UNSTRUCTURED MATTER

(According to '*Hypothesis on* MATTER')

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Abstract: Free macro bodies have a natural tendency to gradually reshape themselves to perfect spheres in three dimensional space. Sub-structured macro bodies tend to increase their existence into most number of spatial dimensions. This is the result of (apparent) interactions between its constituent matter particles. Contrary to this tendency of macro bodies, pure (unstructured) matter particles tend to reduce their existence into minimum number of spatial dimensions. This contradictory behaviour of matter (in its pure state and in sub-structured state) can be shown as the basis of all physical phenomena in nature, including creation, sustenance, (apparent) interactions and eventual destruction of macro bodies.

Keywords: Matter, unstructured matter, structured matter, Hypothesis on 'MATTER'.

Introduction:

We have three spatial dimensions. We are 3D living rational beings. Generally, we deal with 3D macro bodies. All macro bodies are composite and are structured by smaller component particles. At different stages of history different 3D bodies were considered as the ultimate fundamental particles. There was a time, when different elements were considered as fundamental constituents of macro bodies. Later, different molecules and diverse atoms were regarded as most fundamental. Still later, constituents of atoms were discovered as fundamental particles. Currently, even these fundamental particles appear to be constituted by primary particles of different properties. As our knowledge expands, we are likely to discover the (ultimate) basic matter particle, in near future.

Basic matter particles cannot have different properties. They have to be made of ultimate and the only substance in nature. They will have least number of properties and behave identically under similar conditions. Since matter alone can provide a physical body with objective reality and positive existence in space, basic particles in nature have to be made of pure matter. Since it has no sub-structure, basic particles will be bits of pure matter with no particular properties or abilities, other than the ability to stay as a single physical body. In order to avoid self-dispersal of its matter content and sustain it integrity as an independent physical body, its matter content has to have certain affinity within itself.

Macro bodies:

All macro bodies are constituted by smaller and inferior matter particles. Each of these matter particles itself is an independent macro body, in its own right. Integrity of a macro body is preserved by (apparent) attractions between its constituent matter particles. Simultaneously, fusion by constituent matter particles, in a macro body, is prevented by (apparent) repulsion between them. Relative magnitudes of (apparent) attractions and (apparent) repulsions between constituent matter particles determine many properties of a macro body. Each constituent of a macro body (say, atoms or molecules) has a natural position within the macro body, with respect to its neighbors. In this position, the particle will be at a neutral state and in equilibrium with all its neighbors. There will be no resultant external efforts on or by it. Displacement of a constituent particle from its neutral position (by deformation of macro body or displacements of its constituents) can cause exhibition of various physical properties like; tension, torsion, compression, (apparent) attraction, (apparent) repulsion, etc. by the particle or by the macro body. These properties are caused by structure and constituent particles of a macro body. Therefore, only a structured matter body can exhibit these properties, which are results of relative displacements of its constituents.

Because of sub-structures of a macro body, range of (apparent) repulsion between its constituent matter particles is relatively short and range of (apparent) attraction between matter particles (of a macro body) is very large. Every sub-structure of a macro body has (apparent) attraction and (apparent) repulsion with every other sub-structure in it. Magnitudes of these efforts, between two points, are sum of efforts by all sub-structures in between these points. Both, (apparent) attraction and (apparent) repulsion are additive efforts and has inverse relation to distance.

Additive inter-particle efforts in a free macro body tend to gradually reshape a macro body towards perfect geometrical shape in spatial dimension(s) of its existence. Depending on distribution of sub-matter particles, a macro body may attain critical stability of its shape as a straight line in (hypothetical) 1D spatial system or as a perfect circular plane in (hypothetical) 2D spatial system. Minute instability in these shapes will compel the macro body to reshape itself as a perfect sphere in 3D spatial system. This process may also induce spin motion of the macro body, in space. Therefore, we may consider that it is a natural tendency of a free macro body in space to strive towards spherical shape (with or without spin motion).

Unstructured matter:

The more fundamental a matter particle is, less complicated its structure should become. Ultimately, when degree of complication is least, a matter particle should be of pure matter and without sub-structures, whatsoever. Obviously, compared to other (currently known) primary/fundamental matter particles, unstructured matter particles will be of very minute size. We may call such a particle of pure matter as a ‘quantum of matter’. To analyse its properties, we shall consider a hypothetical quantum of matter, much larger than its real size in all spatial dimensions.

Since matter occupies space and we live and operate in 3D space, any matter particle has (objective) real existence in all spatial dimensions. However, when its measurement in any spatial dimension becomes too small to be tangible by our standard, it may be assumed as nonexistent in that spatial dimension. Thus, a matter particle with intangible measurement of its body in third spatial dimension may be considered as a 2D object. Similarly, a matter particle with intangible measurements of its body in third and second spatial dimensions may be considered as a 1D object. Should its body measurements in all three spatial dimensions are intangible; it can be considered simultaneously as a functional but real entity.

In order to maintain its integrity as a single entity, every point within the matter content of a quantum of matter has to have certain affinity with all adjoining points. A point, considered here, is a part of matter content that has negligible measurements in all spatial dimensions, within the unstructured matter body of a quantum of matter, in consideration. Affinity (similar to adhesion/cohesion), between nearest points within pure matter, acts somewhat identical to attraction between sub-particles of a macro body. Since this affinity is not a result of sub-structures in matter content, its magnitude will neither be additive nor it will have any relation to distance.

