

Chapter - 1 What is the Quantum Field?

The “Quantum Field” is an assembly of quantum particles in a lattice-like structure that is the foundation and progenitor of this Universe. See Diagram 1.1. The Quantum Field was originally called the “Ether” by the ancient Greeks. It was called the “Luminous Ether”, the “Void” and the “Quantum Vacuum” in the 19th Century and the early 20th Century. Now the “scientific community” calls this collection of Quantum Particles the “Quantum Field”. The Quantum Field is the currently accepted name for the “static Ether” - I prefer to call this collection of bound quantum particles the **Material Cause**. As long as you understand what the collection of quantum particles actually is and what that collection does – it does not matter what you call it.

The word “Field” is a fancy science word that addresses the unseen forces at work in the Universe and is an attempt by scientists to hide the fact that science has no explanation how these forces such as gravity and magnetism actually work. The scientific community is divided and has created all sorts of new theories to explain away those things they do not like such as the Quantum Observer.* It would seem to a casual observer that science has made a very simple thing overly complicated and complex.

* “Quantum Observer” is a phrase coined by atheists who did not like the Big Bang theory because it allowed for the possibility of an observer being present before the “bang”. Which also implied an “intelligent designer” - which did not sit well with Biologists who believe evolution is a random sequence of linear events. The “Quantum Observer” is in fact the “Supreme Being, the great Spirit, the Maker of all things” documented in the Kena Upanishad. The “Quantum Observer” is not the God of the Torah. In Chinese Taoism – the “Quantum Observer” is “the One who arose from the Tao and created everything else”. The Tao is the sea of Cosmos Quantum Particles that surround the Quantum Field which contains our Universe.

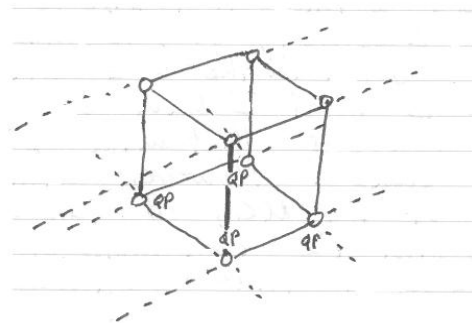
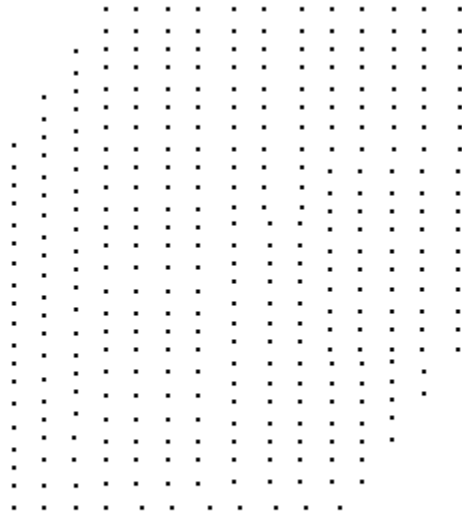


Diagram 1.1: The **Quantum Particles** of the **Material Cause** arranged in a lattice like structure (The sketch (bottom) is a two dimensional representation of a single lattice cube of **Quantum Particles** that make up the **Material Cause**.)

Inventors used the phrase “natural medium” in the late 19th and early 20th Century in their US Patent applications instead of the “Ether”. This was done by inventors because the scientific community could not agree on anything. The “natural medium” provides electromagnetic radiation a structure for wave propagation. Light waves move through the static Ether the way sound waves move through the gases of the atmosphere.

One of the problems science created for itself in the late 20th century was the notion that science could understand what was happening at the quantum particle level. The quantum particle level is a boundary that separates the physical Universe from the Quantum Field (static Ether). This “boundary” or curtain is the knowledge “event horizon” of our Universe. See Diagram 1.2. On our side of this boundary - reality is “objective” - we can measure it. On the quantum particle side of this boundary a “subjective” - supernatural reality exists. In other words the quantum particle reality is not only beyond our understanding it is beyond our capability to understand it!

