TRANSDISCIPLINARITY APPROACH TO STRONG SUSTAINABILITY

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But this became more and more complex. New pillars were added: future generations, environmental justice, economical justice, universal human rights, culture of peace, politics, etc.
Very interesting is the fact that studies on sustainability underline the necessity to consider the interaction of a bigger and bigger number of disciplines. Complexity is more and more increasing: there are 17 goals and 169 targets.

The concept of sustainability is not well defined: it is multidimensional and multireferential. It is inevitably fragmentary and reductionist.

Some approaches try to formalize sustainability in a mathematical way. One speaks even about a «science of sustainability». But the methodology of science excludes the human being (the Subject) which is an important paradox: the human being must be in the center of a sustainable world.
Big question: WHAT COULD BE REALLY SUSTAINABLE?


Transdisciplinarity (TD) is therefore a necessary approach.

TD ⇒ The only known sustainable system is the cosmic system, in all its dimensions, from the quantum particle till the most distant galaxy.

EVERY LEVEL OF REALITY SUSTAINS EVERY OTHER LEVEL OF REALITY
WHAT IS TRANSDISCIPLINARITY?
Unprecedented increase of knowledge

Number of disciplines:

1300: 7
1950: 54
1975: 1845
2019: > 8000

National Register of Scientific and Technical Personnel, National Science Foundation (NSF) archives, USA, 2000
MULTIDISCIPLINARITY: studying a research topic not in just one discipline but in several at the same time

INTERDISCIPLINARITY: transfering of methods from one discipline to another

TRANSDISCIPLINARITY: studying that which is at once between the disciplines, across the different disciplines, and beyond all disciplines

Latin word « trans » = between § across § beyond
Goal: understanding the present world

UNDERSTANDING = KNOWLEDGE + BEING

Finality: unity of knowledge

TD ➔ study of the interaction of Object and Subject

➔ new knowledge
METHODOLOGY OF TRANSDISCIPLINARITY

3 axioms

1. The ontological axiom
2. The logical axiom
3. The epistemological axiom

Rigorous definition of TD
THE ONTOLOGICAL AXIOM OF TRANSDISCIPLINARITY

There are different
levels of Reality of the Object
and, correspondingly, different
levels of Reality of the Subject
REALITY
That which resists

- our experiences
- our representations
- our descriptions
- our images
- our mathematical formulations
REALITY
that which resists - accessible to our knowledge
+ trans-subjective dimension

REAL
that which is - veiled for ever
LEVEL OF REALITY

Set of systems invariant under certain general laws (natural systems) or under certain general norms and rules (social systems)

There is **discontinuity** between levels
Levels of Reality of the Object + Zone of non-resistance

Restores the continuity between levels

Fig. 3. OBJECT
Edmund Husserl
(1859 - 1938)

Levels of Reality
of the Subject +
Zone of non-resistance
Knowledge is neither exterior nor interior.
Examples

Natural systems:

- quantum level
- macrophysical (classical) level
- cyber-space-time level
- superstring level

Social systems:

- individual level
- geographical and historical community level (family, nation)
- cyber-space-time community level
- planetary level
- cosmic level
The passage from one level of Reality to another is insured by the logic of the included middle.
There exists a third term $T$ which is at the same time $A$ and $\text{Non-A}$.

Symbolic representation of the action of included middle logic.
THE EPISTEMOLOGICAL AXIOM (COMPLEXITY)

The structure of the totality of levels of reality of the Object and of the totality of the levels of reality of the Subject is a complex structure:

Every level is what it is because all the levels exist at the same time
TD REALITY

- Levels of Reality of the Object
- Levels of Reality of the Subject
- The Hidden Third

- organization
- structuring
- integration

- confusion
- language
- representation/interpretation

- objectivity
- subjectivity
- complexity

- knowledge
- understanding
- being

- ignorance
- intelligence
- contemplation

- materiality
- spirituality
- non-duality

Levels of Contextualization
A new Principle of Relativity

- No level of Reality constitutes a privileged place from which one is able to understand all the other levels of Reality
- Every level - incompleteness
- Knowledge is forever open
Environment (natural and artificial: Quantum, Macrophysical, Cyber-Space-Time)

