirical evidence to support suggested hypotheses.

Mysteries and abnormalities sometimes exist because of wrong reasoning that cannot soundly resolve the many problems realised. The reasonings are the fundamentals used from the scientist’s toolbox to try to pry open the lid for the real description of the phenomenon seen. If those fundamentals are wrong – then the pieces will not come together to formulate the correct hypothesis.

However, sometimes historically a new technology and/or a keen observation swings a door wide open to create a scientific revolution and a fundamental shift to give us a clearer understanding of the Universe.

The search for the unknown fundamentals for the still existing mysterious and perplexing phenomena must go beyond the normal science of academia, and may be unravelled by the advances of open science and by the disseminating of information on the internet.

The search for the true fundamentals of the Universe is still in the research phase, as it is generally agreed by the scientific community that there is a substantial lack of solid empirical evidence to support much of the ideas and speculations provided from the electromagnetic spectrum information received from the universe.

There is also the problem of making wrong conclusions that seem to be correct but are not.

The true fundamentals still lie in the tools to make the pivotal changes – the scientific method and the best applications from the philosophies of science, theories, and physics.

The fundamentals for understanding reality and describing phenomena are supported by solid applications of the fundamentals of the scientific methodologies available in the scientist’s toolbox otherwise, it is just a working model or speculation.