Every point, within matter content of a quantum of matter, will have same magnitude of affinity with every other point within the same quantum of matter. Hence, there are no resultant efforts on these points in any direction. As points on its outer perimeter have no neighbouring points on their outer sides, they will have identical resultant inward affinity. Due to inward affinity from all points (on outer perimeter of matter content), outer perimeter of a quantum of matter acts as a container of included pure matter, without being

of any special structure. Resultant of affinity in various directions, on a point on the periphery of a quantum of matter is inward and along the normal to tangent (line or plane) at the perimeter.

If a quantum of matter is in spherical shape, resultant affinity at every point on its surface are directed towards the particle's geometrical centre. All efforts being identical in magnitude, they will maintain critical stability of its spherical shape.

A change in the shape of 3D spherical quantum of matter will alter uniformity of its surface curvature. Normal to altered surface tangent (line or plane) will not pass through its geometrical centre, any more. Resolving resultant efforts of affinity at peripheral points into three perpendicular components each, we can notice that the component towards major axis of deformed 3D quantum of matter particle is greater than components towards its minor axes. Matter content of the quantum of matter will gradually displace itself towards the major axis. An unstructured (pure) matter body, in all three spatial dimensions, will gradually squeeze all its matter content into a plane (containing its major axis) and thus become a 2D object.

If a quantum of matter is in circular shape, resultant affinity at every point on its perimeter is directed towards its geometrical centre. All efforts being identical in magnitude, they will maintain critical stability of its circular shape.

Any change in the shape of circular 2D quantum of matter will alter uniformity of curvature of its perimeter. Normal to tangent at altered perimeter will not pass through its geometrical centre, any more. Resolving resultant efforts of affinity at peripheral points into two perpendicular components each, we can notice that the component towards major axis of deformed quantum of matter is greater than the component towards its minor axis. Matter content of the 2D quantum of matter will gradually displace itself towards its major axis. An unstructured (pure) matter body, in two spatial dimensions, will gradually squeeze all its matter content into a straight line (along its major axis) and thus become a 1D object.

In case of a quantum of matter in 3D spatial state, above mentioned reversions into 2D and 1D spatial states may take place simultaneously. Reversion to lower spatial dimensional state(s) is a natural process for unstructured (pure) matter particles. This tendency, in a 3D quantum of matter, may be prevented or reversed by external efforts, applied all around, in 2D plane of its development. Similarly, reversion of a 2D quantum of matter can be prevented (or reversed) by external efforts, applied at both ends of its major axis in the straight line of its 1D development.

Should the quantity of pure matter content in a quantum of matter exceed certain limit; reversion mechanism is likely to fragment the quantum of matter into two or more smaller quanta of matter. As there is no mechanism to regulate quantity of matter content in a quantum of matter, matter contents in different quanta of matter may differ from each other. All quanta of matter are too small to be tangible by our standards and too small to be observed by our instruments. Their presence can only be inferred logically from their actions on 3D macro (matter) bodies.

We are 3D rational beings and we consider matter as real substance only in its 3D spatial state. Hence, a pure matter particle becomes real only in its 3D spatial state. To convert pure matter into 3D spatial state, certain structuring is essential. Thus, whole matter in 3D spatial state is structured and only structured matter constitute observable universe. In both 1D and 2D spatial states, matter remains intangible, unobservable and unstructured. In these spatial states, matter may be considered as (some sort of) assumed or functional entity. This does not mean that unstructured matter particles are unreal or imaginary. These particles of unstructured (pure) matter constitute part of our universe, which 3D rational beings are unable to observe. We are able to observe only structured matter and unstructured matter remain forever out of our direct observation. Whole universe is made up of matter and entire space is filled with matter (there are no empty or vacant space). Out of this, only (relatively) a small part that is in 3D spatial state is considered by us as real matter. Rest of matter that remain unobservable may be considered as functional matter (or even as dark matter).

Unique capability of unstructured matter to revert into lower spatial dimensions bestows quanta of matter with many peculiar abilities. It can be shown that; (1). Different quanta of matter in lower spatial dimensions can co-exist at points of their crossings in space and fill entire space outside basic 3D matter particles without voids. (2). Quanta of matter of equal matter contents form latticework structures in planes, which extends to infinity. Separate 2D latticework structures by quanta of matter, in all possible planes, together, form an all-encompassing universal medium that is permanently in compressed state. Universal medium, made of unstructured matter, is aether-like entity but with definite constituents,

structure and self-sustaining mechanism. It has ability to act and be acted upon. (3). Universal medium causes and accomplishes all physical actions in nature, by direct contact (push) actions, which leads towards diverse physical phenomena. (4). As actions originate from universal medium and mechanism of action is similar in all cases, there is only one type of 'natural force', which may be categorised into variety of 'natural forces' according to phenomenon of its association. Etc.

Conclusion:

All physical bodies, in observable universe, are constituted by structured matter. Structured matter particles tend to coagulate and strive to form perfect geometrical shape in highest possible spatial dimensional state (spherical shape). A matter particle, in its unstructured state tends to reduce its existence to minimum spatial dimensions and hence remain hidden from observation of 3D rational beings. Tendency of matter to occupy spatial dimensions, in its structured state and unstructured state are contrary. These contradictory behaviours can be shown as the basis of all physical phenomena in nature, including creation, sustenance, (apparent) interactions and eventual destruction of every object in our universe.

Reference:

Reference is self-published by the author. It is neither reviewed nor edited.

[1] Nainan K. Varghese.: Hypothesis on MATTER (second edition). BookSurge Publishing, North Charleston, NC. (2008) http://www.booksurge.com/Hypothesis-on-MATTER-Second-Edition/A/1419689789.htm

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