Planetary
Cosmic

Economic

Natural information

Spiritual information

TRANSPREALITY

HIDDEN THIRD

Religions
Spiritualities
Cultures

Political
Social
Historical
Individual

TD OBJECT

TD SUBJECT

A1
non-A1

A2
T2
non-A2

A3
T3
non-A3

X

X

A1
non-A1

A2
T2
non-A2

A3
T3
non-A3

A1
non-A1

A2
T2
non-A2

A3
T3
non-A3
The notions of natural information and spiritual Information (see Basarab Nicolescu, "The Hidden Third as the Unifier of Natural and Spiritual Information", Cybernetics and Human Knowing, Vol. 22 (2015), no. 4, p. 91-99).
In the transdisciplinary approach, the Hidden Third appears as a source of knowledge but, in its turn, needs the Subject in order to know the world: the Subject, the Object and the Hidden Third are inter-related.
The human being appears as an interface between the Hidden Third and the world. The eradication of the Hidden Third in knowledge leads to a one-dimensional human entity, reduced to their cells, neurons, quarks, elementary particles, and electronic chips.
The role of the Hidden Third is to establish the link between Reality and Real.

Catalyst of movement, it possesses an infinite number of faces.

The Hidden Third is the guardian of our irreducible mystery and the only foundation of human dignity.
TD definition of strong sustainability (TDSS): sustainability which takes into account all levels of Reality and the Hidden Third.

At face value, this kind of sustainability may seem an asymptotic aim and therefore utopian. But the Hidden Third has the virtue of unifying the levels of Reality.
THE KEY POINT OF TDSS:
The roots of violence are inside the human being. Our thoughts, feelings and instincts are in perpetuuals conflicts. Only if we can harmonize our thoughts, our feelings and our instincts we can discover a new intelligence which erases the violence in ourselves. And only when we become non-violent in ourselves, by accessing to a new level of consciousness, we can act to erase the violence in the world.
In other worlds, the key-point is the access at a new level of consciousness, individual and collective. This obviously requires a new civilization, which does not suppose a revolution but a gradual transition from our own civilization.

This new level of consciousness involves a global education for TDSS, which must be a noble aim of UNESCO and of all countries.
TDSS revolves around the problem of violence. Violence made to the human being by acting on his nature and made to the earth, everywhere today, by the modification of the cosmic conditions of existence of our planet. Violence is everywhere: poor countries against rich countries, religious and ethnical wars, terrorism, urban violence.

TDSS is incompatible with violence. Violence eradicates the Hidden Third.

We therefore need to imagine a Strong Sustainability of Peace (SSP).

TDSS offers an overall methodology for SSP in the world.
The most extraordinary proof of the violence is the fact that there are currently a number of nuclear weapons (more than 25,000 nuclear warheads, divided among nine countries). A small fraction of them could eliminate life on earth. The man invented the *balance of terror*: an agreement between all those who have the nuclear weapon not to use it, because that will lead to the disappearance of the adversaries. In English the title of the agreement is "MAD" (Mutual Assured Destruction), which, by a funny coincidence means "crazy" in English. Who could prevent a dictator from triggering the nuclear apocalypse?

SSP requires the destruction of all nuclear weapons.
Transdisciplinarity - hope for a new era - **cosmodernity** – founded on TDSS by the fruitful contemporary interaction between science, culture, spirituality, religion, and society.

A new spirituality, free of dogmas, compatible with all existing spiritualities, is already potentially present on our planet. This would give full meaning to the already existing notion of **sustainable spirituality**.

The old idea of cosmos, in which we are active participants, is resurrected.

Everything is interconnected.

All levels of Reality are interwoven.
The ethical imperative of cosmodernity: togetherness

Only through transdisciplinary dialogue can we face the challenges of the contemporary world:
- Dialogue between human beings
- Dialogue between human beings and non-human forms of life (animals, plants, etc.)
- Dialogue between human beings and the cosmos
- Dialogue between human being and the divine
- Dialogue between cultures, religions, spiritualities
We are, in spite of everything, at the threshold of a New Renaissance, founded on the TDSS.
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