CHAPTER 2

To be or Not to be Transdisciplinary, That is the New Question. So, How to be Transdisciplinary?

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When. Centuries ago Hamlet, the famous character, asked himself a similar question. We now have to deal with the actualization of this ontological and fundamental issue: "how to be" (or not). Why. The difference is that in those ancient times, humanity could have a long-term vision of its development (the planet earth was mostly unknown by Europeans). A vision we don't have anymore, as the anthropocentric period will collapse soon if humanity doesn't change its beliefs and way of live. Where. Since Shakespeare, the world became a small village through globalization and the increase of all kinds of networks. So the question still remains valid anywhere on our planet, and even in outer space, where some futurologists plan a possible (and non-sense) human extension. Propositions to discuss. We should try to answer this question by beginning here (and now), as sciences and world's traditional wisdoms agree that all issues start from the inner self of each human being. So we have to increase knowledge by conducting research both in human sciences (philosophical and practical) and fundamental sciences (theoretical and applied). How. For sure, each man tries to be a good human being... but we mustn't also forget that we are not alone, that means we also have to learn how to live better all together. This brings us to translate the question from just a personal position (point of view) to its collective and social dimension. It means the whole thing might become a question of education: we probably have to (re)-invent a new pedagogy. It should include: transdisciplinary approach, complex thinking process, transpersonal psychology, soft skills, spirituality (as not to be confused with religion) etc. The use of (always) new technologies as to be part of this inves-

tigation, as they can increase our feeling of our awareness and consciousness, creating a new field called techno-ontologies (i.e. technics + ontology). Then, we will approach a transdisciplinary paradigm for our personal and collective lives, for a future of hope and fair sharing of the only planet we collectively need to take care of. Therefore we need to find all together the answer to this question: "how being transdisciplinary"?

Keywords*:* Being transdisciplinary, subjects and objects, how to be transdisciplinary, transreality, axioms of transdisciplinarity, levels of Reality, Hidden Third.

Centuries ago Hamlet, the famous character, asked himself a similar question. We now have to deal with the actualization of this ontological and fundamental issue: "be and how to be" (or not to be).

The difference is that in those ancient times, humanity could have a long-term vision of its development (the planet earth was mostly unknown by Europeans). A vision we don't have any more, as the anthropocene period will lead to a collapse soon if humanity doesn't change its beliefs and way of live.

Opposite to Shakespeare's time, the world is now a small village through globalization and the existence of all kinds of networks. So the question still remains valid anywhere on our planet, and even in outer space, where some futurologists plan a possible (and non-sense) human extension.

We should try to answer this question by beginning here (and now), as world's traditional wisdoms agree that all issues start from the inner self of each human being. So we have to increase knowledge by conducting research both in human sciences (related to subjects) and fundamental sciences (related to objects).

For sure, each man tries to be a good human being, but we mustn't also forget that, as we are not alone, we have to learn how to live all together. This brings us to move the question "*How to be transdisciplinary*" from just a personal position to a collective and social dimension.

We proceed in this way by starting with the diagram of "Transreality"[1] (see Figure 2.1). In agreement with the three axioms of transdisciplinarity,[2] the Hidden Third[3] appears as the interaction of Subject and Object, each constituted from different levels of Reality. We can go from one level of Reality to another level of Reality by using the logic of the included middle,[4] but this passing crosses the region of the Hidden Third. In the diagram of Transreality we therefore see the entanglement between the logical included middle and

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[1]Basarab Nicolescu, "Transdisciplinary Realism", Cybernetics and Human Knowing, Vol. 23 (2016), Number 2, p. 77-85. http:basarab-nicolescu.fr/Docs‾articles/CHK‾2.pdf Accessed on October 20, 2018.

[2]Basarab Nicolescu, *Manifesto of Transdisciplinarity*, State University of New York (SUNY) Press, New York, 2002 , translation in English by Karen-Claire Voss.

[3]Basarab Nicolescu, "The Hidden Third as the Unifier of Natural and Spiritual Information", Cybernetics and Human Knowing, Vol. 22 (2015), Number 4, p. 91-99 http://basarab-nicolescu.fr/Docs‾articles/CHK‾1.pdf Accessed on Ocober 20, 2018.

