

particles that constitute a consciousness would be equivalent to imaginary particles, and the *psychic mass*, m_{Ψ} , of the psychic particles would be equivalent to the *imaginary mass*, i.e.,

$$m_{\Psi} = m_{g(\text{imaginary})} \quad (131)$$

Thus, the imaginary masses associated to the *photons* and *electrons* would be *elementary psyche* actually, i.e.,

$$\begin{aligned} m_{\Psi\text{photon}} &= m_{g(\text{imaginary})\text{photon}} = \\ &= \frac{4}{\sqrt{3}} \left(\frac{hf}{c^2} \right) i \end{aligned} \quad (132)$$

$$\begin{aligned} m_{\Psi\text{electron}} &= m_{g(\text{imaginary})\text{electron}} = \\ &= \frac{4}{\sqrt{3}} \left(\frac{hf_{\text{electron}}}{c^2} \right) i = \\ &= \frac{4}{\sqrt{3}} m_{i(\text{real})\text{electron}} i \end{aligned} \quad (133)$$

The idea that electrons have elementary psyche associated to themselves is not new. It comes from the pre-Socratic period.

By proposing the existence of psyche associated with matter, we are adopting what is called *panpsychic* posture. Panpsychism dates back to the pre-Socratic period; remnants of organized panpsychism may be found in the Uno of Parmenides or in Heracleitus's Divine Flow. The scholars of Miletus's school were called *hylozoists*, that is, "those who believe that matter is alive". More recently, we will find the panpsychistic thought in Spinoza, Whitehead and Teilhard de Chardin, among others. The latter one admitted the existence of proto-conscious properties at the elementary particles' level.

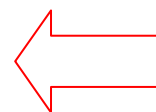
We can find experimental evidences of the existence of psyche associated to electron in an experiment similar to that commonly used to show the wave duality of light. (Fig. IX). One merely

substitutes an electron ray (fine electron beam) for the light ray. Just as in the experiment mentioned above, the ray which goes through the holes is detected as a wave if a *wave detector* is used (it is then observed that the interference pattern left on the detector screen is analogous with that produced by the light ray), and as a particle if a *particle detector* is used.

Since the electrons are detected on the other side of the metal sheet, it becomes obvious then that they passed through the holes. On the other hand, it is also evident that when they approached the holes, they had to decide which one of them to go through.

How can an electron "decide" which hole to go through? Where there is "choice", isn't there also *psyche*, by definition?

The existence of *psyche mass* associated to material particles **can solve the black hole information paradox** † if we assume that any *information* placed into a black hole is saved into the psyche mass



† In 1975, Stephen Hawking showed that black holes eventually evaporate releasing particles containing no information (Hawking radiation). It was soon realized that this prediction created an *information loss*. From the *no hair theorem* one would expect the Hawking radiation to be completely independent of the material entering the black hole. However, if the material entering the black hole were a *pure quantum state*, the transformation of that state into the mixed state of Hawking radiation would *destroy information* about the original quantum state. This violates Liouville's theorem and presents a *physical paradox*. It is a contentious subject for science since it violated a commonly assumed tenet of science—that *information cannot be destroyed*.