Why would science waste time and money trying to understand something that is beyond understanding? Especially when their “mind set” (state of mind) can influence reality on this side of the “event horizon” of the Universe. The basic tenant of “Modern (or “new” as opposed to “classical”) Physics” is the “state” of the observer's or experimenter's mind must be included in the apparatus list of any experiment or observation. Because your Mind can affect “objective” reality on this side of the boundary!

The first step to understanding the **Material Cause** is to understand that “empty space” is not empty. The vacuum of “empty space” between the stars and planets is not empty. How

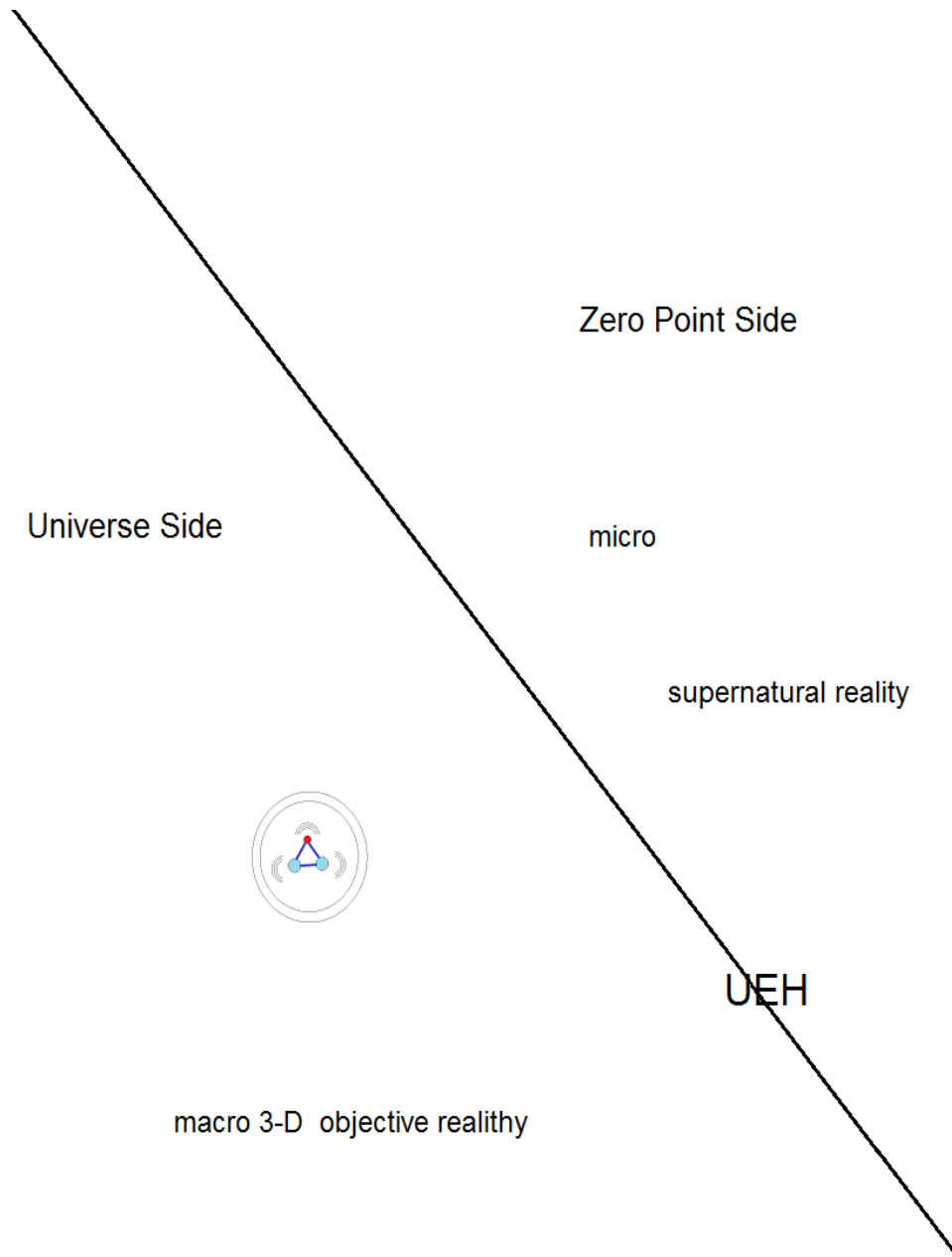


Diagram 1.2: The Universe Event Horizon (UEH) or the boundary between the objective, measurable reality we live in and the subjective, supernatural reality of the Quantum Field

