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**“SCIENCE AT THE
FARTHEST ENDS
OF KNOWLEDGE”**

I

**About “the whole-and-parts”
as a reversible model of synthesis**

An Interdisciplinary Approach to Knowledge-and-Life



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“Sociedad Científica Argentina”
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Excerpt from
“La Ciencia frente a los Confines del Conocimiento”
Del “Todo -y- las Partes” como Modelo Reversible de Síntesis

About “the Whole-and-Parts” Interdisciplinary Research Program

HOLOEPISTEMOLOGICAL PRESENTATION OF THE SUBJECT

Ramón Pascual Muñoz Soler (Author of “Gérmenes de Futuro en el Hombre”, “Antropología de Síntesis”, “Universidad de Síntesis”).

From the principle of contradiction to reversibility of values.

PRESENTATION OF THE SAME SUBJECT AS HOLISTIC MODELS FOR PRACTICAL APPLICATION

02/09 *Eduardo Alberto Castro*

(Titular Professor of Physicochemistry, Faculty of Exact Sciences, National University, La Plata, Province of Buenos Aires).

-Some reflections about quantum physics and expansion of consciousness.

09/09 *Eva Sarka*

(Professor, Central University, Province of Buenos Aires; (introduction to knowledge and design practice).

-Human communication and systemic pedagogy.

16/09 *Ricardo Bullrich*

(Professor, Basic Cycle, University of Buenos Aires (introduction to knowledge and design practice).

-Design as an instrument for change.

16/09 *Gustavo Loiseau*

(Architect, organic architecture researcher; he took part in meetings on organic architecture in different countries).

-Organic architecture as an answer to the awakening of consciousness in planetary man.

23/09 *Ramón Lema Araujo*

(Rector of Municipal Education Institute for Art (IMEPA), City of Avellaneda, Province of Buenos Aires. Creator of national and international biennials of art by children and youngsters, and of international meetings about education by art).

-Education by art as an instrument for human integration and cultural identity.

30/09 ***Rosa María Germ***

(Physician Coordinator in Prager-Bild Foundation).

-Quality of life, dignity of death.

“Science at the farthest ends of knowledge”
Holoepistemological presentation of the subject

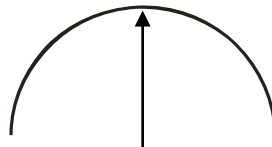
Ramón P. Muñoz Soler

First, some few words about a method we are going to use in this Course. I'll be in charge of the first part of each of our meetings, trying to preserve the unity of the proposed subject (*Holosynthesis*), and the rest of contributors will refer to the same subject as holistic models for practical application.

Here is subject of our meeting, “*Science at the Farthest Ends of Knowledge*”. This is the title of the so-called “*Declaration of Venice*”, UNESCO's paper of a Colloquium held in the city of Venice (March, 1968), where seventeen personalities assembled, of them, two Nobel prizes) from fifteen countries representing different neo-cultural regions and as varied disciplines as genetic, medicine, biochemistry, physics, philosophy, art, cosmology; all of them feel, as fundamental premise, the need of a trans-disciplinary dialogue between science and other cultural and spiritual traditions of humanity.

The “*Declaration of Venice*” reads, “In the quake of its own inner movement, scientific knowledge has reached certain confines to start a dialogue with other forms of knowledge”.

But not only science, but also all our culture has reached a critical boundary. Henri Lefèbvre says, “Present culture faces a rampart that is hard to cross”.



And I dare to say we have reached not only confines of knowledge and boundaries of culture, but also we begin to recognise limits in our own human body as a research instrument. Present fragmentation of organic functions (intelligence on one hand, and sensibility on the other) put a “physiological barrier” to a potential global perception of the reality.

In short:

Limit of science.

Limit of culture.

Limit of human instrument.

Today we are asking this question in thousand different ways:

“how to cross this boundary?”

It is a “dangerous boundary”. It is a “vibrational” challenge, not an ideological challenge. It is a question of “identity”, not of knowledge or power –to know if my “vibrational code” is fit or not for crossing this threshold. It is like a BANELCO card, a “magnetic track”, something very subtle, *an invisible code*, but sufficient to open the door.

Why do I say it is a “dangerous frontier”? What may happen in front of this rampart?

Life may stop, there many beings die (they are those who have their souls dead and still are alive).

You can look behind and become a pillar of salt (like Lot’s wife).

You can go back in time and bring dreams of the past into action.

There many civilisations die, and many peoples lose their souls.

Do we have any science to guide us? I feel not.

Present science just gives us “half of the formula”.



Our present knowledge is fragmented, divided knowledge, useful for practical purposes, but insufficient to fill the sense of the existence.

Sciences are divided,

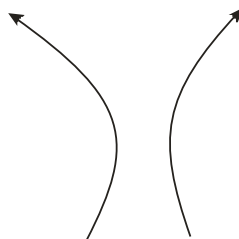
universities are divided into a variety of faculties and careers,

the social body is fragmented into sectors and classes,

scientific-technical civilisation is detached from the spiritual tradition of humanity.

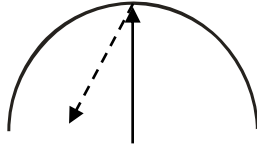
But the most serious thing is that even the human being is divided (knowledge detached from being, sex detached from love).

In few words, the way of knowledge is detached from the way of life.



The “logotechnical” man, who is able to tread on remote planets, able to release energy from an atom, and to decipher the genetic code, is unable to solve serious problems of hunger, unemployment, planetary pollution and, what still is more serious, he is not even aware of human life degraded.

We have reached a frontier of human space, and an *in*-flection of time.



Of course, we have reached a high developmental level as evolution of the racial man, in order to go on ahead; a new philosophy of history, a new politics, or a new theology is not sufficient; we need a new “physiology”. Not a new organisation, but a “new organism”, a new “body”, a new “geometry of life”.

Just until yesterday, an “ideal” was sufficient to sustain life. Today we need “life” to sustain this ideal.

We need to recover “other half of the formula” in order to achieve this integration of both material and spiritual values.

But not in a theoretical form, but in an “organic” form; I have just said, not by means of a new philosophy, but of a new “physiology”, or of a “new alliance” between values of the soul and chemistry of life.

This “Alliance” of spirit/matter kindles an “atomic” fire in the heart of man, and releases energy so far unknown: “co-evolutionary liberation energy”.

Now it is not sufficient to exploit resources of nature detached from man in order to start the planetary civilisation of the third millennium, to conquer the new expansive dimension of consciousness, and to put goods of knowledge in the service of life; what we need is to discover Nature in man, that is to say, the powerful telluric/cosmic/human energy trapped in “matter”. In other words, we need to bring our own “atomic fuel” into action.

One thing is ideals. And another quite different thing, these ideals effectively achieved.

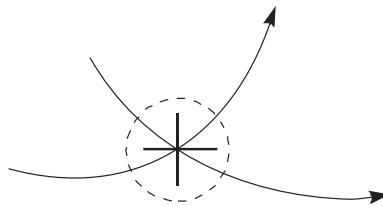
Jules Verne anticipated the “*Journey to the Moon*” in fiction, but just in possession of fuel fit for surmounting the terrestrial gravity we could conquer practically the cosmic space.

On their side, mystics speak about spiritual transcendence of man, about “*Climbing to Mount Carmelo*” (in the mystical Saint John of the Cross poem), or ascending by different “*Abodes of the Inner*”

Castle” (by Therese of Avila’s pen), but all those who climbed that “inner stair” have testified and left us the same liberation message: an ideal, doctrine or belief is not enough; we should offer our own human “matter” to sustain the spirit flame, “energy of Alliance”.

This “energy of Alliance”—recognised in quantum physics as “particle resonance”, and in molecular biology as matter/antimatter/information “fluctuations” (Ilya Prigogine and his school)—the said “exchange energy” has in our time an analogical correspondence in the field of human forces in terms of a “paradigmatic event” that starts the new planetary age. This event is

**the convergence between
scientific-technical revolution and spiritual revelation.**



Entirely new “configurations” of life loom on this “meeting” points of currents so far separate:

In a social “magma” in disorder, new “fields of order” appear here and there;
In a time with no signals, with no reference points, “significant meetings” occur.

All of them are “signals” in a world without signals (*Bilderlosigkeit*).

These crossing-fluctuation points, called “mutation points” by Fritjof Capra (a theoretician about quantum physics), are the first visible stars at the night of the contemporary world. A “resonance” between these focuses of expansion of consciousness and radiation of energy (resonance by similarity of different functions) constitutes new reversible mechanical structures, proto-models of organic forms of the future.

Apparently, so far our sayings are not easy to grasp if we do not go beyond boundaries imposed by the reductive structure of our rational mind. And this is so because the post-modern message is not conceptual but energetic/symbolic.

Those who have watched the movie-picture “*Man Looking at Southeast*” (Eliseo Subiela’s script) may realise how today a paradoxical form runs in the prophetic message on the complex weft of the daily life.

