

A properly deciding, Computing and Predicting new theory's Philosophy

Abstract:

Undecidability, Uncomputability, and Unpredictability are very much undesirable properties and out-comes of any theory. That theory might have developed by a very reputed person or by a group of well-educated and knowledgeable persons. There is no point of poring resources, money and highly educated man power into that theory. That theory might have given some good results earlier, but if it is having a complex mathematical base and if the possible outcomes of these equations are mis-leading to these above 3Uns, people should discard and switch to another new theory which is giving experimentally verifiable results.

Essay:

A theory in pure Mathematics and a theory in Physics have different requirements and outcomes. A pure Mathematical theory may not have any physical basis and out-comes also may not have any physical significances. In many cases such a math theory may not be computationally possible / viable. Whereas a physics theory should have its foundations firmly on the reality and experimental out-comes. The resulting theoretical outputs of the Physics theory should also be experimentally verifiable by anyone anywhere.

We have already seen in the abstract what should the foundational basis of any physics theory. Lets further discuss various other requirements of such a theory in the essay below. First, we will discuss the undesirable qualities and later we will see important and required qualities. And later we will see the results of a new theory with some foundational points of that new theory in Cosmology. Further we will conclude.

A. Undesirable qualities of any theory

Any of scientific theories should not be based on blind faith, fear or narrow boundaries of any type. Cooking up the results is one malpractice that goes in the scientific community. Let's discuss these undesirable qualities of any theory in a little further detailed way as below.

A.1. Dogmatism, Superstitions must be avoided

With a predetermined idea that the theory should behave in some manner, religious feelings etc, must be avoided while forming a new theory. As far as possible, the new theory should be based on scientific findings and experimental results.

A.2. Theory must be developed without any type of fear

It is a common thing that there is some fear about teachers, professors and superior bosses. Such fear should not enter the new theory while formulation. Otherwise it will become key factor, and the new theory will become improper and inconstant and will give erroneous results.

A.3. Theory has not been bounded up by narrow academic walls:

Such boundaries do exist and are being imposed by institutions, teachers and professors. Funding and allocation of seats and vacancies are inside these boundaries. It is well known generally that the Professors don't accept students who work outside these boundaries or provide funding. Many times, they don't accept that there is some science beyond these boundaries.

A.4. Don't force or manipulate results

It is generally observed that scientists or experimenters manipulate the results to their advantage. But it is very fair practice NOT to manipulate any results, take them as they are, and publicize them as needed. It is quite possible that your thinking will not be reflected in an experiment or scientific simulation using computers, and they may give quite opposite results, accept them analyse them and refine your theory accordingly if needed.

A.5. Don't make the mathematics too complex with thousands of multiple possible solutions

It is seen that many times while formulating a new theory to many input variables were taken by thinking that they are rudimental. For example, for calculating motions in a system, if we take variables like "Masses, time, gravitational attraction force constant, Electro static force constants, charges, positions in three-dimensional coordinate axes and system temperature" are ok and sufficient a problem in quantum mechanics, and these are sufficient. But for a similar problem in astrophysics, "Electro static force constants, charges and temperature" are not required. So, don't make your mathematics too complex and complicated.

A.6. Avoid imaginary numbers and imaginary dimensions / axes.... and so, avoid unimaginable results.

Avoid using imaginary numbers and imaginary dimensions / axes in real or physically existing systems otherwise you will get unimaginable results. You can't understand what are they, what is the meaning of such result, finally you will go nowhere and look perplexed. All your time will be wasted which was spent for developing such system of mathematics to describe a physical system.

B. Desirable, important and required qualities of new Theory

The motive of the new theory should be to last long, it should not be for a short-term financial gain. It should be useful to humanity, should be remembered by humanity for a longer period. Let's discuss these desirable qualities of any theory in a little further detailed way as below.

B.1. Human Accrued knowledge should be free to all

Scientific knowledge should be used for development of Humanity not for destruction or for selfish financial motives. Knowledge should be free to all. It should be remembered that the author is an instrument for the flow of knowledge from the top knowledge base to humanity.

B.2. Concept should come out from the depth of truth;

When the concept is based on experimental results and correct 'true' foundations the new theory will be correct and its predictions will come true. People will keep this new theory in their mind and remember.

B.3. Authors / Scientists thinking should go towards perfection:

The mind set of Author should be to go for perfection. Then only he will achieve his goal properly. If not, he will end in approximations. Of-course there will many hindrances and obstacles and one cannot go for perfection always. Hence sometimes in these cases, the results will be approximate only. The limitation will be in the form of

- = Available computer capacities,
- = programming language limitations,
- = the real capacity of the author to write a computer program to this required extent,
- = Limitation of Mathematical model to assimilate the Physical situation
- = The authors capacity to understand the Physical situation.... Etc....