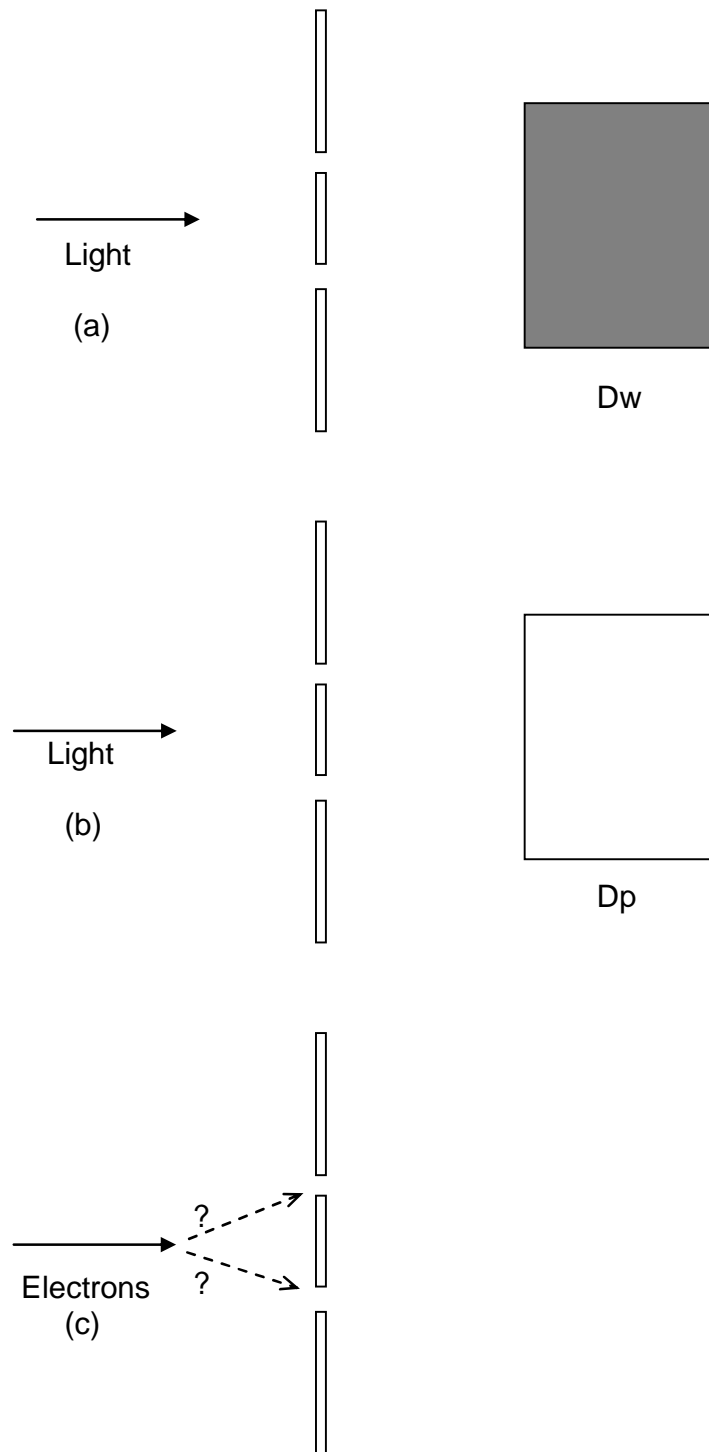


Fig. IX – A light ray, after going through the holes in the metal sheet, will be detected as a wave(a) by a wave detector Dw or as a particle if the wave detector is substituted for the wave detector Dp. Electron ray (c) has similar behavior as that of a light ray. However, before going through the holes, the electrons must “decide” which one to go through.

associated to the black hole and after - during the evaporation of the black hole, carried by the psyche masses associated to the evaporated particles (Hawking radiation). Thus, if the material entering the black hole is a *pure quantum state*, the transformation of that state into the mixed state of Hawking radiation does *not* destroy information about the original quantum state because the psyche mass does not lose any structure of the original quantum state in the transformation. In this way, when information goes to into a black hole it is not destroyed and might escape from the black hole during its evaporation.

The idea of psyche mass associated to a black hole leads to conclusion that there has been a psyche mass associated to the Initial Universe.

If the primordial superparticles that have been materialized at the beginning of the Universe came from the collapse of a primordial wave function, then the psychic form described by this wave function must have been generated in a consciousness with a psychic mass much greater than that needed to materialize the Universe (material and psychic).

This giant consciousness, in its turn, would not only be the greatest of all consciences in the Universe but also the *stratum* of everything that exists and, obviously, everything that exists would be entirely contained within it, including *all the spacetime*.

Thus, if the consciousness we refer to contains all the space, its volume is necessarily infinite, consequently having an *infinite psychic mass*.

This means that it contains all the existing psychic mass and,

therefore, any other consciousness that exists will be contained in it. Hence, we may conclude that It is the *Supreme Consciousness* and that there is no other equal to It: It is *unique*.

Since the Supreme Consciousness also contains *all* time; past, present and future, then, for It the time does not flow as it flows for us.

Within this framework, when we talk about the Creation of the Universe, the use of the verb "to create" means that "something that was not" came into being, thus presupposing the concept of *time flow*. For the Supreme Consciousness, however, the instant of Creation is mixed up with all other times, consequently there being no "before" or "after" the Creation and, thus, the following question is not justifiable: "What did the Supreme Consciousness do before Creation?"

On the other hand, we may also infer, from the above that the existence of the Supreme Consciousness has no defined limit (beginning and end), what confers upon It the unique characteristic of *uncreated* and *eternal*.

If the Supreme Consciousness is eternal, Its wave function Ψ_{SC} shall never collapse (will never be null). Thus, for having an infinite psychic mass, the value of Ψ_{SC}^2 will be always infinite and, hence, we may write that

$$\int_{-\infty}^{+\infty} \Psi_{SC}^2 dV = \infty$$

By comparing this equation with Eq. (108) derived from Quantum Mechanics, we conclude that the Supreme Consciousness is simultaneously everywhere, i.e., It is *omnipresent*.

Since the Supreme Consciousness contains all consciences, it is expected that It also contain *all the knowledge*. Therefore, It is also *omniscient*. Consequently, It *knows* how to formulate well-defined mental images with psychic masses sufficient for its contents to *materialize*. In this way, It