Some reflections on quantum physics and expansion of consciousness

By Eduardo Alberto Castro

Modern Physics and Spirituality

According to the “*Declaration of Venice*”, “today the contemporary man witnesses a significant revolution in the field of science, essentially produced by basic sciences, physics and biology”. And it adds,

“ (...) great challenges in our time (risk of disappearance of our species, repercussion of an advanced technological revolution, violent irruption of the information age, implications of genetic discoveries, coming of new materials, and so on) call us to reflect on social responsibilities of the scientific society, as much in relation to basic investigation as to consequent concrete applications, and also to the responsibility of the common citizen for discussing these and other pressing current subjects”.

Fundamental sciences are settled on the same field in which common matters to each area of human knowledge are growing: What is the meaning of life? What is the role of man in the cosmic process? What is the place of Nature in knowledge? So we see that the fundamental science has the same roots as Religion, Art and Ontology.

All this has led the man to enquire quite anxiously about the relation between Science and Mystique. Many answers have been given, and diverse perspectives have emerged, tending always to find unified ways, holistic cosmic visions and integrative ways of solving the human question.

It is our purpose to keep ourselves in the contextual subject presented, but restricted to certain aspect in order to be precise and specific, as much on posing as on subsequent development.

Here is the aspect to consider: relation between Modern Physics and Spirituality. So we may ask: is some relation between the two? Are they complementary forms to study the reality? To what extent, may findings of the one serve to the other? May we expect an integrative synthesis?

Science and Mystique

In this talk the central idea –proportionally summed up– is that modern physics does not offer any positive support, and much less definitive and decisive proofs of a mystical and spiritual vision of the world.

Simply they believed that if modern physics makes no objection to the mystical perspective, also it does not offer any positive support. More concretely, it is different in relation to such perspectives.

But in the event they did not get their mystique from studying modern physics, where did they get it, and why?

Today there is an overly general belief against the above-mentioned; that is to say, that modern physics automatically bases and/o proves mystique. But it is not so. If this wrong belief is spread widely and rapidly by virtue of good intentions, results have been harmful and detrimental.

In the event that current physics gives support to mystique, what can happen when physics of tomorrow –that surely will come– replaces it? Also mystique shall be replaced by another mystique? This cannot be so.

As Jeremy Bernstein, a (particle) physicist said, “If I was an Oriental mystic, the last thing that I would do is to seek for a reconciliation with modern science, since to link a religious philosophy with contemporary science is a sure route to obsolescence (of religious philosophy)”.

Genuine mystique, precisely as it is true, is absolutely able to offer its own proofs (and eventual defences), its genuine evidences, its own assertions.

As a fact, fathers of modern physics were all, without exception, mystics, and this is truly curious. And apparently, the same spirit of these forerunners reaches us now, –the spirit that moved them to be astonished at their own discoveries. And bear in mind they never led anyone to leave behind his critical intellect, –a basic form of scepticism so dear to scientists. And the point is that they felt entirely obliged to go beyond physics by using and constantly applying such an intellect (not emotion, faith, or intuition). So they left clear and precise features for all those sensitive souls to follow them.

On Shadows and Symbols. Beyond the Cavern.

Physics and mystique, mystique and physics...

Multiple writings by physicians, philosophers, psychologists, theologians, and so on, have been recently published with the purpose of describing and explaining an extraordinary and revealing relation between modern physics (the hardest among sciences) and mystique (the softest among religions).

Some of them say, “physics and mystique are rapidly coming near a markedly common cosmic vision”.

Others add, “physics and mystique are complementary approaches to one and the same reality”.

Sceptics state, “no, they don’t have anything common; their methods, purposes and results are diametrically opposite”.

In fact, modern physics has been invoked in order to base and refute determinism, freewill, God, Spirit, immortality, causality, predestination, Buddhism, Hinduism, Christianity, and Taoism.

In fact, in each epoch, there were attempts to use physics in order to prove or refute the spiritual (a fact that should teach us something, beyond anecdotes and statements). So, for instance:

Plato teaches that physics as a whole is nothing more than a possible history, and that ultimately it is dependent upon evidences of erratic and subjective senses, while the truth resides in transcendent forms that are beyond Physics (that is to say, metaphysics).

On his side, Democritus places his entire faith on atoms and void, for nothing more exists. This is firmly denied and fought by Plato, who wished the incineration of all Democritus’ works.

With the establishment of Newton’s physics, materialists took it as a basis to prove that, since the Universe is obviously a deterministic machine, then there was not room for freewill, God, Grace, divine intervention, and/or another entity linked with the specifically spiritual aspect. But this discourse did not influence idealistic, spiritual philosophers. They applied to the Second Law of Thermodynamics, which clearly states that the Universe declines continuously, and that this can mean only one thing: If the Universe declines, sometimes something or somebody had taken it to a higher state. So, Newton’s physics does not prove the existence of God; on the contrary, it proves the absolute need of a Divine Creator!

All this took place again when the Theory of Relativity is brought into action. Cardinal O’Connell, of Boston, warned all good Catholics against such a theory as a “dark speculation tending to give rise to universal doubts about God and Creation, and to the phantasm of atheism”.

Rabbi Goldstein, entirely against the latter, announced solemnly that Einstein had given rise nothing less and nothing more than to a monotheistic scientific formula.

In the same way, James Jeans’ and Arthur Eddington’s papers were fervently greeted by pupils all over England: “modern physics confirms Christianity in all its aspects”. The only problem was that Jeans and Eddington did not agree with such an answer, and much less their opinions were coincident.

This led Bertrand Russell to give his opinion, according to his quite acute critical style: “Sir Arthur Eddington deduces Religion from the fact that atoms do not respond to usual laws of Mathematics, and Sir James Jeans deduces the same from the undeniable fact that they *do*”.

Today, usually a surmised relation is established between modern physics and oriental mystique. The “bootstrap” theory, Bell’s theorem, implied order, holographic paradigm, Heisenberg’s paradigm of uncertainty, and so on, all of them constitute supposedly a proof (and/or negation) of the Oriental mystique.

Essentially, it is the same story already told. Many arguments may be for or against, but actually it is clear, and beyond any controversy, that this matter is complex and delicate.

May be a good idea to consult the founders of modern physics about what they thought about the matter, that is to say:

- a) nature of Science and Religion?,
- b) relation, if any, between modern physics and transcendental Mystique?,
- c) if physics founds matters as freewill, Creation, Spirit, soul, and so on,
- d) which are the relative roles of Science and Religion?, and
- e) if physics deals with the Reality (R in capital letter), or is reduced to studying more partial aspects (shadows in caverns), and so on.

Even though with certain variations, all theoreticians unanimously state, “modern physics does not offer any positive foundation to any variety of mystique or transcendentalism”. Bear in mind that all of them were mystics of one kind or another, but at the end, mystics.

According to their opinions, modern physics neither proves nor rejects, neither supports nor refutes a mystic cosmic vision.

It is true, there are certain similarities between both perspectives, but these similarities, although they were not purely causal, become trivial compared with quite wide differences between the two.

Any attempt to help and support a spiritual cosmic vision with data arisen from physics (whether new or old physics, it is the same) is simply not to understand (or misunderstand) the nature and function of each one.

Einstein said, “The current vogue by which axioms of physics are applied to the human life is not only a complete mistake, but also much reprehensible and blameworthy”.

When they asked Einstein about how the theory of relativity influenced religion, he said: “No influence. Relativity is a purely scientific theory, and nothing has to do with religion”. And Eddington made

this sagacious commentary about this: “In those days you had to be an expert in order to elude and avoid persons convinced that the fourth dimension was the gate to spiritualism”.

Eddington’s perspective was deeply mystical, but he was categorical about this point: “I do not suggest that the new physics proves religion, or offers any positive support to religious faith; moreover, I am totally against such an attempt”.

Schrödinger was as much conclusive as Eddington:

“Physics nothing has to do with mystique. Physics starts from daily experience, and continues it by subtler means. It remains related to it, but neither goes generally beyond it, nor can enter another field. Any attempt of this kind” –in his opinion– “is simply ‘sinister’”.

“There is certain field from which the scientific achievement is invited to go, and some religious theories declare with admirable cleverness that this field is their own and cannot be properly used by science because the true field of religion is beyond the reach of any scientific explanation.”

Planck and Sir J. Jean share similar opinions.

And nobody can say these men were unaware of mystical Eastern and Western writings, that if they had read “*The Dance of Masters*” would had change their minds and declared physics and mystique to be dear brothers, that if they had known more details about mystical literature would had find numerous similarities between Quantum Mechanics and Mystique. On the contrary, their writings are full of Buddhism references to *Vedas*, *Upanishads*, Taoism, Buddhism, Pythagoras, Plato, Berkeley, Plotinus, Schopenhauer, Hegel, Kant, virtually to the whole pantheon of perennial philosophers, and even so their opinion was such as we noted.

They were perfectly conscious of an essential principle in Perennial Philosophy –in mystical consciousness, subject and object are one in the act of knowledge; and they knew that certain philosophers stated that Heisenberg’s Principle of Inclusion and the principle of correspondence sustained this theory, since for a subject to know the object, he must “interfere” it, and this proved that the duality subject-object was transcended (surpassed) by modern physics. None of them believed in this statement.