B.4. Logic should be simple

The basic underlying logic behind the new theory should be simple. The principles must be simple must be simple and tested. Otherwise complexity will result and one cannot understand the results. The results can be true or false or even imaginary. For example for a new theory 'Dynamic Universe model' used the following....

- = "Newtonian gravitational law" which is tested for the last 500 years or so,
- = No problem will be there to use 3D Cartesian coordinates,
- = The cylindrical / spherical coordinates give inherent singularities so discarded
- = Multiple masses will give multiple gravitational attraction forces
- = The vectoral sum of all these forces will be resulting force vector
- Etc...

B.5. Theory's predictions should be verifiable experimentally, by anyone and anywhere with the same conditions

Any new theory should predict some results and they should be verified experimentally. That is how the people will think of it positively. For example, this new theory **predicted** many **physical results** like 'Blue shifted Galaxies', 'No Dark matter', 'Frequency upshifting' / 'radiation to matter conversion', which all came true after 7 or 8 years after publication. See the results (C.4.) section for further predictions and results.

B.6. Computations / computer programs should be simple

In many theories describing the cosmos, it will be very much required to simulate equations and situations. Such simulations should be easily possible to be done. Using our new theory many simulations were well done and they gave excellent results.

B.7. Ontological realism of senses produced information

Our sensory perception is limited. Our eyes don't have a vision as much as an eagle. Our listening is not as good as a bat. Our smell perception is not as good as a dog. Our body is not as flexible as chimpanzee. We can see many examples like this. But our brain is capable and its intelligence is much higher than any other animal or in some cases better than a computer. So, our brain philosophically or thro' some conversion realises the other information beyond our senses. Of-course this was done in the new theory by the way of computer simulations using mathematics, so that we can visualize results.

B.8. New theory should lead us forward into ever-widening thought and action experiments

Any new theory should NOT put a full-stop or end to further work based on same set of principles. It should kindle further thought and experiments. I can see further work possible in many ways in our new theory example. Lets use it further and further.

B.9. Let the new theory lead us into that heaven of freedom of thinking.

Let us pray the Almighty Vak that this new theory further kindle heaven of thought and experiments further and further for the progress of Physics and humanity....

C. Some Foundational points and results of the Example new theory:

Some foundational points of a new theory 'Dynamic Universe Model' in Cosmology.

This Model is new Cosmological model fundamentally and mathematically different from Bigbang, Steady state model etc. I am giving below its Foundational points, Present Day unsolved problems, which can't be solved by other prominent models.

C.1. Logical and Physical foundational points of Dynamic Universe Model:

- No Isotropy
- No Homogeneity
- No Space-time continuum
- Non-uniform density of matter, universe is lumpy
- No singularities
- No collisions between bodies
- No blackholes
- No warm holes
- No Bigbang
- No repulsion between distant Galaxies
- Non-empty Universe
- No imaginary or negative time axis
- No imaginary X, Y, Z axes
- No differential and Integral Equations mathematically
- No General Relativity and Model does not reduce to GR on any condition
- No Creation of matter like Bigbang or steady-state models
- No many mini Bigbangs
- No Missing Mass / Dark matter
- No Dark energy
- No Bigbang generated CMB detected
- No Multi-verses

C.2. Main ETHICAL foundational principles of Dynamic Universe Model:

- Human Accrued knowledge should be free to all
- Concept should come out from the depth of truth;
- Authors / Scientists thinking should go towards perfection;
- Logic should be simple
- Theory's predictions should be verifiable experimentally, by anyone and anywhere with the same conditions
- Computations / computer programs should be simple
- ontological realism of senses produced information
- New theory lead us forward into ever-widening thought and action experiments
- Let the new theory lead us into that heaven of freedom.

C.3. Main PHYSICAL and COSMOLOGICAL foundational principles of "N-Body problem solution: Dynamic Universe Model":

- Natural universe regularly undergoes change in shape due to mutual Dynamical Gravitational forces.

- Accelerating Expanding universe with 33% Blue shifted Galaxies
- Newton's Gravitation law works everywhere in the same way
- All bodies dynamically moving
- All bodies move in dynamic Equilibrium
- Closed universe model no light or bodies will go away from universe
- Single Universe no baby universes
- Time is linear as observed on earth, moving forward only
- Independent x,y,z coordinate axes and Time axis no interdependencies between axes..
- UGF (Universal Gravitational Force) calculated on every point-mass
- Tensors (Linear) used for giving UNIQUE solutions for each time step
- Uses everyday physics as achievable by engineering
- 21000 linear equations are used in an Excel sheet
- Computerized calculations uses 16 decimal digit accuracy
- Data mining and data warehousing techniques are used for data extraction from large amounts of data.

