A Hypothesis on MATTER

Nainan K. Varghese
matterdoc@yahoo.com

It is a long-time dream of scientists to have a unified theory, which is applicable under all conditions and to all phenomena that are related to matter. This desire clearly indicates that all is not well with the current theories and hence the search for a new ‘holy grail’ of theory. These searches, in some way or other way, are based on present-day theories or they are continuations of present-day theories. Searches based on ‘not very correct theories’ cannot, yield a better theory, they can only compound errors. Hence scientists trying to find a better theory, need to go outside the thinking of orthodox physics. This they are afraid to do. Anybody, who dares to move outside orthodox physics in search for such a theory is immediately branded as heretics and are isolated from the mainstream. Their work is not given any consideration. This tendency on the part of the establishment is the main reason for the delay in any progress towards a unified theory.

I wish to present a different approach based on an alternative concept, in the hope that at least few scientist will try to read and evaluate it with unbiased mind. It is neither a continuation of, nor based on any present-day theories. At the same time it does not contradict any experimental findings. The hypotheses presented are based on only one type of assumed particles and provide simple and logical explanations to all phenomena related to matter by using the same principle and under the same basic laws. It is an attempt to explain the very basic nature of matter in all its forms. When accepted and elaborated, I believe that this hypothesis will give a simple and satisfactory explanation to most physical phenomena that are observed in nature under all conditions. It logically explains nature of fundamental entities (e.g. energy/matter particles, space, force fields, radiation of energy, fundamental forces, fundamental particles, etc.) and their interactions, without relying on unnecessary assumptions, spooky actions at distance or virtual particles.

Matter is specialized form of (real) energy, which has the attributes of mass and exists in space and time. Matter is inert and it cannot interact through “true” empty space. All natural forces should be just different manifestation of same basic force. All diverse matters in the universe are essentially made from same basic material and in a similar manner. They should all be basically identical and should obey same basic laws under all conditions. Hence it is illogical to assume that the occurrence of singularities and different applications of same laws, depending on the parameters of a body. Nature must be simple and logical, such that all physical laws operating in the process of creation and the interaction of matter should also be simple and logical. Any complicated or illogical physical laws are unnatural. Hence the application of Ockham’s Razor (the simplest theory that can explain a phenomena, is most likely the correct one).

Any three-dimensional body, by its inherent nature, contains matter. So it is incorrect assume that virtual or massless 3D objects have any part in an interaction. Science gives us explanations for most of the observed phenomena in universe. Some of them vary in different contexts. There are some phenomena, which do not have satisfactory explanations (e.g., conversion of energy into matter and its reverse, the nature of gravity and other natural forces, the binding force of nucleons, the collapse of matter, the nature of radiant energy, the nature of electric charge, etc.). Many observed phenomena are explained based upon assumed fundamentals and basic reasons that are not made clear (e.g., the construction of radiating energy particles, the construction of subatomic particles, the production of electric charge, the cause of inertia, the application of force, etc.).

Matter is developed through various steps of conversions from ‘basic energy particles’ into more and more complicated and self-sustaining objects, to form the different particles and larger bodies that found in nature. These objects, though made from same material – basic energy particles - and in similar way, depend on their construction to exhibit different properties and interact with each other in a myriad of ways. It is the aim of this hypothesis to supply a comprehensive explanation for all these different behaviors that is suitable for all occasions. This is done by neglecting all present day assumptions and starting on the development of this hypothesis from the nature of the basic energy particle itself. Only assumptions made in this text are about the nature of ‘basic energy particles’. They (the ‘quanta of real energy’) are one-dimensional and have a body with two ends. The ends of any two such energy particles that are ‘in contact’, attract each other to meet at their ends, lining up with each other in same dimension. When free, they lengthen in their own dimension until a limit is reached. When under compression from the ends in their dimension they reduce in length up to a limit, and then grow into second dimension up to a limit, and growing into a third dimension up to a limit which is then repeated forward. The rest of this hypothesis is a logical development from these assumptions. No abstract logical system can work on many basic assumptions. If the system has more than few basic assumptions, the chain of reasoning becomes very difficult and often fails to have a logical coherence. The fewer basic assumptions, the easier it is for the system to remain logical. Hence I chose a single
type of assumed particles to base this hypothesis on. The validity of my hypothesis and its conclusions should be easy to prove or disprove by other physicists. My only claim is that these conclusions are but a logical progression from assumptions about basic energy particles.