The following argument serves to put the things in order: description of central mystical experience may be this: in mystical experience, you apprehend directly and immediately the Reality without a mediator, or a symbolic construction, conceptualisation, or abstraction of any kind. Subject and object become an act

beyond time and space surpassing mediation of any form. Mystics talk about contact of the Reality in its totality, sameness, completeness, and so on, with no intermediaries of any kind, beyond words, symbols, thoughts, images and names.

Now, when a physicist looks at the quantum reality (whether relativistic or not), he is not observing things in themselves, what they are in themselves (*noumenon*), direct, non-interfered reality. This physicist is observing markedly abstract differential equations as a whole, not the reality itself, but mathematical symbols representing the reality (in a better or worse way).

Bohr says: “One should admit we deal with a purely symbolic procedure. Therefore, our space-time vision is ultimately dependent upon these abstractions”. Jeans was more specific:

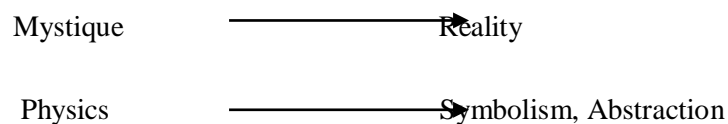
“We never can understand what the events are, but we should reduce us to describe events as a whole in mathematical terms; no other end is possible. Physicists that try to understand nature may work on many diverse fields and with a wide variety of methods; one can dig, other can sow, other can mow, and other can collect. But the final harvest will ever be a handful of mathematical formulae. These formulae never can describe nature itself. Our studies never can make us contact the reality”.

Role and Meaning of Using Models

What an absolute, radical and irreversible difference with mystique!

Any supposition about significant similarities in physics and mystique entails to state that mystique is basically a new symbolical abstraction, for it is totally true that physics is so. And this represents a big confusion.

See how all this leads us to weight things differently:



In other words: Physics deals with the world of shadows (symbols), not with the reality in force beyond the cavern (but mystique does deal with this other Reality).

But, then how is it that fathers of modern physics were mystics? Obviously, here there is something substantial! And this is disconnected from a shared cosmic vision, or a similarity of purposes and results! So,

what gave them a momentum to go beyond shadows? And what did the new physicists teach them that was not in the old physics?

The point is that now physicists are more aware of dealing with shadows (that is to say, with symbols), not with the Reality itself. Democritus had already talked about such a character, but right now we are fully conscious of this.

And it was this limitation of physics that has led to come back to the centre of human consciousness for more and better cognition, and to go beyond the conditioned world of shadows.

A more careful analysis

Let us go to a further detailed analysis of relations between Science and Religion, their respective natures, methods and fields. First we define Science, and we have diverse choices to this end, according to which Religion can be assimilated or not as Science. Previous to this, it is more relevant to make a difference between method and field of Science.

Method of Science: It refers to ways and means that, independently of definition of Science adopted, the latter (that is, Science) collects facts, data and/or information, and applies to confirm or refute propositions in relation to those facts.

In other words, method refers to ways by which Science arranges to develop knowledge.

Field of Science It refers to classes of events or phenomena that are or can become an object of investigation.

That is to say, Method refers to epistemology Science, while Field refers to its ontology.

Instead of asking somewhat loosely, what is Science?, it is better to ask these questions, what is scientific method?, and what is scientific field?

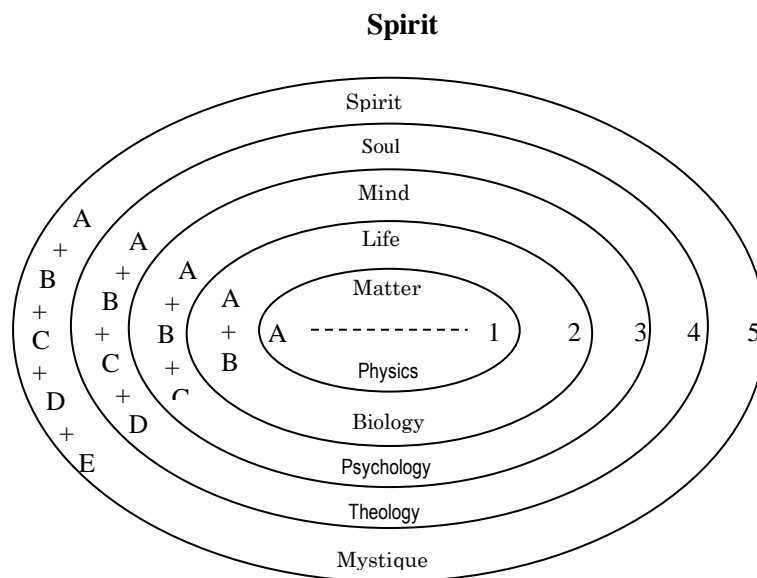
Scientific Method It is a procedure tending to acquire (gain) knowledge, in which hypotheses are (instrumentally or experimentally) proved in relation to experience (data) that are potentially public or open (or able) to repetition (confirmation or refutation) by colleagues (specialists). In simpler words, scientific method involves those affirmations than can be validated or refuted experimentally. See that nothing has been said about Field (!), and you may apply it to any art in which prescribed conditions are fulfilled.

A consequence of this is that the dividing line between scientific and non-scientific does not coincide with the line that separates physical from metaphysical.

The dividing line is between the experimentally possible of being proved and what it is not so (being merely dogmatic). The first is exposed to confirmation or refutation, based on an open experience, while the second is based upon something as succinct as for instance: it is so because I (or any person) say so”.

If Science were restricted to the sensory (field made of objects able to a physical-sensory register) then Mathematics, Logic, Psychology and Sociology could not be called Sciences, because central elements of their related fields are non-sensory, non-empirical, non-physical, and even metaphysical.

Now we wonder what field is the scientific method applicable to? Previous to an analysis of this point, we pose us: What are the fields existent? That is to say, what ontology shall we accept? Not considering this in detail, we shall adopt the so-called “Big Chain of Being”.



Numbers refer to levels. Letters, we’ll see. No problem with life and mind in terms of matter. For field of the soul we’ll understand the field of Platonic forms, archetypes, angelic forms, and so on. In this field the duality subject-object persists; the soul apprehends the being and is in communion with God, but an unyielding barrier still remains between the two. But on level 5 (field of the Spirit), the soul is the Great Being in a non-dual state of radical intuition and highest identity, known by these names: *gnosis*, *nirvikalpa*, *satori*, *kensho*, *jñāna*, and so on.

We’ll not discuss the word spirit, for this entails serious semantic troubles and inevitable paradoxes. Simply we say that it IS, that is to say, is beyond any qualification and characterisation.

See how each level of the “Big Chain” inclusively goes beyond previous levels, thence its constitutive hierarchy. Also pay attention to the location of the (transcendent and immanent Spirit). When we

refer to the transcendent aspect (level 5) we write down spirit, and when we refer to immanent aspect we'll put Spirit.

What do we understand for Religion? Religion accedes to and deals with levels 4 and 5 (especially, 5).

And we wonder, in this sense, might religious phenomena constitute its own field for the scientific method? The answer is yes!

So, what about the conflict between Science and Religion?

The confusion between the above-mentioned scales (that is, between field and method) leads to associate science with what is low (level 1) and genuine, and religion means "lofty and subjective". Obviously this never can be solved, since both sides share a part of the truth. No battle (confrontation) is possible between higher dimensions and lower dimensions of the reality (because the former transcends inclusively the latter).

But certainly there is a real confrontation between genuine knowledge and non-genuine knowledge. And this confrontation takes place on all levels (1-5) and concerns to statements that can be tested openly and freely through suitable experiences against those that are dogmatic and cannot be validated or refuted.

So this confrontation does not take place between Science and Religion, but between genuine and false. Accordingly, it is possible to talk about an alliance between genuine science and genuine religion, against pseudo-scientific statements with no experimental basis, and only justified by dogmatic assertions.

Are methods of spiritual sciences the same as those of physical sciences?

Yes and No. *Yes* in the sense that an essential methodological view is identical for all genuine sciences (that is to say, all statements of knowledge should be ultimately established upon the basis of a direct experience).

No in the sense that each field has overly differential characteristics, and scientific method concretely applied assumes its own forms in each field and in relation to such a field.

So we have unity in a diversity of knowledge: unity as for methodological views that entail unity of knowledge underlying a diversity of phenomena.

Are there significant parallels between phenomena emerged from Physics and phenomena that Mystique considers as its own?

In this sense we want to discuss findings, results, data and phenomena of both Physical Science and Mystical Science, and to ascertain if they have in common (share) significant parallel features.

The answer is No (or at most, some trivial aspects). And we have marked this in the beginning. If for a central mystical activity we mean an experience and direct knowledge on the spiritual field, then some type of parallelisms shall exist between both findings of physics and mystique, simply because we can expect some kind of (although poor and few) similarities between levels 1 and 5. But such similarities are rather trivial, because of the abyssal difference in dimensions of Being. Any over-dimension or emphasis on such parallelisms invites to be totally confused as for the two fields (their objectives) under consideration.