Note: the black UEH line is the “curtain” or event horizon that separates the Universe from the **Material Cause** (“Quantum Field”).

can this be you ask. The vacuum of space is full of “quantum particles”. **Quantum Particles (QP)** are so small the vacuum in a standard hundred watt light bulb contains an unbelievably large number them! Thus what scientists once thought to be empty space is not empty at all - it is full of **QP**.

QP are also within every spec of matter in this Universe. Thus the **Quantum Particles** of the **Material Cause (MC)** surround you and are inside every sub atomic part of you.

One of the difficulties for students who try to visualize the bound **QP** of the **MC** is they have no basis of understanding with which to produce a simulation in their **Mind**. So it is important to not only define the **MC** – it is also important to give an example or analogy the layperson can use to visualize it.

One way to think about the static Ether or **Material Cause** is by comparing it to a bucket of water. A saturated (wet) sponge floating in a bucket of water is a good analogy for the **Material Cause** and the Universe. See Plate 1.1. The **QP** that make-up the **Material Cause** are like the water in the bucket. The sponge is our Universe and the water is the **QP** that make-up the **Material Cause**. The **Material Cause** is a collection of bound **QP** (water in a bucket) upon which the Universe (sponge) floats.

The **MC** is the “Ether” of classical physics. The **MC** is also the “space-time” of Albert Einstein. Einstein used a “rubber sheet” analogy for his “space-time” to explain gravity. Currently, as previously stated, the **MC** is called the “Quantum Field” by scientists. One of my Engineering professors always preached – “don't get hung up in what something is called – it is more important to understand what something is.”

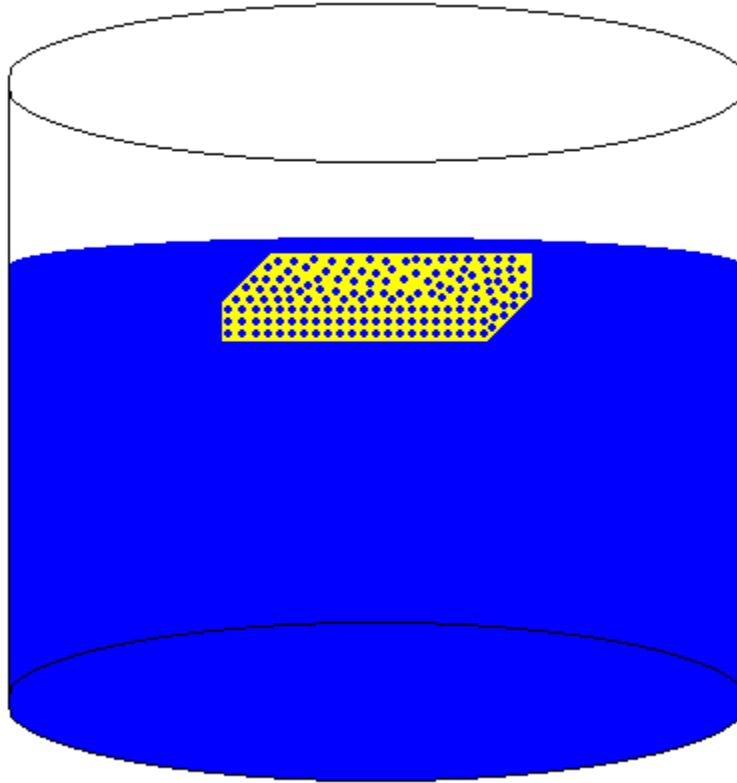


Plate: 1.1 A sponge floating in a bucket of water analogy

The water both surrounds supports and penetrates the sponge.