C.4. Computer Simulation results as Decided by Dynamic Universe Model

For free downloading of published Scientific papers and books see
<http://vaksdynamicuniversemodel.blogspot.com/>

Some previously published papers of Dynamic Universe Model were given in section E. (References).

Many Present-day UNSOLVED problems solved by Simulations:

- Explains Formation of Astronomical Jets and their high Velocities at Galaxy centers.
- Predicts** Frequency shift in electro-magnetic radiation near huge gravitating masses
- Galaxy Disk formation: Dense mass Equations
- Explains gravity disturbances like Pioneer anomaly,
- Non-collapsing large scale mass structures
- Offers Singularity free solutions
- Solving Missing mass in Galaxies, and finds reason for Galaxy circular velocity curves....
- Blue shifted and red shifted Galaxies co-existence, in an Accelerating Expanding Universe...
- Explains the force behind expansion of universe
- Explains the large voids and non-uniform matter densities
- Predicts** the trajectory of New Horizons satellite
- Withstands 10^5 times the Normal Jeans swindle test
- Explains VLBI variations
- Explains Formation of Astronomical Jets and their high Velocities at Galaxy centers.
- Predicts** Frequency shift in electro-magnetic radiation near huge gravitating masses
- Explains frequency upshifting
- Explains energy to mass conversion
- Explains Cosmic-rays formation
- Proposed an UNIVERSE model with full cycle of Energy (from Sun)--- to Mass(neutrinos to Hydrogen- to formation of various elements) ---- to formation of Stars and Sun ---- to Energy again---- NO BIGBANG --- No Blackholes etc...

D. Conclusion

In this essay we just discussed a new theory 'Dynamic Universe Model' as a possible example for the points discussed in this essay. Any new theory with such principles should do good to humanity in any other branch of science. This essay should give guidelines for any new theory development.

E. References

1. S.N.P.GUPTA (2012) SITA: Dynamic Universe Model: Blue Shifted Galaxies Prediction. Lap Publications, Saarbrucken, Germany.
2. S. N. P. GUPTA (2017) Nucleosynthesis after frequency shifting in electromagnetic radiation near gravitating masses in Dynamic Universe Model with Math.
3. Einstein A (1952) The foundation of General theory of relativity. Dover publications, New York, USA.
4. Gupta, S.N.P. (2010) Dynamic Universe Model: A Singularity-Free N-Body Problem Solution. S. N. P. Gupta 130 VDM Publications, Saarbrucken.
<http://vaksdynamicuniversemodel.blogspot.in/p/books-published.html>
5. Gupta, S.N.P. (2011) Dynamic Universe Model: SITA Singularity Free Software. VDM Publications, Saarbrucken.
<http://vaksdynamicuniversemodel.blogspot.in/p/books-published.html>
6. Gupta, S.N.P. (2011) Dynamic Universe Model: SITA Software Simplified. VDM Publications, Saarbrucken.<http://vaksdynamicuniversemodel.blogspot.in/p/books-published.html>
7. Gupta, S.N.P., Murty, J.V.S. and Krishna, S.S.V. (2014) Mathematics of Dynamic Universe Model Explain Pioneer Anomaly. Nonlinear Studies USA, 21, 26-42.
8. Gupta, S.N.P. (2013) Introduction to Dynamic Universe Model. International Journal of Scientific Research and Reviews Journal , 2, 203-226.
9. Gupta, S.N.P. (2015) “No Dark Matter” Prediction from Dynamic Universe Model Came True! Journal of Astrophysics and Aerospace Technology, 3, 1000117.
10. Gupta, S.N.P. (2014) Dynamic Universe Model’ s Prediction “No Dark Matter” in the Universe Came True! Applied Physics Research, 6, 8-25.
11. Gupta, S.N.P. (2015) Dynamic Universe Model Predicts the Live Trajectory of New Horizons Satellite Going to Pluto. Applied Physics Research, 7, 63-77.
12. Gupta, S.N.P. (2014) Dynamic Universe Model Explains the Variations of Gravitational Deflection Observations of Very-Long-Baseline Interferometry. Applied Physics Research, 6, 1-16.
13. S.N.P Gupta (2019) *Rotating Universe and Simultaneous Existence of Red and Blue shifted Galaxies in Dynamic Universe Model*. OSP J Nuc Sci 1: JNS-1-105<https://drive.google.com/file/d/1HJ63FVvKLMrWJly9dosfGh15sD73hRiTN/view?usp=sharing>
14. S.N.P Gupta (2019) *Model of Universe*. OSP J Nuc Sci 1: JNS-1-109
https://drive.google.com/file/d/1JpdEy_-dS81CiYaaCgzz6m8csllM7z/view?usp=sharing