Parallelisms spread in a popular way usually end with such statements as this:

“all things are interrelated in a holistic way.”

In the event this statement is not absolutely incorrect, still remains trivial. Particularly, things are not mutually, symmetrically and hierarchically related, for in the field of manifestation, symmetric and hierarchic relations are as much important as mutual and equivalent relations. For instance: time.

But if this comes true, it tells us nothing new, for Newtonian physicists already say everything in the universe is related to everything by an instantaneous action at a distance (*sic*, holistic concept).

But are not physics and mystique simply two different ways of coming closer to the same underlying reality?

Answer: No₁, No₂ , Yes and No₃.

In the event we want to mean for underlying reality spirit (level 5), then:

1) Physics and Mystique do not deal with the same reality, but with two very different levels (or dimensions) of the reality; this is a confusion to avoid at any price.

2) In the event you want to mean Spirit for Reality in an immanent sense, then any comparison is impossible and we only can add that when you cannot and must not talk, then to be quiet is the best.

3) In the event you mean Totality of each existing thing for the Reality, then obviously Physics and Mystique are parts or aspects of the Totality, and at most we can “invent” a trivial tautology. And while this may be impressive for many people, as soon as you investigate it in detail, it just leads to spurious (or false) scientific assertions founding

surmised mystical truths, which at the most are not good for a genuine Mystique or a true Science.

4) Finally, in the event that for an “underlying reality” you want to mean openly Spirit, then you are attributing the peculiar quality of sameness to the Spirit, which is not a proper way of understanding it.

5) And precisely this attribution constitutes the basis of a considerable success in popular literature about fusion of Physics and Mystique. When they asked of the King Charles II an explanation about the wide popularity of certain mediocre preacher, he replied:

“I assume his lack of sense and absence of rigour fit to them (his audience)”. (*Sic!*)

Some additional elucidation about our diagram

In the “Big Chain”, each level transcends and includes the previous one; so, 1 represented by A, 2 by A+B, and so on.

There are more significant parallels between 1 and 2, than between 1 and 4, or 2 and 5. Physics has found 4 essential (or primary) forces: gravitational, magnetic, nuclear strong and nuclear weak.

In 2, other forces are added to the latter: motive capacity, instincts, desires, and so on. So, other forces are added as we pass from one level to another.

There is an effort tending to isolate and characterise some features common among all these forces, which demand to be quite careful. And attempts have failed or gave way to trivial –although true– generalisations (for instance, in each level there are forces of attraction and repulsion; symmetric relations, and so on). The point is that each higher level, as it goes beyond its predecessors, does not admit to be in parallel with them, since is “emerging, creative, new, transcendent” in relation to them.

In short, you may cut the ontological cake as you wish, because findings made by physics and mystique have very few common things, and you can just consider some trivial tautologies by which the two state to constitute and deal with different aspects of the one and same reality.

But, an interdisciplinary is useful and needful, and in such a sense these efforts are valid in order to harmonise physics with a wider cosmic vision, that is to say, not confirming or refuting, but simply not contradicting. Why is a (forced) marriage of Physics and Mystique risky:

1) It mistakes finite and relative assertions for eternal and absolute verities.

2) It makes believe that, in order to get mystical consciousness, we should learn just a new vision of the world and, if Physics and Mystique are simply (and only) two different approaches to one and the same reality, why to deal with and focus the one and same reality for years of spiritual toil in order to reach the Enlightenment?

3) A deeply reductive approach is something quite ironic in this matter as a whole.

Symmetry Break and Signals of Convergence

Ramón P. Muñoz Soler

We are going to sum up sayings and comments of the first meeting.

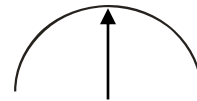
First we emphasise the valuable UNESCO's summons by means of the paper named "*Declaration of Venice*".

"By its own inner movement, scientific knowledge
has reached the farthest ends on which can start
a dialogue with other forms of knowledge".

And based on this assessment of the scientific and cultural reality, made by outstanding world personalities, we remark, by means of some concepts-synthesis and some few images, the development of current scientific-technical civilisation and its possibilities of a qualitative leap for time to come.

These symbolic referents for an "humano-graphic chart of the future" are as follows:

- "a barrier difficult to cross"



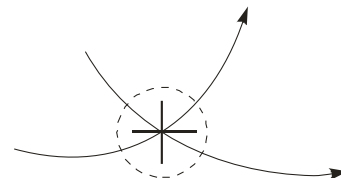
- "half of the formula"



- "paradigm of fragmentation"



- "sign of time"
- "signals of convergence"



Let us recall briefly each of these aspects

What does mean a **“barrier difficult to cross”**?

–It means we have reached limits of the instrument.

What does mean **“half of the formula”**?

–It means we know the laws of the universe, but we lack laws of man.

“Paradigm of fragmentation”

Sciences are divided, universities are divided, society is divided, human beings are divided.

We have knowledge of parts, but we have lost vision of the whole.

Professor Eduardo Castro has especially emphasised he noticed a separation between “mystique” on the one hand, and “science” on the other. And referring especially to physics he told us “current physics does not offer any support to a religious cosmic vision of the Universe”, and questioned attempts made to “unify” these two fields on the basis of “analogies”, “comparisons” or “arbitrary extrapolations” (like those made by some investigators between data of modern physics and some principles of Oriental philosophies, or between Bohr’s complementariness principle and the symbol “Yin-Yang” that in Chinese philosophy denotes distribution and balance of cosmogonical forces in the Universe).

Professor Castro’s sayings, shared on the other hand by outstanding thinkers, scientists and philosophers, clearly expose the strong influence of the “paradigm of fragmentation” in the mind of the contemporary man, –a theoretical frame displaying not only limitations of science for a whole vision of the reality, but also limitations of mystique for a unifying cosmic vision of knowledge and life. As Fritjof Capra properly says in his book *“Tao of Physics”*, quoting an ancient Chinese aphorism:

“Mystics know roots of Tao, but not its branches;
scientists know branches, but not its roots.”

In other words:

Mystics reach intuitive vision of the Whole, but have not a language to articulate the potential of this Whole with the multiplicity of aspects by which the life of the Universe becomes apparent.

Saint John of the Cross says:

“To come and taste all,
don’t taste anything.
To come and possess all,
don’t possess anything at all”.

On their side, scientists reach the whole knowledge of parts, but when they want to formulate equations of unified field and comprise the Whole, they must stop halfway because to do so they should put qualitative values in their equations, which is against their own premises.

In few words: In order to save the Whole, mystics have to refuse parts (they refuse development and evolution); in order to save parts, scientists refuse the Whole (they refuse the Transcendent).

What does this mean? It means that the “paradigm of fragmentation” cannot go beyond its own limits, and that we have reached limits of the instrument instead of limits of science or limits of mystique.

In order to cross the abyss between science and mystique, between the way of knowledge and the way of life, instead of a new science, a new philosophy, or a new religion, we need a new “organ” of knowing, a new “cosmic sensibility”, a new “language” to translate the unitive experience of the soul into the multiplicity of living forms.

Where to find support points for these leap to a new dimension of human development?

“Sign of Time”

In what sign of time are we living?

It is a time without signals, without reference images (“*Bilderlosigkeit*”).

Our technical civilisation has lost the image of the world.

Octavio Paz says in his work “*El arco y la lira*” (“*Bow and Lyre*”):

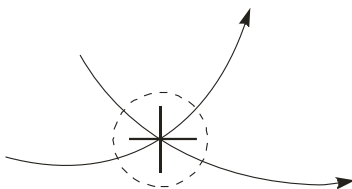
“Works of the past were replicas of the cosmic archetype in the double sense of the word, copies of the universal model and human answers to the world, rhymes and strophes of the poem that the word says to himself. Symbols of the world and dialogue with the world; the first, as reproduction of the image of the universe; the second, as an intersection point between man and outer reality...

Buildings of technique –factories, airports, power plants, and other big structures– are absolutely real, but not *presences* –they do not represent, they are signs of action, not images of the world” (“*El arco y la lira*”, page 262).

How to accede a new image of the world? Not by way of “building”, but by way of “revelation”. Not by theoretical speculation about cosmic archetypes constellated in the new sign of time.

The irruption of a new spiritual energy into the weft of our time becomes apparent by signals of convergence as a whole.

“Signals of convergence”



A paradox. We have entered this existential wild (cosmic loneliness, inner void, loss of sense), and in this time with no signals, in other words, in this “dark night” of the soul and word, first stars come out, –they are “signals of convergence”, a new configuration of signs.

The keynote in our time is

**convergence between scientific-technical revolution
and spiritual revelation,
a convergence between intuitive sensibility and scientific thought.**

That is, “contacts” by “resonance by similarity between differential functions”.

How are manifest and recognised these new signals?

On “physiologic level” they become apparent under the form of a new paradigm, “holistic paradigm”, configuration of the Whole-and-parts.

