Theoretical.

Scientific Cosmological Models

A Communication of the Intractable Studies Institute

Patrick M. Rael, Director, IntractableStudiesInstitute.org

The Instititute's position on cosmological physics models is that there are two important criteria that models should be checked for (explain and predict are grouped together):

- predict testable phenomenon
- be reality

A model of reality should meet at least 1 of the above criteria to be useful. Modern science tends to value the predictive ability of a model more than the qualitative reality models. These two criteria are analyzed in a table below.

Modeling Rules:
1. Initial state is no thing, not even dimension, and zero assumptions.
2. All entities including dimensionality must be declared before used.
3. Assumptions may be used, as long as they are declared.
4. Minimize assumptions, but no less than necessary, and no limit.
5. Definitions can be used and are substitutions of word(s) for word(s).
Definition 1- Axiom is an assumption.
6. Hypothesis can be used, can be either proven or dis-proven.
7. Conjectures can be used, expectation of proof but none given.
8. Opinions can be used but have no rigorous value.
Note: #1 a blank slate is a slate thing: cannot have even that at start.

PREDICTOR

REALITY	False	True
False	There are an **INFINITE** count of these subjective models. These models are less useful to science as they lack predictive ability AND have no connection to reality. Faith is usually needed to use these models. These models are difficult to prove. The two main categories within here are deity and non-deity. This model can evolve to Predictor and/or Reality when it makes testable predictions or answers the SRQ. Examples are: I. Technical models 1. String Theory of vibrating dimensions. 2. Aether Theory - the luminiferous aether that “fills the void”. II. Deity models [not scientific, usually subjective] 1. Creation myths (turtle back, genesis, eden, deity(s), egg, ...) 2. Post-death “heaven/hell” and/or reincarnation, souls, ghosts, etc.	**PREDICTOR** - There are an **INFINITE** count of predictor models. These models are very useful to science as they make predictions that are testable. Answers the question: “how much” with equations? Some predictor models can never be reality models. Often the model isdeduced from data as an equation(s) or geometry, but other times is a pure guess. Testable predictability is critical. Examples are: 1. Newtonian mechanics 2. Quantum Mechanics 3. Relativity 4. Standard Model of particle physics 5. Atomic Theory 6. etc
True	**REALITY** - There is only **ONE PHYSICAL REALITY.** To be a reality model it must answer the Standard Reality Question: ***What is natural dimension made of?*** This model is useful to grasp reality itself. It must start making predictions after time, thus it must *evolve* to become a dual Reality-Predictor model. *1. The Dium Theory of Natural Continuous Dimension --evolved-->*	**THEORY OF EVERYTHING** The reality model that can also make predictions is the best possible. Determinant: You will know the model is a TOE when questions like “What is natural dimension made of?” are directly addressed clearly upfront by the model. 1. The Dium Theory of Natural Continuous Dimension

No 13. 2013-12-31, Revised 2015-02-18