

**COMMITTEE VI**  
Eastern Approaches to the  
Unity of Spirit and Matter:  
Qi and Science

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**QI AND THE FOUR INTERACTIONS OF PHYSICS**

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ABSTRACT

QI has for millenaries be part of the knowlege of Eastern philosophy. It would be a concept that will allow the unification between the material and the spiritual interactions. Various participants to this Meeting have given examples of the use of Qi.

In this paper we want to see how Qi is looked upon in Western philosophy, and examine more carefully if, and how, this notion has a direct interpretatkion in contemporary Science.

We are lead to clear up the following questions:

- . What is the distinction between Spirit and Matter ?

. Should we make also a distinction between Spirit (relation to the Universe as a whole, Intuition) and the Mind (relation to a personal memory, Reason) ?

. Has Matter got a Spirit ? Has Matter got a Mind ? What is the precise definitions that we give to the words Spirit and Mind ?

. Can contemporary Physics propose to knowledge a "model" of the Mind, having the characteristics to be "cumulative and previsional", like the memory ?.

. Is there a "coupling" allowing to demonstrate that there might exist a direct influence of Mind on Matter ? In other words, is there a "field" produced by the Mind which can interact with Matter (Qi field) ? Can we elaborate a mathematical representation of this field and see how it can be unified with the present unification of Physics ?

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It will probably astonished Eastern philosophy that part of the world (Western philosophy) still practically ignores what is QI. However, QI is a notion that has played an important rôle in knowledge for millenaries.

The origin of this concept of QI seems to be with the LI-QI theories, found within Confusianism in China, and with the school of Taoism of Lao-Tse and Tchuang-Tse at the VIth. century before J.C. According to these views, Qi would be a concept that will allow the unification between the material and the spiritual interactions. Some few examples have been given by various participants to this Meeting, showing that this notion of Qi is still to day at the center of the explanation given by Eastern philosophy in many instances; while Western philosophy, which is also desperately working for the unification of phenomena, seems not to use the notion of Qi. Is it really so, or is it that Western knowledge is using concepts which are analogous to those of Qi, but that are not explicitey related to Qi ?

The Universe is formed of communicating individualities

Let us look in a very general way to the representation of the

Universe. We can say that the Universe is made of individualities communicating one with the other.

The term individuality means that the Universe is not made of a continuous substance but of "grains" of Matter which are separated one from the other; and not separated by space (which is also a substance, since Einstein): in other words, what we call "space" is made also of individualities. Each "grain", i.e. each individuality, is characterized by a quantity called an "action", or an energy multiplied by a duration of time (the Planck constant, symbolized since the beginning of this century by the letter  $h$ ). The action  $h$  has been very precisely measured, and is the same for all individualities. It does not mean that individualities cannot group together to form a larger structure: the individualities can form more complex structures, or "complexify". Exactly as workers can get together to accomplish a specific task...each of these workers not losing his individuality because of this "complexification".

The term communicating is self-explanatory: it means that the individualities have relations one with the other, and are in this way "communicating". We also say that the individualities have "interactions" one with the other. One of the main objective of present day Physics is to look for a great law of Nature which would represent all physical interactions, which are now 4 in number (called weak, electromagnetic, strong and gravitational). We know that there exists also spiritual (or mental) interactions between individualities, for instance living beings communicate one with the other by using languages, sounds, gestures...We hope that, some day, we shall unify spiritual (or mental) communications on one hand, and physical communications between individualities on the other hand. And, this day, we think that the knowledge already acquired on Qi, all along centuries, by Eastern philosophy, will be very useful to represent and understand the Universe.

### Spirit and Matter

There are 2 ways humankind have been looking to the problem of the relation between Spirit and Matter:

## 1- Spirit is Matter "complexified"

According to this approach, Spirit is "secreted" by the neurones of the brain in the same sense as urine is secreted by kidneys. In fact, there is no difference in nature between Spirit and Matter. In neurones and synapses Matter (which is supposed "to do" everything) has built up "complex" structures, so that Matter can now show new properties, that we call spiritual properties. But the difference is only in the "complexification" of Matter, there is no change of nature whatsoever, it is always the "good old Matter" which is at work, only a difference in complexification. For a well known biologist (J-P Changeux), "what is the use in this case to still speak of a ambiguous word like "Spirit", when well defined notions of Physics and Chemistry would be enough...and clearer". To follow the traditional appellation, I shall call this the "material" approach.

## 2- Spirit and Matter are of a different nature

This is the opposite approach: Spirit cannot be represented with the language used to represent Matter. In a more precise way, Spirit is not made of Matter. Some biologists speak of the "transmaterial substance" of Spirit. René Descartes himself, the philosopher of the 17th. century, said that Matter is "extended" in space, while Spirit is not. And, nearer to us, the french anthropologist Pierre Teilhard de Chardin said that Matter, since the smallest level (elementary particle), has got an "outer" aspect (the material aspect) and an "inner" aspect (the spiritual aspect). In such a case, a "model" of the communicating individualities making up the Universe would be useful, in order to see how we can represent together the "inner" and the "outer" parts of these individualities. This is generally called the "spiritualist" approach.

We do not say that Matter does not exist, we say that Matter AND Spirit are present in each individuality forming the Universe, that we propose to call "Psychomatter", instead of Matter alone.