How are woven these new configurations of knowledge-and-life in the complex weft of the contemporary world?

- By a dialogue between wise men and saints.

- By a “logotechnical” dialogue between man and machine (interaction of human physiology and logo-cybernetic circuits).
- By a dialogue of transcendent love between man and woman.
- By a transdisciplinary and transcultural dialogue.
- By a collective sacrifice.

Now I will tell some few words about the meeting (“resonance by similarity”) that today takes place among thinkers, scientists, philosophers and artists on the summits of intelligence, poetry and love. So I will reproduce some paragraphs of dialogues between Einstein and Tagore (1930) and between David Bohm and Krishnamurti (1976).

Einstein-Tagore

(See: Ilya Prigogine, “*Tan sólo una ilusión*” (“*Just an illusion*”), Tousquets, 1983, page 39.

Einstein: Do you believe in the divine isolated in the world?

Tagore: Not isolated.

.....

Einstein: In the event that man does not exist, the Belvedere’s Apollo should

stop being beautiful?

Tagore: No.

Bohm-Krishnamurti

(See: “*The Awakening of Intelligence*”, J. Krishnamurti, Avon, 1976, page 477).

Krishnamurti: Is intelligence out of time?

Bohm: But thought has to be related to intelligence.

Krishnamurti: Is it so? I think there is no relation between them.

Method

The audience, 60 persons get together in circle, in groups of ten; in each group they read and comment subjects on education.

At the end, each one expresses what has understood, and Eva writes on the blackboard particular comments about the reading.

Eva

Comments

1. I feel this is the essential point: what values should be cultivated in the official school?
2. Another point posed is the difference between education, formation and instruction.
3. The concept on true education related to change...
Continuous change...
4. What was industrial revolution and what is now technical revolution. Are we living or surviving in a society of change? Change because are we invaded by products of human creativity, or because did this human creativity by means of its products extended his senses and neurones by "observing" the invisible? And here is the conclusion: the paradox is installed
5. In my view, education. Formation should start from the deepest of each one of the educators, that is, the purpose has to be a meeting of a person with another on the same level, and by the heart; in my opinion, this is one of the main foundations...
6. Or course, we have talked about this point of view, about a new language of affection...
If we lay pride a little aside, and put humility to do things, I feel we are going to find this way the right path that we want to follow.
7. A difference between knowledge and wisdom arose
Data as a whole do not take more information for granted, and information as a whole does not takes knowing for granted.
8. Another thing we saw: mass exploitation of knowledge, and incapacity to face it...

that is to say, informative saturation.

"in school"

"instruction/information"

"What is change?"

"continuous change"

"Change because are we invaded?..."

"gap in development"

"paradox"

But, what did emerge from reading?

Perfect, may I say "affection"?

-Yes.

"new language"

"pride/humility"

"knowledge and wisdom"

"velocity of information"

(scientists call it "polluted information")

9. Emphasising changes produced in significance of space, wider spaces, young people travelling and knowing other countries and customs and languages, and this is highly formative.

Just through travels?

Through geography, books, and all communication media; the world becomes smaller as velocity increases; new meaning of human space in relation to time and velocity; knowledge rapidly accelerated and soon displaced: an enormous help derived from interdisciplinary tendencies, the one supports the other... their is a tremendous expansion of consciousness.

“space/time”

“acceleration of time and belittlement of space”

10. It is obvious the anguish produced by an accelerated process of change and its mass information. A purely creative sense in education is absent, and the ideal would consist in transforming the mass, the critical mass that is going to give rise to education.

“creativity”

“critical mass”

11. In my opinion and beyond our reading, I realised the relation produced among persons in the group, in spite of not being acquainted; and I realised we all were looking improperly because we were seeing what knowledge could this paper give us, but we do not try to see something new.

Here a young man spoke, but I interrupted his words.

“to see something new”

12. Here the point is where the general journey of humanity should be led. Because on the one hand, it is possible to form an ideal culture, a cosmic culture, with no geographic boundaries, and integrative culture or of synthesis, and on the other hand –a concrete reference to development in Japan- to aim at a regional culture, applicable to concrete needs of each people. So the question is: what would be the strategy in terms of education: cosmic, integrative culture, of synthesis, or should we manage here and now, by assuming our own concrete problem?

“ideal culture, cosmic culture, or concrete culture”

13. We commented a paragraph referred to one's attitude in front of change; while in grown-ups this attitude is of fear (fear for change), children are more open and ready. The other point refers to informatics and says, if at this moment we are somehow captivated by this “new toy”, later it shall be helpful to acceding more directly information, and children will have more time to develop their creative potential.

“fare for change”

“and why not for us, the adults?”

Yes, of course!

Why education only for children?

No

In this chapter it is emphasised that the only quest

“intellectual knowledge/handicraft”

for knowledge would lay handicraft aside, let us say, abilities acquired by a race. It calls the attention on inability to educate out of the bureaucratic system to which education is usually reduced, where we do not know the sense of what we are doing (for instance, mathematics, where we are taught how to add or subtract but not to give sense). That is to say, we end in a bureaucratic system where the final object of education got lost halfway.

“bureaucratic system”

14. The paragraph commented emphasises a dichotomy between school and child; there is a loss; we need to hear children; and they detect this dichotomy; We are going to be able to educate to each other, children and adults.

“dichotomy between school and child”

“education together”

“apprenticeship process”

Eva:

Let us see a little these “space/time/knowledge” categories, like ways that are going to enable us to broach this synthesis we try to build, which absolutely is not a theory or a closed conclusion because fortunately we stopped believing in closed conclusions. What it is happening amazes us, so we try actually to see what type of potentials are hidden in us, and which potentials we should begin to develop or make emerge so that we may be able to read the reality with new codes, new ways of communicate with this reality, not only seeing it, reasoning and getting too rigorous conclusions by means of laws, hypotheses or “models” (as doctor Muñoz Soler said), where suddenly, when we construct a beautiful model –along with its wonderful objectives, and all its contents of the educational system, for instance, its evaluative system– we rejoice over seeing educational objectives so clearly described by us, but when we put a model in contact with the reality, this model collapses, but we do not mention this collapse but say that the reality did not respond to the model. So, the fundamental subject –as this young man quite properly said– obviously is the viewpoint with which we observe the reality, and we should change this viewpoint. But what is this viewpoint? Are we going to learn now that there is only one viewpoint? No, each one of us has his own viewpoint, so you were constructing this with me; surely each one of you has lived it in a different way, but you said, where from?, and you said this from your own viewpoint, experience, need, and even ignorance about certain matters.

Of course, the “space”, now certainly we are perfectly able to surround our world in 90 minutes (a satellite goes round the globe in 90 minutes and brings us images from all points of the world); now we do not travel by ship or plane, but we have another means. But see what an unbelievable thing: information comes to us in real time. What does real time mean? At this moment, I can receive an updated information about events occurred on the other end of the world.

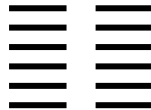
So, obviously, something is happening –and is happening to us– because we are unable to understand the meaning that this message brings us, because what we are doing is to translate this message according to our current possibilities that, obviously, we find obsolete, but we are unable to find a way of reading it properly.

“Time”, of course, as Celia quite properly would say, “times”. At this moment we are living together historic times. Farmers, producers, services, all together. There are simultaneous cultures, simultaneous situations all over the world, which tell us about our space conquests, but here there are millions of human beings starving, and this contradiction gives rise to a deep inner conflict in us: not only a conflict about what direction to follow, but an innermost conflict by which I am misplaced in space and incapable of coping with (and being in) this time, because this time is not enough and my lifetime is very short. In no way this time is sufficient. So this make me feel anguished, and gives rise to a sense of being totally misplaced. And in addition to this, “knowledge” overwhelms me with a lot of possibilities –I can positively accede the whole information (now, in a tiny compact disk, in a disk drive, I am able to read the whole Britannic Encyclopaedia), and by means of a communication MODEM I can make direct touch with schools of Buenos Aires, Rio Negro and Bariloche, as we recently did, and with those of Mar del Plata and the United States simultaneously. There were children talking simultaneously through a communication MODEM. Obviously, we are living different times that produce a conflict in the educational sub-system established in the social system; so we begin to question it, and say: how is this? We speak about communication media when actually education is inherent in education: education (“*educere*”) is impossible without an inner communication process and without communication with somebody else. When this lady said we “build” an education in which we all teach and learn, and do not know if through a dialogue, but perhaps through “silence”, or perhaps through a search; through a search of what? We have to discover this all together through a code constructed by us, through this new language we have today. This artificial communication system, that is, language, is insufficient, and even causes confusion, because one and the same word, one and the same concept... (is a concept, a “synthesis”, isn’t?; a concept becomes our wider synthesis of something concrete), but we do not agree about a concept: so, what happens? We have to construct new concepts. We may re-construct what now we are managing in our daily activities. But when we say, for instance, “pedagogy”, we know quite well that we do not speak any more about pedagogy studied in the University, because this pedagogy told us that auxiliary sciences (psychology, philosophy, politics, sociology) should enrich this pedagogy, but what did we do with this psychology, with this sociology, with this philosophy? We have them as watertight compartments, and pedagogy remains as another watertight compartment, in which we try to “re-float” and vindicate it along with other sciences or other areas of knowledge; when knowledge –I do not know if what I am to say is ety

5th Part
Introduction to the Subject Death
as
Experience of Totally Integrated Life

Ramón P. Muñoz Soler

This is the last meeting of the Course. We are coming near the “time of ending”.