**Different dimensional systems coexist in nature.** Basic, one-dimensional energy particles (somewhat similar to strings) constitute networks of two-dimensional energy fields (vaguely resembling aether/ZPE field) extending infinitely and in all directions. The network construction of 2D energy fields yields both fluid and solid characteristics simultaneously. In a stable condition, the network of 2D energy field consists of perfect squares made from basic energy particles. The tendency of these 2D energy fields is to remain calm, homogeneous and isotropic, produce reactive field forces, when disturbed. 2D energy fields tend to reduce any disturbances in them to minimum. All matter bodies are therefore disturbances within the 2D energy fields. This tendency is the basis for the motion of photons.

**The field force is the basic and only force in nature.** It is originated (as a reaction) in strained 2D energy fields. It is manifested in all forms of force such as gravitational, magnetic, electric, nuclear, mechanical, inertial, etc., forces. The attraction due to gravity, an apparent force, between 3D bodies does not originate in or about these bodies, but rather in the vast 2D energy fields outside, and are applied separately on each body. Any local breakdown of 2D energy field produces an implosion of 2D energy field in its own plane around the point of breakdown. This motion of 2D energy field will produce a gravitational pressure on any disturbance within the gap and outward inertial force on any body that is away from the gap.

**The quantity of basic energy particles, forming a photon is its real energy (matter/mass).** Constant linear speed and spinning speed (frequency) proportional to its real energy content, with respect to the 2D energy fields are essential to a photon’s existence and stability. Variations in energy (matter) cause them to change their frequency. Stable photons do not interact (other than for gravitational attraction) with any other body. A combination of photons produces a photon of much higher frequency. All objects are constituted of photons. Attraction due to gravity between bodies is the resultant force between each of the photons in the same plane, in these bodies.

**All types of energy manifested in nature (except for heat which is real energy) are apparent energy (work-done).** Electromagnetic waves carry only apparent energy and hence have no matter or mass. They are transmitted through the medium of 2D energy fields at constant speed with respect to the 2D energy fields by fluctuations (waves) in the 2D energy field network. They transmit magnetic effects through space and electric effects are produced locally at atoms of the receiving body. Photons being 3D bodies also have associated apparent energy (in the form of electromagnetic waves). All of the properties of radiation of real energy (light) can be explained by its corpuscular nature.

High energy photons of limited range and in various combinations, create self-sustaining primary particles, which in turn produce subatomic particles, atoms, and matter bodies of different kinds. Each primary particle has a definite construction and it is by virtue of its construction, produces its characteristic properties. Photons constituting primary particles continue to move at their critical speed but their paths are curved into small circular orbits. A continuously changing velocity keeps them in unstable condition. Real energy level of photons forming primary particles is also a function of external pressure on them. Increasing the external pressure (due to gravity or other reasons produced by 2D energy fields) will lower real energy level of these photons thus causing primary particles to shed real energy and enlarge in size. This is the reason for mass-defect during the combination of subatomic particles. 2D energy fields may absorb real energy particles thus discarded, or they may form independent photons to be radiated away. Any body under compression, will radiate real energy (heat, photons, etc.). Under favorable conditions, photons (3D matter) are being created from and reverted back to 2D energy fields throughout the universe. So, on a macro scale, the universe is of a steady nature (no big-bang or expansion of universe).

**There is only one type of electric field.** Electric fields of both a positronic and electronic nature are similar. Direction of electric field (clockwise or anticlockwise) is indicated by the respective ‘electric charge’. Electrons (or holes) do not move along a conductor during the flow of an ‘electric current’ but rather magnetic effects are transmitted through a current carrying conductor and resulting electric effects are produced locally. It is the angular deflection between nuclear axis and atomic axis of an atom which causes production of electric field about the atom.

**Time is a functional quantity and hence intangible.** So it is not a fundamental dimension and it has no direction or absolute magnitude.

The universe on a micro level can therefore be explained by using photons as the basic subunit of matter while the basic energy particle’s characteristics can explain energy and the various forces of nature.

**Addendum:** A more in-depth text on the “Hypothesis on MATTER (a preliminary study)” can be sent by email to anyone who is interested. It is also available for your critical scrutiny at http://www.geocities.com/matterdoc/index.html. All criticisms, suggestions, and inquiries are welcome.