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Name of the ESSAY: What is FUNDAMENTAL.

ABSTRACT: The search for fundamental is the motivation in our knowledge of the universe as appear before us. Our perceived universe is from all senses , observations in instruments and reflections in our known theories. As all these procedures have major flaws in our limitation in senses and probabilistic interpretation in theories, we sometime say –Shut up and calculate as if calculations from known mathematics will rescue us from our vagueness in understanding.

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Einstein spent about thirty years of his life in futile exercise of a THEORY OF EVERYTHING. Even his genius could not fathom the complexity of a fundamental when cause and effect submits to Born probabilistic Copenhagen interpretation. It is impossible to consider that our world is not emerging from cause and effect but by chances . Probably we do not take care of all causes due to our inability from present standard model and highly assumed quantum physics. This desperation led us to many worlds interpretation of multiverse theory which may be true but not proveable conclusively as it appears today

As a result the question of what is fundamental is becoming more interesting because each universe may be built up on few fundamental building blocks of force carrying and material entities by mere chance following a set of natural laws on probabilistic outcome due to leakage into higher dimensions . So the source of such primary building blocks and the prevailing natural laws is the first fundamental which is often disguised in many worlds interpretation . Again the question of changing universal constants as well as natural laws with the passage of time can not be ruled out even in our own universe .

So far our stable matter as we see in proton ,electron and neutron is various combinations of only two quarks -up and down in three quark geometry. But penta quark has been seen and who knows what is the theory of more and more quarks combination in material entity.

So in my opinion theory of quarks assembly in elementary material entity can lead us to a better outlook in multiverse and that can be a fundamental search.

I strongly believe that then natural laws will follow from these basic combination of three, five etc etc quark structures in elementary particles formation and multiverse will be an infinite garden of many flowers , each having a distinct flavor, color and thriving on its own natural laws or may be perishing due to mathematical validity .

I am sure that mathematics can not be very much varying from universe to universe and only a careful mathematics can guide us to understand multiverse. So MATHEMATICS is fundamental and a blob block theory of a three dimensional cubit SPHERE of size PLANCK LENGTH DIAMETER, containing information of the BIG BOUNCE may give rise to a particular universe on a specific fine tuning, where intelligence can look for such questions.

I published many papers in year 2002, highlighting the fact of multiverse possibility. The infinite void of absolute nothing called true vacuum is harboured by many many universes with many flavors of laws and basic entities like many flowers in a garden.

In our case, we live in a balloon inside balloon configuration of matter universe inside an antimatter universe on opposite entropy path and reverse arrow of time. The common boundary is very violent due to annihilation of matter and antimatter where gravitoetheron superfluid consisting of matter carrying and force carrying particles are created and injected into both the universes for growth. The outer universe is slowly turning into a black hole when due to low entropy, a BIG BOUNCE will occur giving Dr. Guth an exponential inflation and this jerk of inflation will decide what kind of matter -say three quark or five quark baryons will be produced and what laws they will follow. Then after 400000 years, we will see galaxy formation around escaped

evaporation black holes from previous era for further march.

So the intensity of the primordial bounce is fundamental to decide about the outcome . Then after many years we will arrive and ponder about due to by chance benign laws . In my separate papers submitted to FQXI earlier, I have said gravity is emergent force due to push of heavy FERMION GRAVITONS and predicted $M/R.R$ is constant for any molecule. Also I have said that strong nuclear force is emergent due to BOSON GRAVITONS acting as gluons in quarks configuration. The strength of BOSON GRAVITONS decide about three quark and five quark etc configuration of elementary PARTICLE and force of RE BOUNCE decide about the strength of BOSON GRAVITONS or even Fermion gravitons. All

galaxies rotate as superfluid disk and the heavy fermion gravitons position themselves by the centrifugal force as in centrifuge. The outer periphery is more and more dense from center , so that stars at outer periphery rotate as observed by Dr. Rubin revising Newton as $F=PG.M.m/R.R$. here P is density factor.

Therefore I have proved that all the four forces are electromagnetic in nature and emergent from eletro-magnetism Also it is known that magnetism is outcome from electrical charges explained by Faraday. So basically two opposite nature quarks along with two opposite nature electric charges are the fundamental in emergent electromagnetic and

other three forces. Due to symmetry of existence all opposites exist to balance each other , because even multiverse is absolute ZERO if you take into account of all positives and negatives.

My theory of SYMMETRY give all kinds equal opposite configuration from basic fundamental quark and electric charge in Kalidoscopic infinite multiverse . But the basic question remained,--what is a quark in its entity and charge in its formation. We are searching in LHC and we will know that there may not be a theory of everything or even the source of basics fundamentals like charge and quark .

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