So we shall conclude our talks with the subject “death”.

In a Castaneda’s story, Don Juan tells his disciple:

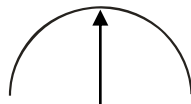
“Death ever expects by the left side of the warrior
for him to finish his battle on earth”.

Well, while death expects, we shall examine in a brief and retrospective way some ideas and queries arisen in the course of different meetings.

The central subject of this course was, as we recall,

“Science at the farthest ends of knowledge”.

We say our culture has reached a “frontier difficult to cross”.



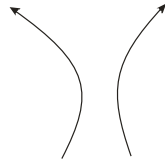
This frontier displays a “double face”:

on one side, crisis of a “fragmented knowledge”;
on another, “signals of convergence”.

This “contradictory/coincidence of signals” is a paradox in the sign of our time.

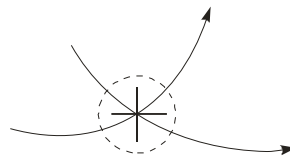
That is to say:

on one side, we watch the way of knowledge moving away from the way of life,



but on the other side, we watch “signals of convergence” looming on the horizon.

How do these signals come up?

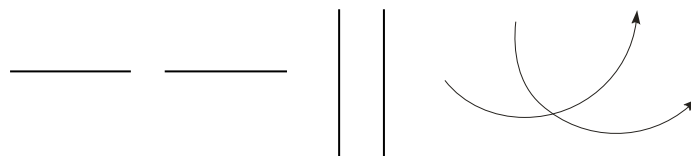


Inside, as “revelation” of the identity of Being.

Outside, as trans-disciplinary dialogue between scientific knowledge and spiritual tradition of Humanity.

This contradictory signals became patent in the first meeting of this Course when, on my side, I would emphasise the significance of this convergent movement in culture of our days and, from another point of view, Professor Castro (as a researcher in quantum physics) would state current science, particularly physics, did not offer any support to a religious cosmic vision of the Universe.

And Engineer Osvaldo Martínez, Director of the Interdisciplinary Institute of Philosophical Anthropology in “Argentine Scientific Society” noticed this seemingly contradictory messages and told me: “I’d like to converse with Professor Castro and you, because in front of this gap we have pointed between science and Tradition, there are different positions today”. While Doctor Castro postulates this contradiction, Fritjof Capra (in his “*Tao of Physics*”) marks a parallelism, and you a convergence.



Certainly, Engineer Martínez' question is quite valuable and suggestive and, on the other hand, gives way to an epistemological, philosophical and theological controversy. I prefer not to enter this field because we run the risk of creating a new scholastics as a result of this.

My position is as follows:

- We cannot cover the gap opened between the way of knowledge and the way of life but means of science or religion, but by means of man.
- We need a new “instrument” to cross this bridge: a new “system” is not enough.
- This new instrument is being implemented right now. In the individual being, by a qualitative leap in the process of transforming life; and in the social/planetary process, by significant human meetings.

In other words, two dimensions of life that so far are separate –matter on one side, spirit, individual and society on the other; individual and society; man and cosmos– may have this bridge of union that cannot be built by speculative games of the mind or fantasies of the spirit, but by a deep shock in life itself.

This shock –that today we undergo but do not understand– is the characteristic sign of what we may call

“post-modern revelation”.

This “revelation / shock” comes up as much in the soul as in the world, as much in science as in mystique, as much in art as in technique. In my opinion and feeling, we are in the presence of a “new revelation”. Revelation is “One”, “Holophonic”, but manifested by a “polyphony” of voices and signs.

As Doctor Castro said, physics may not offer any support for a religious cosmic vision of the world, particularly if we consider experimental results apart from their founding principles, but if we appeal to principles imparted by fathers of modern physics –who in Doctor Castro's words were “scientists/mystics”– on such a level wise men and saints speak the same language; on such summits of thinking-and-feeling, Einstein conversed with Rabindranath Tagore, and David Bohm with Krishnamurti.

We have talked about “post-modern revelation”(revelation / shock).

How does this “revelation” come up? What is its message? What is its operative technique?

It is an exciting subject, but beyond the frontiers of this Course. Anyway, I may tell you something (but I do not want to alarm you).

The post-modern revelation comes up through different ways, but all of them cross over death.

Death has been expelled from our civilisation as an “experience of life” and replaced by beliefs in “beyond death”, or by techniques for an “artificial prolongation of life”(industry of the *cybernanthropos*); this does not mean that beliefs or technique are valueless, but that usually they are assumed as so many other means of denying the “experience” of death.

This expelled death comes now against us with more power, not only with the damned face of extermination fields of human life, torture, and violation of matter, but also nothing less than with threatening faces, as ozone holes, drugs, prostitution, AIDS, and even under subtler psychological disguises as existential void and loss of sense.

The sign of our time is not of balance but of lack of balance: ecological unbalance, financial unbalance, political unbalance, human unbalance, but we still go on to think all this is transient and we shall come back to a state of balance. As Thomas Berry quite properly says “at present we do not go from a problem to its solution, but from a problem to another” (gymnastics of the new age).

All these situations of “unbalance” are other so many faces of “death”. But the point is that in these areas “far from balance” (as a Nobel Prize in Chemistry, Ilya Prigogine and his school say) in those peculiar points of symmetry break it is exactly where such a change may start. But instead of using such an “unbalance” (and the disruptive power of death) as an instrument of evolution, we go on to try models of “balance” that ultimately mean frustration and crystallisation.

A “creative dialogue with death” requires of a new scientific/social/mystical education, –an education enabling us to conquer “other half” of the formula.



Not only knowledge to transforming cosmic matter into energy, but even experience to transforming our own matter into radiant energy and expansion of consciousness. This requires of an inner switch of force, the awakening of a new human “function”, and reversibility of values. It is the new adventure of man: it is not only to possess life, but also to transcend it. A reversibility of values shall enable us to cross effectively over the threshold between the Promethean will of the terrestrial man and the expanded consciousness of the cosmic man.

Quality of Life, Dignity of Death

Rosa María Germ

I only just told Doctor Muñoz Soler, you talked about “death”, but I am not going to talk about it, but about “life”, about the rest of life in a terminal patient until the moment of his death. Basically this is the task in the Foundation in which I am working and that, as Doctor Muñoz Soler said, is the first experience made in Latin-America by a movement that, at present, is spread all over the world: the movement called “Hospice”. Unfortunately, the Director of this Foundation refused to translate this name into “Hospicio” (in Spanish) because of its clear reference to mentally handicapped persons.

I shall tell briefly the story of this movement “Hospice”, and this brings to a previous reflection: any terminal patient and somehow even physicians (as Doctor Muñoz Soler said, by technological breakthroughs, another distribution of people who live more in urban centres than in the country)—generally speaking human beings are missing contact with this reality of death: something that all of us fear but ultimately it is the only sure thing that we bring with us at birth. The point is to bear this in mind with clarity because in my opinion it is the only way of coping with patients of this type.

“Hospice” took birth as a movement in England, twenty-one years ago, thanks to a former nurse, at present “Lady” of the British Empire, whose name is Cecily Saunders. She observed on patients some curative activities, but when such a cure was impossible and treatment ineffective, usually physicians left gradually them to nurses (who at the end had to attend them as if those patients were simple “packets”). At the same time, these patients were forsaken by their families unprepared to cope with this situation. This is a fact, and no human being, no family is prepared to face a terminal situation and to accept that a dear one may die. Cecily Saunders studied medicine and later she was in a position to discuss with us —somehow we have some omnipotence— on an equal footing. So she founded a movement extended at present all over the world, —practically you may find “Hospices” in England, Canada, the United States, Australia... or some movement like “Hospice”. And we preserve the word “Hospice” that, if you recall, in the Middle Ages was a place in which travellers or sick persons went in order to be healed, to spend their last days, or to rest a little and later to travel again, —that is to say, a place in which they received particular care.

This movement responds to basic principles of the Foundation: each terminal patient is a “living being” until the last minute of his life; so, this rest of life —perhaps days or weeks, sometimes years (in children’s case, generally speaking this comprises years)— this patient must live it with quality of life and according to his wishes, in order to have dignity until the moment of his death. So a technique and a technology have been created in order to assure a patient two fundamental things: first, his “leading role” in his illness on this last stage of his life —the most important because is the last one—, and second, to assure him

that every symptom of his illness shall be “under control” so that he may live with quality of life. And I refer to “symptoms under control”, not to “pain under control”, because pain is perhaps the most fearsome symptom, but not the only symptom a patient may undergo, –and an uncontrollable hiccup may be as bothersome as pain. The principle is that he shall be “accompanied” until the end, and later, after the passing away of one of its members, to assure that the family will count with assistance and support in their readjustment process. These are basic principles in “Hospice”, that is, to offer respect to the patient, and to assure him that as much as possible he will be free of bothersome symptoms (this is possible in 95 percent of cases), or at least, so that he may stand a symptom –here is a principle of rehabilitation that we can discuss later– and that he shall be accompanied, and never forsaken at any moment until the end.