[4]Stéphane Lupasco, *Le principe d'antagonisme et la logique de l'énergie*. L'Esprit et la Matière, Le Rocher, Monaco, 1987.
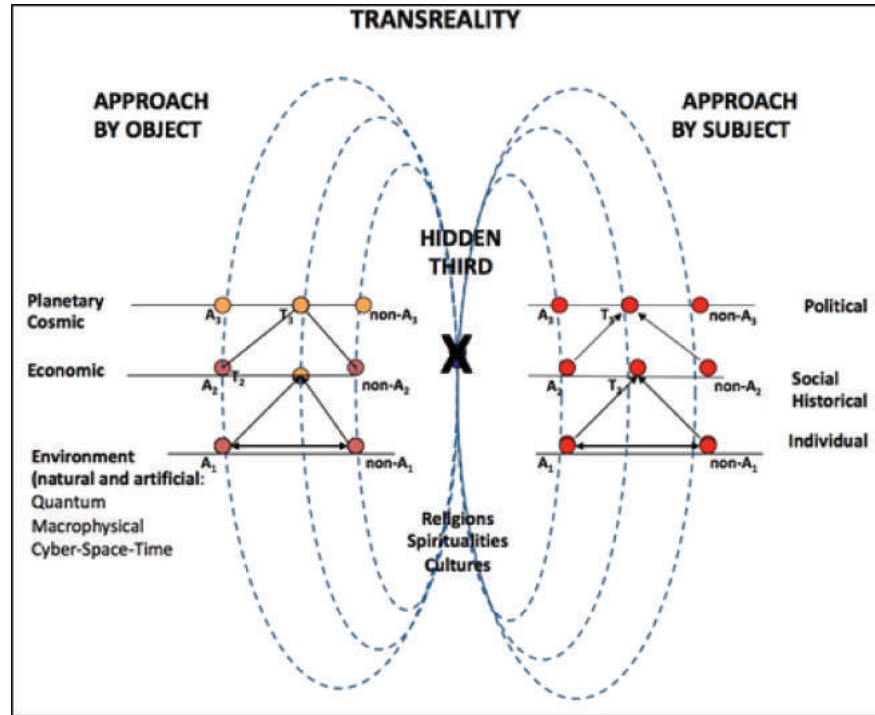
Figure 2.1: Transreality.

the alogical Hidden Third. This entanglement is fundamental for everything which follows in our chapter.

The question is to find a theory of action[5] allowing going from a descriptive mode to a conscious effective mode. We studied in such a way the dynamics of successive and simultaneous transformations, called individual, collective and social transformations.[6] We propose to study the problem of "development" - human and organizational. Starting from a world incarnated in three levels - the self, the others and the nature/world,[7] we formulate three levels of development: the personal development (the self), the professional development (the others in a professional context) and the collective development (the world). These levels, potentially present in the first diagram, allow a *true transdisciplinary discovery* (see Figure 2.2): by superposing the three zones of development, we see that there is a zone where they intersect, a zone where appears the important role of the Hidden Third, which is common to the three zones of development. By projecting this triple approach we can position them

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[5]Talcott Parsons, *Action Theory and the Human Condition.* New York: Free Press, 1978.

[6]Florent Pasquier et al., *Réinvestir l'humain: individus, collectifs, sociétés,* Chronique Sociale, 2017.

[7]Pierre Weil,*L'art de vivre la vie*, Rocher, Monaco, 2003.

Multiple levels of development and the Hidden Third

Figure 2.2: Multiple levels of development and the Hidden Third.

on a common pedestal which is constituted and constructed on the different levels and structures of Transreality. This pedestal is the common platform corresponding to a specific space-time. It contains individualities and communities such as territories, cultures, material and psychological conditions of existence, societal, affective and financial networks immersed in the Hidden Third. We therefore succeed to discover the dynamical and operatory links between human actions and structure of Transreality (see Figure 2.3). The zones of non-resistance, belonging to the Hidden Third, are accessible through intuition, imaginary and imaginal,[8] affectivity, lived experience, poetry, dreams.[9]

Certain conditions are identified for an optimal functioning of acting in view of a real reciprocal influence between subjects and objects.

First of all, the condition of the search of a harmonious equilibrium between the three types of development.

Also, there is the condition of the intentionality of the centripetal unification of these three domains, in order that everyone benefits from the others and there is sharing instead of separation.

Finally, there must be done a deep analysis of the implicated subjects and subjects, in order to verify the consistency and the capacity of orientation towards the aims to be attained, by introducing the notion of "temple", as we

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[8]Henry Corbin, "Mundus imaginalis ou l'imaginaire et l'imaginal" in Henri Corbin, *Face de Dieu, face de l'homme, "herméneutique et soufisme"* (Paris: Flammarion, 1983).

