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Considerations over the problem of the knowledge of the Universe

day/dialogue first

Physical and Mathematical Universes

My emphatic pronouncements on the nature of the Universe, and the few papers readily available in the internet, at last produced great interest on my close neighbor, Patrick, which was also a great lover of the subject and could not refrain from visiting me with the purpose to satisfy his scientific curiosity.

The argument was so interesting that many visits followed and the polite form of dialogue, although we differed in some points, was source of common satisfaction.

I must say that before his first visit scarcely a fleeting greeting was ever exchanged, between the two of us, the rare occasions when entering or exiting from our respective gates we had a glimpse of each other, nothing more and nothing less than what can be expected from two illustrious nobodies busy to protect their own turf whilst respecting without persuasion of sort the social conventions.

I have to admit that when I sought P. in the family room, even before he had the opportunity to talk, my reaction was a mixture of curiosity and a guarded countenance.

Once this moment was over, the common interest and the scientific curiosity absorbed and put aside completely other inconvenient states of mind, and that was the start of a series of pleasant discussions between peers (since P. was a person of sharp mind and great culture and certainly was more prepared than me on the academic side, unfortunately he, although had an uncommon intuition, was short a little in synthesizing).

In the other hand, as I was later informed, P. was also an independent researcher who in the private life had remained single, and since he was enjoying a small income, not only dedicated his time to various intellectual

pursuits but accumulated also a background of large general culture which in the end directed him towards the problem of the knowledge.

Given these premises I was right to be on guard and especially in the beginning it was difficult, for me, to break the icy mould, whilst he tried to intrude the least possible, and I (although wishing this type of conversation) maintained a diffident attitude and was telling myself that: "he had come as a patron to interrogate me in order to sound my capacities, but on the end he had judged me in advance and soon or later I would have been told to get involved on pursuits of more practical nature".

After all, in previous occasions, many had done this when on learning that I had a Doctor Engineer degree in the civil-hydraulic discipline, advised me to put aside the attempt to understand how the Universe behaved and dedicate my efforts to more fruitful activities, like for example start an hydraulic firm or become a small contractor " since the country is very much in need of active skilled individuals ...".

I remember well that I tried to avoid the argument for which he had come , talking about my unsatisfying career and as , once shown a good capacity to innovate, instead of being encouraged and esteemed I found myself time and again in a situation which eventually lead me nowhere, when I brought my curriculum, strangely I was ignored and there was no possibility of career for me and the recurrent question was "why I had chosen to come to S.A. etc.." in conclusion I had to drink the bitter cup offered to those sorry individuals that are misunderstood and in final analysis are denied to do something out of the ordinary.

These expatiations of mine did not work since P. read my thoughts and brusquely told me that the search for the Truth can be undertaken even if one is rough and not well prepared but is endowed of will, intuition and capacity of synthesis and in regard to himself, he said that: "although he had a good amount of intuition had to surrender to the evidence that it was not enough and had to use in the exercise of studies other people's intuition and achievements".

Furthermore he said that he was firmly convinced that if an individual had these capacities he would not need to be forced to study over books since once reached a good level of knowledge, would have been enough for him to have a blank sheet of paper to fill", in effects he intended to say, like Samuel Clemens (better known as Mark Twain) already had , that: "genius is ten percent intuition and ninety per cent perspiration" and unluckily for him he was conscious to be short on that ten percent .

This humble little speech was decisive for me and leaving behind my recriminations I ventured into the subject and said (and this I remember well) that I had undergone lots of efforts to try to understand why the current prevailing line of thought was that from the mathematical point of view the Universe could be finite and infinite at the same time.

My personal point of view was that the quest for an answer should have been based over arguments , intuitions and considerations of physical nature and this

approach would have changed completely the possibilities to solve the problem, insofar we perceive events that are conveyed to us through transmission of moving at a speed that we perceive fixed and are present in the Euclidean space filled of substance, in the form of stationary waves, and particularly reaching us as light and as radiations of mass-energy having a signature made of different wavelength that when result inside the spectrum of infrareds and radio frequencies generally speaking are referred as " background radiations " .

This permits us to observe an object from which a phenomenon of transmission (dissipation) has occurred within the context of a situation in which this same object is endowed of velocity , so that , in the very instant in which we receive from it a signal that happened to be at distance t in time run at fixed speed c (in the past) , the time necessary to receive another signal from the same object at the same speed c has changed, in other words the object under examination has moved in another point where is simultaneously present at distance t' on the past .

We have to accept that a radiation at high frequency can be subjected to a form of relaxation that extends its original wavelength and that it has to travel many billion years (twelve or thirteen at c speed as it is empirically measured nowadays) before can relax to the point in which it cannot be any more perceived as light (and these twelve or thirteen billions of light years are a time distance necessary so that the most penetrating γ rays arrive to us as infrared or as radio waves).

We then have that our Universe is possessed of a first physical limit beyond which the light emitted reaches us outside the spectrum of visibility, and this limit is at average distance of twelve to thirteen billion light years, our perception is then extended through use of receivers, in the range of the infrared and radio frequencies, beyond that distance in a range that at present is undefined since its definition depends from the capacity of our instruments to receive signals (that become ever more weak and extend within the spectrum of the long radio waves to the point when nothing arrives to us any more).

Beyond that physical limit, even if signals arrive we are not able to receive them, we are not sure that they exists (there is no proof; we can only suppose that exists).

