WHAT CAN THE FORMATION AND EVOLUTION OF BIOLOGICAL POLYMERS TEACH US ABOUT THE STRUCTURE OF THE UNIVERSE? SPECIAL REFERENCE TO SUPER GALACTIC CLUSTERS

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It is now evident that the visible Universe is decidedly structured and this is acceptably clear by the observation of super galactic clusters. These clusters bear a remarkable similarity to insoluble biological polymers. However, the forces underlying the formation and persistence of these structures remains unknown to date. Current theory suggests that attractive gravitational forces may explain this structure. We are proposing an alternative theory for the origin, formation and present structure of super galactic structures.

Firstly, our theory is based upon the observation that biopolymers are formed as a result of hydrophobically driven forces. In effect, this was, and continues to be a precipitation reaction. The chemical nature of the genetic code and corresponding amino acids support this contention. Secondly, we propose that there exists a continuum of Universal forces that are observable and measurable at both the biological and cosmic levels.

We are therefore suggesting that matter in its subatomic state "precipitated" from dark matter and proceeded to polymerize into the current state of visible matter. In the absence of detectible gravitational particles, we propose the initial formation of visible matter as we know it, arose as from a separation from dark matter. The analogy between the formation of the super galactic clusters and formation of biological polymers is striking - and thermodynamically consistent.

The essence of this theory is the suggestion that the attractive force of gravity may be explained alternatively in terms of a Universal force - the separation of two states of matter and energy, dark and visible (detectible). The second law of thermodynamics requires a negative Gibb's free energy change for any naturally occurred event. The negative ^ can either be contributed by negative ^ or positive or both. The formation of biological polymers is rather driven by the negative as the scattered biological molecules sacrifice their freedom (decrease in entropy) in the process of polymerization. However, would negative ^ be enough for the formation of very initial biological polymer, or even the peptides? The second law of thermodynamics maybe, after all, not enough to explain the formation of biological polymers, particularly the initial biological polymers.