The Director of the Foundation has brought this movement to Argentina; as a psychoanalyst he has worked in “Hospice” for children and also adults, an Institution of which I am a member. There we offer assistance to terminal patients by appealing to identical principles, but adjusted to our reality (one cannot transfer the experience of another country to the society in which we live).

Now I shall refer to our specific functions –because I feel this is quite important– and also to different aspects we may find here. First, you cannot take care of a terminal patient in an isolated way –as Doctor Muñoz Soler said– death is something that brings our own anguishes into motion in front of it (we do not accept it, even though all of us know it will occur to all). And our sensation before a terminal patient is that this stirs many of our own feelings. So, we perform this task in an interdisciplinary team; we never observe patients alone; we discuss and work as a team, in which one can express all those sensations produced in us by a terminal patient.

I feel that our first trouble –by our own idiosyncrasy– is the “leading role” linked with the concept of “truth”. I believe that everybody, and nobody escapes to notice that our society is overly negative, and the concept of truth is a subject that we hardly assume so that a patient may play a “leading role”. To play “leading role” means that his physical and emotional needs are going to be totally respected, even if his will is “not to be aware” of the truth, so a link has to be established with such a patient in order to get a “reading”(bear in mind that not all of us are psychoanalysts or psychologists in our team; I am a paediatrician), but you may totally learn a technique and methodology in order to get, by your link with the patient, a “reading” about his needs and wishes. Then we establish a “link with the family” in order to transmit them and re-establish communication bridges. The concept of “truth” is quite difficult to manage. Here it is not like in Anglo-Saxon countries in which all patients know their diagnosis and what shall happen to them; generally speaking there is one idea, and you can observe it: patients –I might say 90 percent of patients– are unaware of their diagnosis, even though all of them, consciously or unconsciously, know what they experience and know they are going to die. And if you permits and gives them space and time to talk about their experiences, they shall reach alone “their own” truth, –truth of the patient.

In my opinion, this point is very important because is the only thing that enables such a patient to assume a “leading role”, so in this stage of his life, he can solve many things that who knows if with this possibility he might be able to do. I may give some examples: a patient can even get married and legalise a situation not solved for years, and other things that he can solve on this last stage of his life if he counts on help.

Here is one of the biggest difficulties because the first thing we find when a relative consults with the Foundation is: “But you’ll not tell him about his illness”, “You’ll not tell him the truth”. This admits two aspects, the one of the patient, and the other, that of the family, so that you have to work on two points. The second point is that of “control of symptoms”. And the latter has to do with our tendency: to demonstrate that a patient may live well and be “rehabilitated” in the last stage of his life. A patient prostrated with pain for weeks, and that can be under control and standing up, eating with his family and going for a drive... this is “rehabilitation”.

Also we find many difficulties to keep symptoms under control in the quake of certain fears and ideas, mainly connected with the use of morphine compounds by mouth, because people generally believes that morphine should be used at the eleventh hour, when the patient gives himself up for lost, and then he should be unplugged.

Another compromise of ours is to “accompany the family”. We offer our assistance as long as the patient is able to move –we have no internment– and comes to the Foundation; otherwise we go and check and come with him back home. But certainly he shall have this reinsurance, namely, we shall accompany him until the last moment. Later we give the family technical help if they wish and need a readjustment therapy in the mourning stage (this is mainly necessary in case of a father’s or mother’s death in a family without children, or when a child is dead).

That is why I only just said we do not talk about death, but aim at life; in fact the Foundation’s logotype is the “tree of life”, and our motto is “rather taking care than healing”.



Now certainly one wonders why all these things happen; as a physician, I feel able to tell this because I lived this in my formation stage and first years as a physician: I believe all of us have been formed to “heal” and do not admit that actually –as early as Hippocrates said so– many few things can be healed, many can be prevented, but always you can “take care”, –and this last principle, that of “taking care” is perhaps the most forgotten. But the team in charge has to pay a high price for this: a physician that forsakes his patient because this physician is alone, has to pay a high price for this patient forsaken because is taking with many deaths accumulated, for which he has no answers. Many times you hear: “What happened with that patient whom I took care of?”, and to certain extent a doubt remains: –when physician, nurses and the entire medical team can accompany a patient until the end, also they have solved this death in themselves (for no mystery or question remains in them). And also this has much to do with technological development –as Doctor Muñoz Soler said– in the sense that one refuses to use any extraordinary treatment with the only purpose of extending life. I ever recall Doctor Twyecross’ words last year here –one of the most outstanding writers about keeping terminal patients under control, and an adviser to the World Health Organisation for control of pain in cancer–, it is far more important to add life to days than days to life; so this is also an important concept for the entire medical team: if one is able to accompany and keep this patient under control, and respond to his needs, then we realise we were able to fulfil an aspect of our profession for which we were not prepared. And if one uses any technique at the price of prolonging life, then we are overlooking this fact: a patient may wish not to be interned, subject to dialysis, and so on, or to any other procedure that is not going to improve his quality of life. And progress in technology has produced one of these “distortions”: then we overlook the assistance to a human being. So our Foundation –as a part of the movement that today is world wide– aims to make prevail what one has to attend and look after, the human being, and that this human being is in a context, namely, his family that also have needs claiming for assistance.

I have offered some basic principles of our work. Now gladly I’d like to hear your questions. You may learn the technique, but you should count on some needful elements. This is not harmless, and does not bring harm if one works as a team and, as in any other task, we feel gratified. This concept should exist in your work and, believe it or not, is gratifying. When you are in a position to accompany a patient, to converse with him, to induce his “acceptance” and “resignation”, and to be able to assist and accompany the family in their mourning, and to see we have achieved it, then you feel more than gratified by your work; that is to say, your work is not for the moment of death but for the life of the patient and of the family that the latter leaves behind. Here is the gratifying aspect that one has to bear in mind because you cannot do anything like that if you do not feel gratified as a person or as a group. Otherwise this is unhealthy, and nobody might do it.

Question

What is your philosophy, or the philosophy of your Institution in regard to euthanasia?

Doctor Germ

In fact, the word “euthanasia” etymologically means “good dying”, not the concept given by modern medicine about using methods or drugs in order to accelerate death. If one thinks about this in the context of our sayings, “Who does ask to die?” –a person that is suffering. If a patient does not suffer and is accompanied, he is not alone, and may be along with his family. No patient asks to die before the exact minute of passing away. So, “euthanasia” is beyond this concept. As a concept, euthanasia refers to a person that says “Kill me because I am suffering”. If you can avoid his suffering physically and psychically (of course, some disturbance may exist), but this person is not alone and feels accompanied, seldom shall say, “Kill me”. So, “euthanasia” does not belong to the concept “Hospice”, is against it, rather annuls it. Euthanasia is out of our intentions. When a patient does not suffer and is not alone, he does not ask “euthanasia”, –he asks to live, even the rest of his time, but he asks to live.

Question

You place “death” as the last part of the vital cycle, and in my opinion, I rather place “old age” as the last part of the vital cycle.

Doctor Germ

I understand your question. One understands for “vital cycle” a period of time from birth to death. It is a different matter altogether how long this may last. In fact, in the quake of medical breakthroughs, certain diseases ceased to kill people in early ages (now people are thrown into a panic by cancer, in old days by plague, tuberculosis or infections, because in those days they had no antibiotics). Now life expectancy is longer, and one thinks that the vital cycle ends with death, but this is not true, –vital cycle is the moment between birth and death, not from birth to present life expectancy that is about 80 years.

Question

My question is, how is this arrival of death?

Doctor Germ

Everything is dependent upon how you have worked. When you could accompany and know this patient, the moment of death entails a “peaceful acceptance”. Sometimes you do not achieve this, but bear in mind this: nobody dies differently from his own living; this is a part of our individual story. You may try to help and sustain, but all psychological and psychopathological processes of the patient –solved or not throughout his life– become more acute at the moment of death in a terminal disease. You may try to attend

and help him, but somehow each person dies in accordance with his own living. But in the event you may attend him, then the moment of his death is a tranquil moment for him and his family.

Now, if the question goes beyond, if we close the cycle, certainly we do, –the cycle finishes at the moment of the patient’s death; later it is the family that he leaves behind. If the question refers to a religious or philosophical aspect, we respect the patient’s decision with no interference; if a patient asks religious assistance, he counts on it, but without impositions: we give it if and when he wants it; otherwise, we try to prevent from it.

Question

Please, a question, you said you were a paediatrician, what does make the difference between attending children and adults? Also may a child understand the idea of death?