The fact that we do not receive light signals beyond the mentioned distance is an " obscuring " fact since if this did not happen, Olbert 's paradox would be a presence in the sky, which then during the night should appear illuminated, because we would be able to receive without alteration of wavelength the light transmitted to us from infinite distance from all the other objects present in the Universe .

In this manner (still from the physic point of view) we find ourselves in a situation in which though the U is occupied to infinity we perceive inside a finite volume (that by necessity has an average spherical shape) within two horizons of perception, an internal one, in which frequencies higher than violet associated to dissipation and ordinary light signals fade away becoming infrared and radio signals and an external one, not well defined but definitely limited, beyond which all signals fade away.

This second sphere, (which depending from the sensibility of our instruments could be extended a lot more than thirteen billions light years) would contain our finite in volume and therefore limited, physical U.

Note: it must in any case be supposed that in our U at large there is infinite presence of matter evenly distributed in space.

If we were able to move in another point of the infinite U, at large, we would find ourselves in a situation in which we receive signal in an exactly similar fashion, and inside a finite volume of reception of the same average size, which encloses a different finite physical U related to us and at the same time is inside the infinite U.

The limit of our U then is not only in space but in time as well, since the further is the radial distance from which we receive the signals the more the event that we observe in our present is distant in the past, prompting the question of simultaneous presence of physical objects in the present inside a substance the Ether/ESF, which on its own is practically timeless and results subjected to time related phenomena only when "captured" by the physical mass.

My arguments pleased him and after a time during which he was in meditation he said:

I can see that you do not mention at all the hypothesis, very much in vogue at present that everything started with a Big-Bang and that you mention relaxation of the wavelengths of the so called electromagnetic waves, this makes me think that indirectly you affirm that not necessarily there was a primordial explosion which originated the U like the official Science perceives at present, and the fact that you mention "relaxation" means that two phenomena can happen one of which does not excludes the other.

I mean that the light could find on its passage an impediment that is the cause of this relaxation or else that the speed of the light is not universally constant or both.

I : this suits me "I answered" but since I have no intention to criticize or to consider the hypotheses advanced by some students of this field (hypotheses, that I do not like or share), I must establish in brief that I developed this theory through the acceptance of the undeniable presence of a substance "the Ether" that I renamed ESF (Energized Space able to develop a three-dimensional texture or Fabric) and the acceptance of the characters of which it is endowed (which are not few).

ESF is pure substance which has some of the characters of mass and is present in a uniform fashion over the whole U which must be considered infinite and in it the speed of light (dissipation of m-e) is invariable and constant, provided that the mass dissipating the light signal and the Observer are in a relative quiet and both are nearing the status of absolute quiet.

Certainly, said P. Your affirmations are difficult to accept and without proofs to

support them, how will the mind be able to absorb those concepts? On top of it I perceive in these last observations a dogmatic attitude, since even if, as you say, two objects can be in a state of relative quiet, can this induce us to suppose that exists a condition of absolute quiet? And how can we be sure of the existence of an absolute status of quiet?

The subject, obviously was becoming garbled since in my mind were present all the concepts developed along all these years of study but to communicate them a didactic organized effort was a necessity not easy to fulfil, without it, on a dialogue, we would have reached a point when further advancement would have resulted impossible.

I understood the danger but I could not avoid answering, although in part only, to his last question and I did so in the following manner:

Certainly I understand, that without having undergone a basic preparation, you find difficult to accept these pronunciations, therefore at this point I refuse to proceed in this dialogue since I am convinced that another dialogue must be started, with whom we will manage to dissolve, using intuitive argumentations, the doubts that represent the fog impeding the mind, in its effort to observe the Truth, nevertheless, in any case, these doubts are a necessity, since once they are conquered one can say that he knows.

One more observation I add to it, whilst I will add in due course other considerations (provided this dialogue proceeds) and that stresses the fact that we cannot affirm that the ESF is endowed of movement since having been defined that it is like a tissue, common to the whole U, it does not have the possibility to move (is mesh like) and neither we can affirm that the mass immersed in the ESF is still in absolute, since one of the properties of the ESF is that when velocities of masses (or systems) immersed in it are of a value low enough, is trapped and moves with them and us from inside such a system have the feeling to be in a status of quiet and cannot measure with the instruments at our disposal any property connected with the inertial movement of our system, therefore we cannot say if we are still in absolute and a second mass is moving with a relative speed respect to us, since it is not possible to measure which of us two is still (if indeed one of us is still), therefore we have that a system generally speaking can be close to the condition of absolute quiet (or be void of movement) but we are not capable to establish for sure the true value of the movement.

In the other hand we can establish with absolute certainty if a mass (or system) is endowed of speed, relatively to another close to the absolute condition of quiet, and this can easily be demonstrated if we refer to a mass in orbit around another a lot larger.

Certainly we cannot say that the Earth which orbits around the Sun can be considered still and that the Sun is orbiting around it, the dilemma started exactly like that, if one well remembers Galileo and there are also arguments of physical nature that will become clear when the theory will be tackled with more details.

I doubt in any case that a mass (or system) totally deprived of movement, due to

presence of gravitational fields of depression, inside which movement is a necessity, has reason to exist.

And I am convinced that a mass (or system) in movement captures the ESF immediately around it and moves with it, so that an observer inside it cannot measure the effect of the ESF external to such a mass over it.

This if I well remember was the end of the first encounter with P. and when he left we eagerly agreed to proceed with the dialogue, whenever possible, since it was clear that we shared common interests and what was more important we were mature enough to communicate in a civilized fashion, my interest revolving in testing his capacity to judge my ideas and his interest bent on satisfying his quest in the field of knowledge.

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