

Crossing the Event Horizon

From presentation by Nassim Hamein

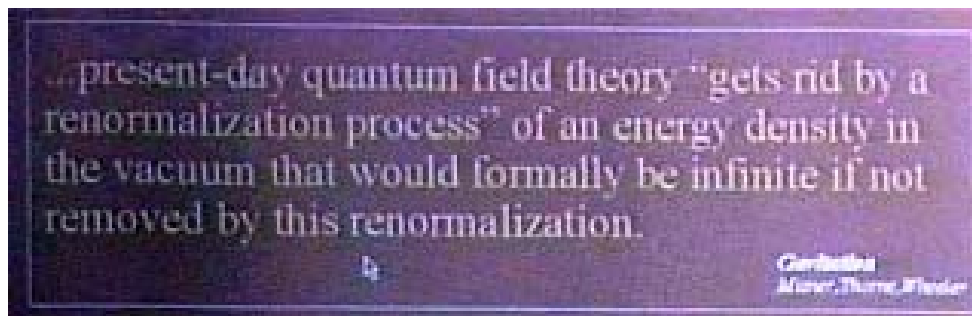
Part 1: The Untold Physics

Chapter 3: Physics and the Atom

Background:

In the presentation, Nassim was speaking about his first class in *Physics* and how much he was looking forward to learning about the *atom*. Much to his surprise, the teacher stated that the atom was not covered in the curriculum as they really did not know much about the structure except that it was 99.9999% space.

Since this seemed pretty astounding, Nassim's first thought was...maybe we should be looking at space instead of the atom. Since the atom is a vacuum with a little "jiggle" and everything still looks solid to us, this fact led him to look for answers in the *quantum field theory* on the *vacuum* of space. He found the following quote in a prominent book used in Physics classes titled: *Gravitation, by Mesner, Thorne, and Wheeler*. It turned out that this book is used in all Physics classes and is considered the "bible of physics."



The statement in the illustration from this book led into a whole new area of exploration. Nassim was determined to find out what is meant by getting rid of energy density by the *renormalization process*.

It seems that when physicists attempted to do the calculations on the vacuum of the atom they found an infinite amount of density. The calculations of the energy at the sub atomic level of the atom were not possible with this infinite amount of *density*. Now they

had to do something with it. If there was that much density in the atom, what about the rest of space? This is where it gets tricky.

As Nassim started to delve into the process of finding answers about the vacuum in the atom and the vacuum in space, his first surprise was that physics claimed that there are two types of infinity. This was a big surprise as all he could ever find was one definition.

However, in *quantum physics* it was discovered that in **small quantities the measurement does not really matter**, so this is the first type of infinity, but in large quantities such as the infinite universe it cannot be ignored and a new label of *nasty infinity* was necessary and strange as it seems, you will find this term in the physics textbooks. So, this is the description for an **infinite amount of something that you can't ignore or discard**.

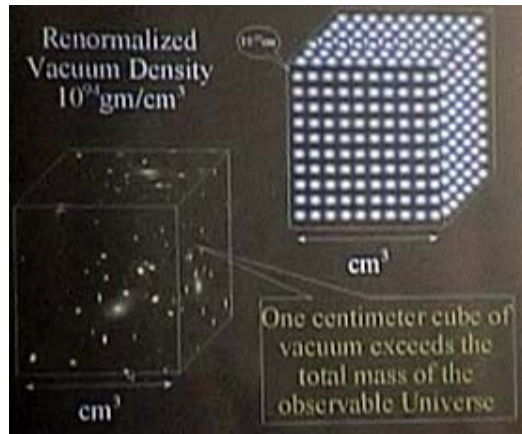
Surprisingly he also discovered when something like this is found in a theory they proceed to do something in the calculations to *renormalize it*. **In physics it means to cut the number**, so they had to find a scheme and decided to use the *Planck Distance*, which is currently the smallest measurement in quantum physics shown as 1.616×10^{-33} cm and is billions of times smaller than an atom. The next chart shows how that looks in physics.



To accomplish this measurement they figured out how many Planck lengths it would take to fill a centimeter of space.