[9]René Barbier, *L'approche transversal: l'écoute sensible en sciences humaines*, Exploration interculturelle et science sociale, Paris: Anthropos, Paris, 1997.

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Multiple levels of development and link with Transreality
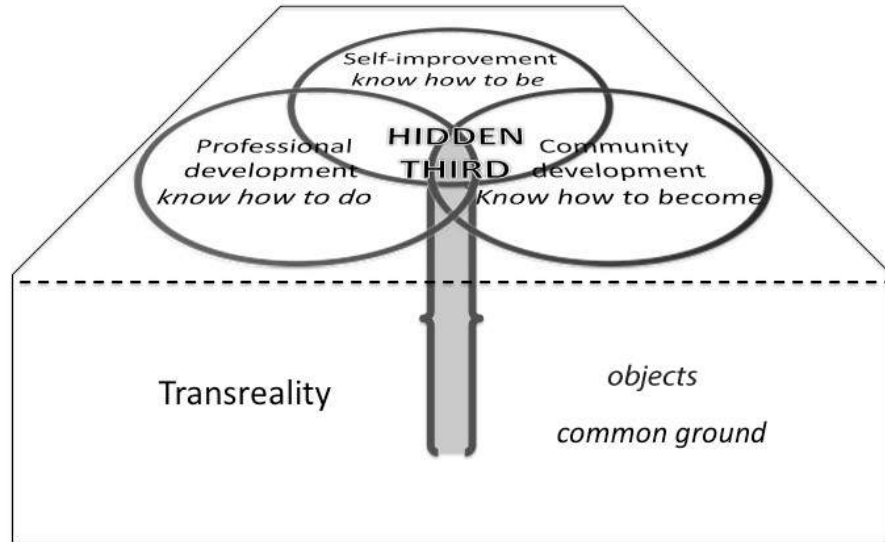

Figure 2.3: Multiple levels of human development and their link with Transreality.

will see in the following.

Then we can explore the coherence loops and the horizontal and sustainable self-consistency, allowing the instauration of a vertical trans-reductionist circulation of the information, of the "black hole" type, overcoming the resistance and the discontinuity of the classical paradigm (theories and discourses, reason and classical logic based). We can therefore envision a principle of unification of the world of objects with the world of subjects or of a vortex of the "white fountain" type.[10] This is the real place of action, of passing from a voluntary, potential act towards actualization: the apparent dialectic mirror opposition subject/object fusions at this point of unification. In terms of the language of Krishnamurti[11] "the observer is the observed".

Is this involving that everything reduces to education and education policies? If this is the case, we must face the question: what type of education and with which conception of human being? What is our vision of a human being as an individual person?

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[10]Florent Pasquier, "Le temps et l'espace à l'école en France, entre trou noir et fontaine blanche", conference given at the workshop "L'école sans murs", Université Paris 8, 2013.

[11]J. Krishnamurti, *Réponses sur l'éducation*, Bartillat, Paris, 2006.
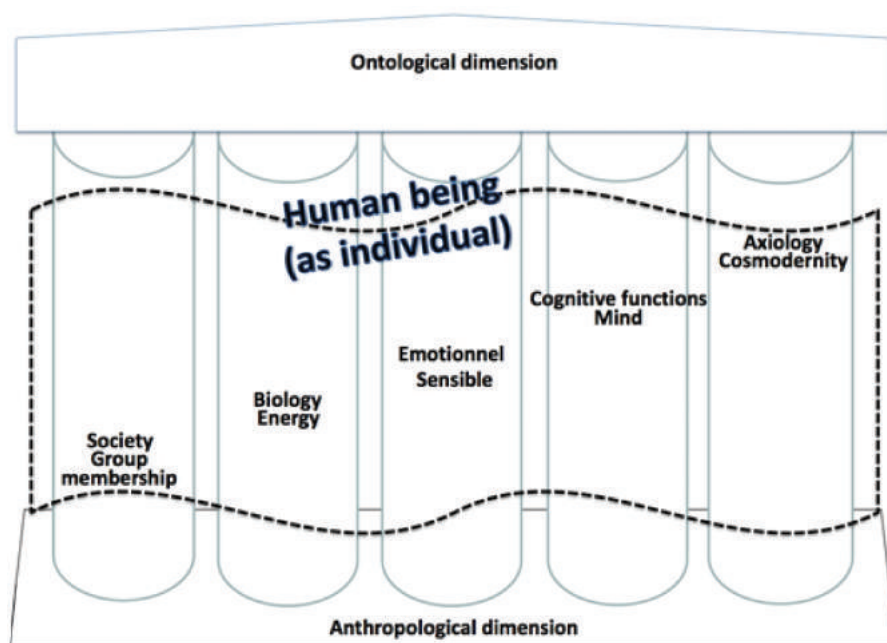
Figure 2.4: Simple human temple.