I want you to understand that the **MC** is the “substrate”, the underlying layer, the “foundation” of this Universe. It is the “natural medium” inventors and engineers of the 20th century referred to in their books

and patent applications. The **MC** is much more than a mere “foundation”. It is the progenitor, the construction foreperson, the operating system, the software packages and the energy source of this Universe. The **MC** provides magnetism, gravity, consciousness, Mind and several types of energy!

The **QP** of the **MC** are bound together and work together. See Plate 1.2. There are also “free” **QP** associated with the **MC** that are not “bound” to the lattice. These are not the “dynamic” **QP** that flow into this Universe from the Cosmos. See Diagram 1.3 for a relationship diagram that depicts the Universe inside the **MC** which is surrounded by the Cosmos.

One of the tools of engineering problem solving is the “free-body diagram”. The free-body-diagram allows the engineer to visualize the forces and moments that act on a body in space, by allowing the body to be drawn by itself without the bodies that apply the forces and moments. This visualization tool allows me to express the **MC** as a series of particles that move through a body on the Earth's surface because the Earth spins on its axis of rotation.

You need to know one more important fact - the sub atomic particles (protons, electrons and neutrons) that make up atoms move through the **QP** of the **MC** as if the **QP** are not there. Just let this fact sink in.

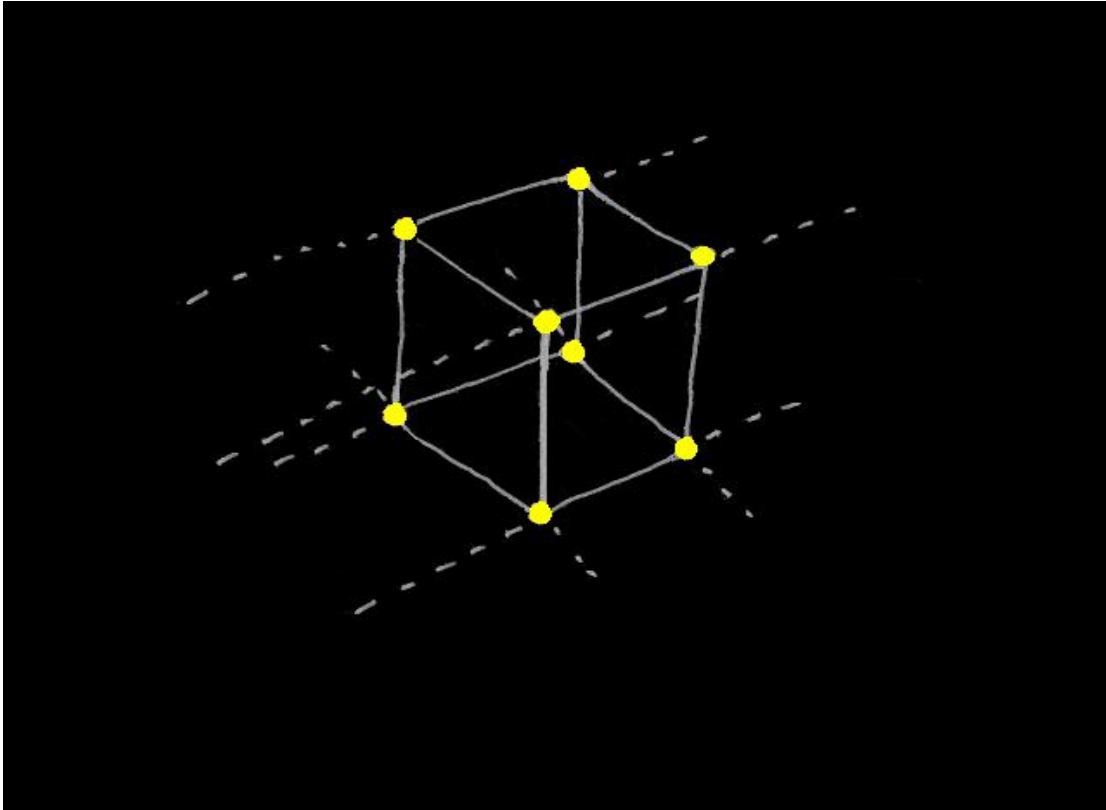


Plate 1.2: Single Lattice cube of bound Quantum Particles (the yellow dots) that make up the **Material Cause**

