**The Nature of Matter – February, 2020 -- compiled by Mary Coelho**

**Brief Recent History of Physics**

**Nature of Spirit**

The word spirit comes from the Latin word spiritus, a word for power and energy. Spiritus is related to similar words for air, wind and breath in many languages such as *chi* in Chinese, *pneuma* in Greek, *prana* in Hindi, *ruah* in Hebrew, *vayu* in ancient Persian and *wonuya* in Lakota. They all have the same basic meaning of the dynamic and life-giving energy of the universe. Essentially spiritus, Mackintosh explains, is the power and energy of the universe at work here and now in the natural world and in ourselves. Spiritus pervades the whole of reality from the most elementary wave-particles, atoms and molecules to the most complex beings. . Sam Mackintosh . . . . . We realize we must not separate the manifest physical world from experiences of spirit

**The Nature of Matter as Described by Quantum Physics**

1. Once all the atoms and molecules and particles and quanta have been taken out of a place, all that remains is “vacuum” or “quantum field.”

The fundamental discovery of science in the early 20th century was that the quantum vacuum was full…pure generativity, not a thing or a place, but a power, space/time foam, seamlessness. (Swimme, Seamlessness, video in Powers of the Cosmos)

The quantum vacuum is highly energetic, perhaps infinitely energetic. That energy cannot be measured directly by the scientific methods of measurement used in our daily space-time world. Brian Swimme writes that the quantum vacuum is not an energy constellation (Hidden Heart, p. 97) nor is it material yet it is profoundly powerful…The seamless plenum is not a place, it is a power…it acts ceaselessly throughout the universe. (Hidden Heart, p. 101)

 It was measured in the 1940’s.

2. “How to describe the nonvisible? It is variously named by scientists as the quantum field, the vacuum, space-time foam, the implicate order and the covariant quantum fields.

Language of much of theology and of science will not do. Cosmology has its own tradition, so Swimme uses the phrase “all-nourishing abyss” to point to the mystery at the base of our being. (p. 100 *The Hidden Heart of the Cosmos*)

3. Matter is clusters of vibrations of the seamless plenum. It is proposed by scientist that it is the universal quantum field that vibrates to make the clusters of vibrations that comprise matter. Somehow “being” itself arises out of the non-visualizable interiority. We can no longer think of particulate bits of inert matter but instead think of matter as clusters of vibrations (semistable) in the seamless plenum. (*Science and the Reenchantment of the Cosmos*, Ervin Laszlo. p. 53). . . . . . Everything in the space-time world, is a manifestation of a single entity, the seamless plenum. . . . . The atom is 99.99% this non-material, non-visualizable (quantum vacuum by volume. We are made of atoms.

Each particular thing is directly, and essentially, grounded in all-nourishing abyss. (The Hidden Heart of the Cosmos, p. 100) The energy that constructed the galaxies flows in our veins. (p. 97, Hidden Heart revised)

4. The seamless plenum is also found where there is no manifest, physical world.

”All-nourishing abyss is acting ceaselessly throughout the universe. It is not possible to find any place in the universe that is outside this activity. Even in the darkest region beyond the Great Wall of galaxies, even in the world between the superclusters, even in the gaps between the synapses of the neurons of the brain, there occurs an incessant foaming, a flashing flame, a shining-forth-from and a dissolving-back into.” (*Hidden Heart of the Cosmos,* p. 101)

5. It is an omnicentric universe. It is the origin, interactions between the whole and its parts that determine the specific facts of the universe. (Hidden Heart, revised, p. 94)

6. As a species we are moving into seamlessness, feeling at home in the birthplace of the universe. This is our habitat, as we undergo our birth as a new species. (Seamlessness, Powers of the Universe video series). . . . . . . . The discovery that we exist at the birthplace of the universe is monumental. It amounts to a cultural announcement that humanity is in the midst of a move to a new cosmological understanding of itself. (*Hidden Heart*, revised, p. 98)

The powers of the planet are unfurling within our conscious self-awareness. The reliable wisdom of centuries no longer works. We need to go to the powers of the universe to ask for guidance. (Seamlessness, The Powers of the Universe video series)

Each entity desire to bring forth its latency, to give it form… to empower the unique development of each human being. (*Hidden Heart*, revised), p. 96)

**The Witness of the Mystics**

“There is in all visible things an invisible fecundity, an inexhaustible sweetness that flows to us from the unseen roots of all created things.” - Thomas Merton

“..the Light Within never fades, but burns, a perpetual Flame, where the wells of living water of divine revelation rise up continuously , day by day, hour by hour steady and transfiguring.” Thomas Kelly

“The spirit is the invisible aspect of matter and matter is the visible aspect of spirit.” - C.G. Jung

“A mystic has found a way of seeing the finite, namely as it exists within the infinite.” - Louis Dupré

 “The Diaphany of the Divine at the heart of a glowing Universe – as I have experienced it through contact with the earth – the Divine radiating from the depths of a blazing Matter.” Teilhard de Chardin