Even with the renormalization, this method of measurement gave space a density of 10^{93} cm. which is so dense that if you put all the observable universes combined together in a compacter, you would still not reach this density in a single centimeter cube.



You would still be below the density of the *vacuum* of the quantum structure. So that means that space has an amazing amount of energy and density, but we don't see it or feel it due to the fact that it is everywhere. Since space is everywhere, within the atoms of your cells and in the deepest fabric of the universe there is no difference therefore, you do not experience this density or energy. The main reason this happens it that the equalization between the boundaries of matter and infinite space become equal and these interactions are complementary, therefore any difference you would expect to feel is negated.

Keep all of this in mind as we venture further into the presentation. Nassim closed this lesson by stating that in this new theory he is presenting, the *vacuum is singularity* and may be the *source* of the existence of all things.

Questions:

1. The structure of an atom is primarily 99.9999% space.
 True False
2. Renormalization in quantum field theory gets rid of what?
 Energy Density Vacuum
3. Using the Planck Distance solved the problem by:
 compacting energy Cutting the number
4. Using Planck lengths to fill a centimeter of space:
 Increased the density Reduced the density
5. In the new theory what will the vacuum represent?
 Planck length Singularity

Glossary:

Physics: 1. The science of matter and energy and of interactions between the two, grouped in traditional fields such as optics, acoustics, mechanics, thermodynamics, and electromagnetism, as well as in modern extensions including atomic and nuclear physics, cryogenics, solid-state physics, particle physics and plasma physics. 2. Physical properties, interactions, processes, or laws. *The physics of supersonic flight.* 3. *Archaic.* The study of the material world and phenomena; natural philosophy.

Atom: 1. Anything considered and irreducible constituent of a specified system. 2. The irreducible, indestructible material unit of ancient atomism. 3. *Physics & Chemistry.* a. A unit of matter, the smallest unit of an element, consisting of a dense, central, positively charged nucleus surrounded by a system of electrons, equal in number to the number of nuclear protons, the entire structure having an approximate diameter of 10^{-8} centimeters and characteristically remaining undivided in chemical reactions except for limited removal, transfer, or exchange of certain electrons. b. This unit regarded as a source of nuclear energy.

Quantum field theory: *Physics.* A mathematical theory of dynamic systems in which dynamic variables are represented by abstract mathematical operators having properties that specify the behavior of the system.

Renormalization process: Forcing something to conform to a standard or norm. To remove obstacles or change elements that stand in the way of conforming to a standard or norm. Adjust to a new normal process, not from natural normalcy.

Density: 1. The quality or condition of being dense. 2. *Physics.* a. The amount of something per unit measure, esp. per unit length, area, or volume. b. The mass per unit volume of a substance under specified or standard conditions of pressure and temperature.

Quantum physics: 1. An indivisible elemental unit of energy, equal for radiation of frequency, esp. Planck's constant. 2. The particle mediating a specific type of fundamental interaction.

Nasty Infinity: A term in Quantum physics developed to describe a volume of density that is too large to ignore, but does not fit the standard model of measurement., esp. vacuum in deep space and the visible universes.

Planck's Constant: *Physics.* The constant of proportionality relating the quantum of energy that can be possessed by radiation to the frequency of that radiation. It's value is approximately 6.625×10^{-27} erg-second.

Planck Distance: Currently the smallest measurement in quantum physics shown as **1.616×10^{-33} cm** and is billions of times smaller than an atom.

Vacuum: 1. a. The absence of matter. b. A space empty of matter. c. A space relatively empty of matter. 2. A state of emptiness; void. 3. A state of being sealed off from external or environmental influences; isolation.

Singularity: 1. The condition or quality of being singular. 2. A trait marking one as distinct from others; peculiarity. 3. Something uncommon or unusual. 4. A black hole. 5. *Math.* A point at which the derivative does not exist for a given function of a random variable, but every neighborhood of which contains points for which the derivative exists.

Source: 1. A place or thing from which something comes or derives; point of origin. 2. One that causes, creates, or initiates something; maker. 3. one that supplies information.