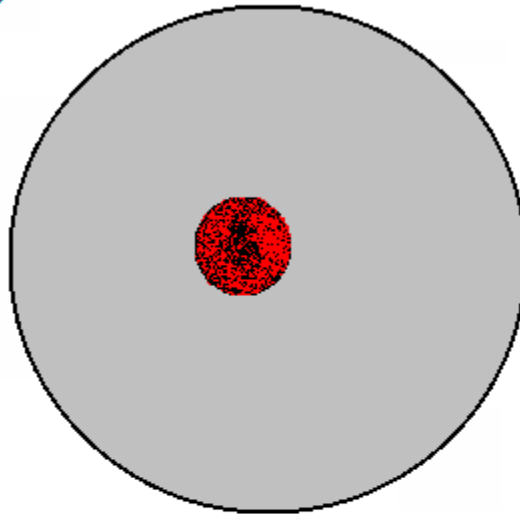
NOTE: I do not know if the Quantum Particles of the **Material Cause** are arranged in a cubic lattice. The behavior of light seems to imply the Quantum Particles are arranged in this fashion, on this side of the Event Horizon.

(The bound **QP** of the **MC** form a “lattice-like” structure – supposition based on observations of the static Ether on this side of the Universe Event Horizon. On the other side of the UEH – objective reality does not exist. It is a supernatural reality that cannot be measured.

The distance between each quantum particle is a fraction of an angstrom.

Yes – the lines between the quantum particles are waving up and down.
(wave propagation)

COSMOS



Material Cause

Universe

Diagram 1.3: The Universe immersed in the **Material Cause** surrounded by the Cosmos.

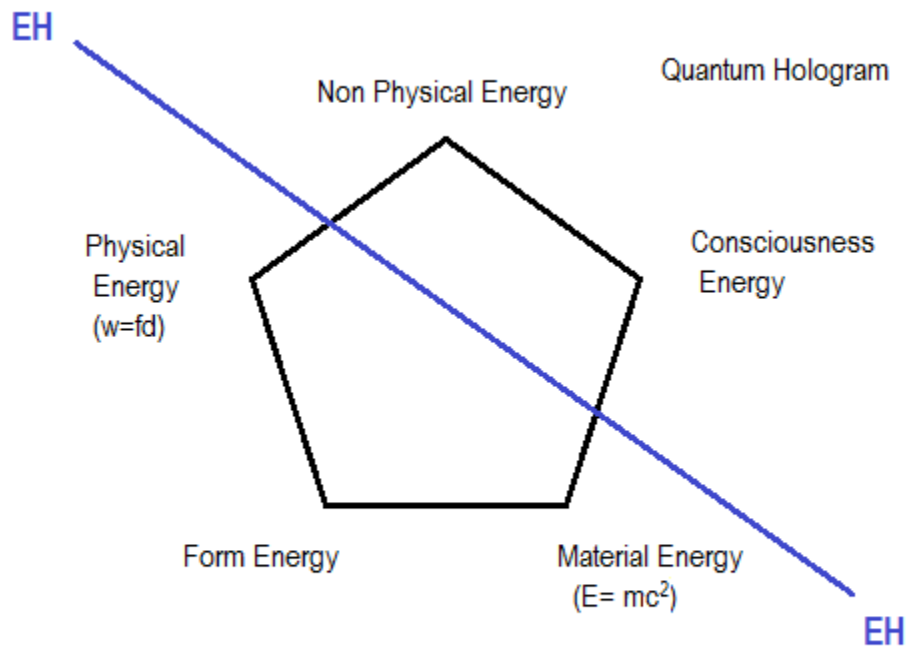


Diagram 1.4: Dr. Yayama's Space Energy Pyramid in 2-D showing the Universe Event Horizon (UEH) separating the energy types on our side of the UEH from the Quantum Field side (8)

NOTE: Quantum Holograms are on the same side of the Universe Event Horizon as Non Physical Energy (NPE) or **Quantum Energy (QE)** and Consciousness Energy.

For more information about Non-Physical Energy and **Quantum Energy** refer to Quantum Interface Technology Magazine Volume 1, Number 1.