Doctor Germ

I’ll divide my answer into two parts. In children’s case, death is something entirely different. He lives death from a world of fantasy. Some few persons have worked with and written about the “dying child”; one of them is Ginette Rimbault, she published in France a pretty book entitled “*The Child and Death*”. You should have a clear knowledge about normal emotional development in children and adolescents if you want to work with them. And in relation to death, one has to be aware of this: the concept of “death” in a child is an irreversible fact (with no return) until he is 8 to 10 years old. So when a child 4 or 5 years old asks about death, he is curious but unable to understand that death is an irreversible fact, –his question is from the viewpoint of his curiosity, but we reply from the viewpoint of our fear: “Please, stop talking about this, how does occur to you to talk about these things?”. Our work with a child or an adolescent is different; in the event that at a moment of his disease he asks about his likely death, and we have established a proper link, then we can reply he certainly is going to die. And against a general opinion –I know this is shocking in case of an adult’s death, and much more in a child’s or adolescent’s death– the latter calms down, as if we were able to reduce his burden of anguish, because a child has a different characteristic: he perceives all those events in a very particular way and from his viewpoint of fantasy, without obstacles and defences that we as adults use. And when a child feels ill, he tends to protect the rest of the family group; so he does not speak because is conscious that his sayings may harm his own family. The world of a child is quite different; if one can work with family and child, the child needs to know, wants answers, and can say goodbye, and he does, gives his own things, and calms his family down; in this case, the child is rather a tranquillising factor in the group than in himself.

Question

I am a rural physician and have assisted terminal patients. It is easier in the country because the physician-patient relation is more open, but at certain moment his family asks “if one cannot do

something more”, and now, mainly in the quake of medical breakthroughs, someone suggests to take this patient to a high-tech centre. So my question is, “to what extent may we use this high-tech in a terminal patient?”

Doctor Germ

I see two aspects in your question. One aspect: what does mean “terminal”? You may examine this from two viewpoints. A patient may start the terminal stage of his disease, which can take days, weeks, months (seldom, a year), –bear in mind that this concept “Hospice” takes birth basically for cancer patients. Today there is a movement for AIDS patients, and we work differently with children because there are children whose diagnosis tells you they are going to die at certain age in spite of any efforts made now by science. So, many things may happen at this stage, you know your patient is going to die, but this is so “until the present moment of science”: –a patient whose diagnosis is lung cancer with liver metastasis is going to die at the present moment of scientific knowledge, however treatment he may receive. Here is the so-called “terminal stage”, and later there is a “terminal phase” defined as the last 48-72 hours of life, and this is entirely different; many times, at this stage you wonder if there are things to do, and this is why again I emphasise this is a group task. In case of doubt about diagnosis or prognosis, we apply to our group of inter-advisers, because it is at this stage that the patient’s family claims for things, “And if you use some magical drug?” Of course, if one continues his search is going to find someone else promising a magical cure, but we try to impede that this search may put an end to the patient’s life previous to the term of his own disease.

In relation to the other part of your question, I believe we should see two concepts with clarity, namely, the use of “extraordinary treatment methods” (you may call it breathing tube, dialysis, resuscitation or reanimation), and if your schemes are clear, these things seldom occur. If my patient is seriously ill by a rapid deterioration of his condition, and I know that if I give an extraordinary treatment I’ll make him recover his previous (or more or less the same) good condition, in this case all methods of “extraordinary treatment” are valid. But it is a nonsense to apply an extraordinary treatment method to a terminal patient that I know he shall evolve this way until a progressive deterioration of his condition and, finally, until his death.

But why this urgency at this terminal stage? Because at this stage of the occurrence, his family runs and arrives in the hospital, and any explanation is out of context, so the physician does what he is prepared to do: it is something acute –“acute” for **him**– because he does not know this patient. So, neither the family was prepared, nor the patient under control so that he may spend this phase at home. But if you usually converse with your patient, ultimately it is this patient who decides to accept or not this extraordinary treatment. Because a patient rather to live wants to live well the rest of his life, and rather than being afraid of death he is really afraid of agony and suffering.

Question

How do patients come and meet you?

Doctor Germ

By three ways, first, quite seldom, through other physicians. Second, also quite seldom, by a spontaneous application of the patient. And third, more often –so the most difficult way– through family, and in this case all the above-mentioned situations may occur, namely, “let us lie”, “don’t tell him”, “doctors, how am I going to tell him who you are?!”, “how did I contact you?”. The latter demands a simple answer, “Tell him you have contacted a group of persons who are assisting those that feel ill like him”, nothing more. All the rest has to emerge from this group of therapists that are going to help him.

Also it is the patient that chooses his therapist, perhaps a nurse, a social worker, a volunteer, a psychologist... because in this case the patient plays a “leading role” (just as you should feel emotions of someone else in order to work on this, so the patient should feel empathy with that person). It is the patient who choose him who is going to stay with him, and in my view, this does not happen frequently.

Question

Please, a question: when one deals with this, namely, with “death”, does the meaning of life begin to be different in us? I do not know if my question is clear.

Doctor Germ

I grasp it, and my reply is as a paediatrician. If you ask if this task is for young people, I would say no; it is not good for those persons that are growing up (that is why you see many quite young and efficient nurses that ultimately quit frightened in front of this situation). I feel you reach this through evolution: you learn about death by accepting previously your own “death”. But I feel you can learn a great deal (and I can say this as a paediatrician) by working with dying patients, you learn about life, and you reassess your own life and your own viewpoint about life. You are much more convinced of this when you work with children: –a work of this kind is actually a lesson of life.

Question

Please, a question... Does your Institution deal with internment? Is there any exchange? What type? Some economic support? Have you some sort of help? Or it is entirely private?

Doctor Germ

Help? No. We are a part of the International “Hospice” Movement even though, according to this concept, we are not “Hospice” because we have no internment place, and if one day we do, internment is not a place for a patient to die, but a place for a patient to spend some days and keep his symptoms under

control, so that he may be in company and checked at home. At most, internment at a “Hospice” lasts about fourteen days.

As for the second part of your question, this is not a private Institute, it is a Foundation and, as any other Foundation, should be sustained by donations, but these donations practically do not exist. Certainly we have a foundational tariff that persons pay at will, otherwise not (also we have bought medicaments for patients), and those who can pay a little less are visited by the Social Service and pay this tariff according to their possibilities. But the economic situation never prevents from assisting a patient.

Question

By the only fact that one is going to die, we are told that they take you to a place, so you begin to think, “How may be this place?”

Doctor Germ

Place? It is a house, distributed as such, a part as a class to give training-approach courses, and three small halls (one for children’s games) and the other two for interviews.

Question

But I referred to the place of death, how is this place where one has to go at death? What is your attitude when a patient begins to theorise about this “place” of death?

Doctor Germ

To speak about his own death? One hears, nothing more. Some patients even speak about death but, in general, patients do not mention their own death; they talk about all those things they want to do while they are alive. When one knows a patient, we do not encourage plans beyond his possibilities or likely term of life... and the patient is “negotiating”. In his book about “*Death and Dying*”, Elizabeth Kübler-Ross describes her experience with dying patients as four or five stages to pass until the “acceptance” moment. The first reaction is to “stay in blank” –this patient cannot receive the news–, later a “refusal” stage, and next a normal “depression” stage –such as Kübler-Ross describes it (a reactive depression stage)– and then a “preparatory depression” stage –in her own words– until the last “acceptance stage”. One ought to know this because, according to the patient’s stage, you know if you can act or not, and what this patient wants to tell you as long as he is talking. Generally speaking, patients already “accept” his terminal disease and do not speak about “death”; their questions refer to an eventual suffering, and begin to plan what want to do until the moment of their death –some things that perhaps they did not solve throughout their lives (and no patient must be deprived of this right). In the event you continuously prevent the patient from seeing this situation, finally he has a bad death and dies alone –no person is bad (neither family, nor the patient by his aggressive

reactions, and so on). That is why I say one is in search of a new communication bridge between family and patient.

And now some few words by way of an

EPILOGUE

At this point the question is, *what happened* in these five meetings of the Course?

At this moment I shall not assess this Course as an *idea* but as a *method*, as an “event”.

We shall not consider *what* has been said, but *how* has been said.

We shall not consider the (interdisciplinary) relation between different fields of knowledge here commented (science, art, education, cultural philosophy, assistance to terminal patients), but the configuration of forces traced by interacting persons (a human hologram).

In my *view*, this Course has a message that does not come up written on any part of the discourse, or in the meeting of all those parts. We should read this message on “interference patterns” among messengers. And here is the fundamental characteristic of the message in the new sign of time.

The “human hologram” is like a technical hologram. You have to illuminate it properly by means of suitable light; you should put something of yourselves in order to see it. What do you see? The “Whole-and-parts”. And what is his “something” of me that I put in order to see the message? It is not something, but “someone”: I am myself. It is the entry of the subject as a research instrument, but now not as a simple observer, but as a “participant”. It is participation that makes “vision” possible; you do not see anything without participation.

Epistemology of science gives way to science of life when the “total being” is subject and object of knowledge.