## The distinction between Spirit and Mind

Before going further, we wish to insist on one aspect that has

been recently stress forth by modern Science (Complex Relativity): there is an important distinction to clarify between Spirit and Mind. "I think, says Spirit, but also I know that I think". Who is this one who "knows" that he thinks? It is Spirit, and Mind is the one who builds up thought, while Spirit is able to contemplate "Mind thinking". This means also that Spirit is existing even if Mind is not functioning, i.e. is not "thinking", is "at rest" for instance. This is precisely what happen when you are in a deep sleep, with no dream at all. Spirit is the center of consciousness, it is a direct communication between you and the Universe as a whole (Intuition of the Universe). We "feel" the Universe rather than we "see" it. On the contrary, what you see of the Universe through your personal Mind depends of your own memory, it can be different between your neighbour and you, it depends of the way that you have structured your memory, of the cumulative data that you have heaped up in this memory. And it depends also of the previsional aspect of this memory, looking not so much at what "has been", but also at the probabilistic aspect of what "will be". This is with the Mind that you prepare your behavior of each instant, looking first at the cumulative facts of the past which are in your memory (your Mind) and at the previsional facts of the future that your memory (your Mind) is also able to build up. In brief, Mind is "cumulative and previsional", it works in\_time, considering both past and future; while Spirit is "free of space and time", it considers the\_totality of the Universe. This is why the functioning of Spirit is paradoxal, a thing is itself and its contrary, because everything is the\_whole (intuitive thinking); for the Mind, on the other hand, a thing is this or that, never at the same time itself and its contrary (thinking of reason).

Matter has always got Spirit: but does it has also always Mind?

I was told, when I was young, that a problem which is well put is more than half solved. This is certainly true of that difficult problem of Spirit, Mind and Matter. We just found that Spirit is a notion more\_general than Mind in the Universe. Every communicating individuality has got a Spirit, even if it has no Mind. Every particle of Matter, even if it is the smallest particle of Matter, like a quark or a gluon composing the nucleon (the constituent of the atomic nucleus) has got a Spirit...but it has not for this reason and ipso\_facto got a Mind. We shall say that a communicating individuality has got a Mind if, and\_only\_if, this

individuality has got a place where is located a memory which is:

- cumulative in time past
- previsional in time ahead

Now we turn towards Physics and ask for an answer: could you present us with a very recent model of the particle of Matter (the simplest "communicating individuality"), so that we can examine it and see if, at least some of them (if not all), have got a cumulative\_and\_previsional\_memory ? We shall declare that those "memorizing" individualities, if they exist, have got not only a Spirit (as every individuality does) but also a Mind .

### Only part of the Matter of the Universe has got a Mind

The word is now to the Physicist. We demand from him not only a "model" of the particle of Matter but also, if possible, the arguments which will allow us to make sure that this "model" is verified by the Universe, that this "model" correctly represent what the Universe actually is. That is what we personally did in a book which is just published, simultaneously in French (Albin Michel, Paris) and in English (Paragon House, New York).

Of course, we are not going to enter here into the details of the mathematical model and its verification. Let us limit ourselves to say that the "new" model of the "communicating individuality" (particle of Matter) has now got a place (a "head") where it can memorize data, in a cumulative and previsional way. Not all particles of Matter have got this memory, only ELECTRICALLY CHARGED particle (their "head" called eon). The ELECTRICALLY NEUTRAL particle have no memory, they are the true particles of Matter (their "head" called preon). But ALL of them, preon and eon, have got a Spirit, with which they can communicate (Intuition) with the Universe as\_a\_whole . Practically, the quarks and the charged leptons possess a memory, while the gluons and the gravitons (which form the "bulk" of Matter) have only Spirit.



Qi:coupling between the personal sigma field of Mind and the collective initial data of Matter ?

The "model" of Mind/Matter which has been developed by Complex Relativity, and which has been recalled above, shows a possibility of "coupling" between the inner personal Mind of a "communicating individuality" and the outer collective Matter which composes the world out there. The memory enclosed in the Mind of an individuality (for instance an electron) is represented by an electromagnetic field (called a "fusion" field, or "sigma" field). This field is "cumulative and previsional", as should be a memory field. On the other hand, this memory field gets its initial conditions from the outer world, and more precisely from the four types of interactions which are experimented by Matter. This means that the behavior of Matter out there has an influence (coupling) on the structure of the memory field which considers this behavior of Matter. This does not surprise us so much, we know that the outer world can influence our own memory, in particular because we can "recall" in this memory what we have just seen in the outer world.

But, still more important is the fact that this coupling, as any coupling, works in reverse : something which has been decided by the memory as "previsionnal" facts, that is something which is supposed to happen (or has at least a non-zero "probability" to happen) in the outer world, imposes to the initial data to become data which render possible what the memory has "previsioned". In other terms, not only the Mind (the memory) is influenced by the behavior of the outer Matter, but also the behavior of the outer Matter is influenced by the behavior of the Mind...for example the Mind deciding that Matter out there should behave so and so. We do not say that Qi could be something of this type, but we say that we should certainly think of these "relations" between Mind and Matter, and see if it could not throw a light on what has been (for millenaries now) observed concerning Qi experiments.

We hope that the present research will help to clarify some basic notions about Qi, and that it will get us nearer to the unification of Spirit and Matter (Psychomatter), insisting on the specific place of Mind.

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