The aim of our proposal is consider the human being as a human temple, a whole being in a holistic approach (see Figure 2.4).

By attaching ourselves to the action of the subject and by taking into account that everything is centered on the self, we consider that there is a deep relation between material aspects to more subtle aspects and that every part depends on the other parts,[12] namely:

1. Each new born human grows up in a specific anthropologic context: believes, culture, social organization, economy, i. e. what we call Transreality or common ground.

2. First pillar deals with the family and social group's links.

3. Second one deals with the body.

4. Third one is about feelings and sensibility.

5. Fourth one concerns the mental functions (cognition and mind)

6. Last pillar is about values.

7. Top of the temple concerns ontological questions.

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[12]Florent Pasquier, "Espiritualidad y educación", in *Ser cambio educativo / Las sociedades necesitan una ciudadanía global*, 186 93, Rizomatrans, Florida universitària, 2016.
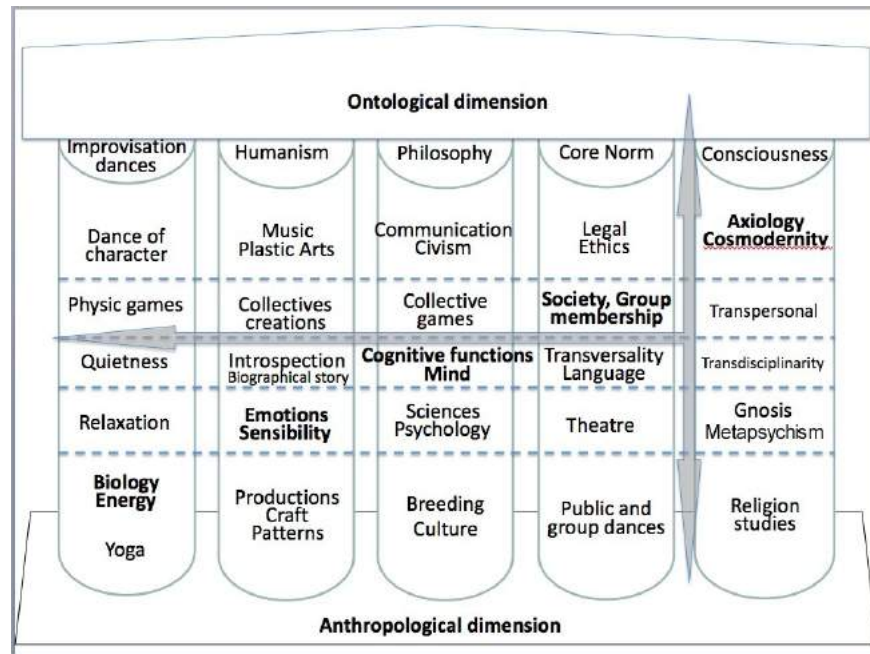
Figure 2.5: Full human temple.

Let us now discuss the complex scheme of "human temple" in educational context (see Figure 2.5).

Each of the above 7 levels includes and develops parts of the other 6 levels. We can in such a way identify the basic scheme in different fields, as in curricula and disciplines. In this approach, "transdisciplinarity" appears in the 5th column and then crosses immediately all the levels and disseminates through the whole structure.

So, here is our answer to the question "how to be transdisciplinary?": we have to focus simultaneously on scientific knowledge and on humanities, and the key for this is "consciousness".[13]

What kind of pedagogy could we imagine in order to promote this vision? What kind of pedagogy shall we use in order to become transdisciplinary in educational policies?

At the crossroad of the Hidden Third containing the subjects in their 3 dimensions of development, linked to the background from the vortex, appears and arises the place for the manifestation of such pedagogy (see Figure 2.6). So this pedagogy must be elaborated according to personal, collective and

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[13]Arthur Versluis and Basarab Nicolescu, "Conversation between Basarab Nicolescu and Arthur Versluis", Part One: "Spirituality and Transdisciplinarity" http://www.hieros.world/a-conversation-between-basarab-nicolescu-and-arthur-versluis-part-one/, accessed on October 20, 2018.
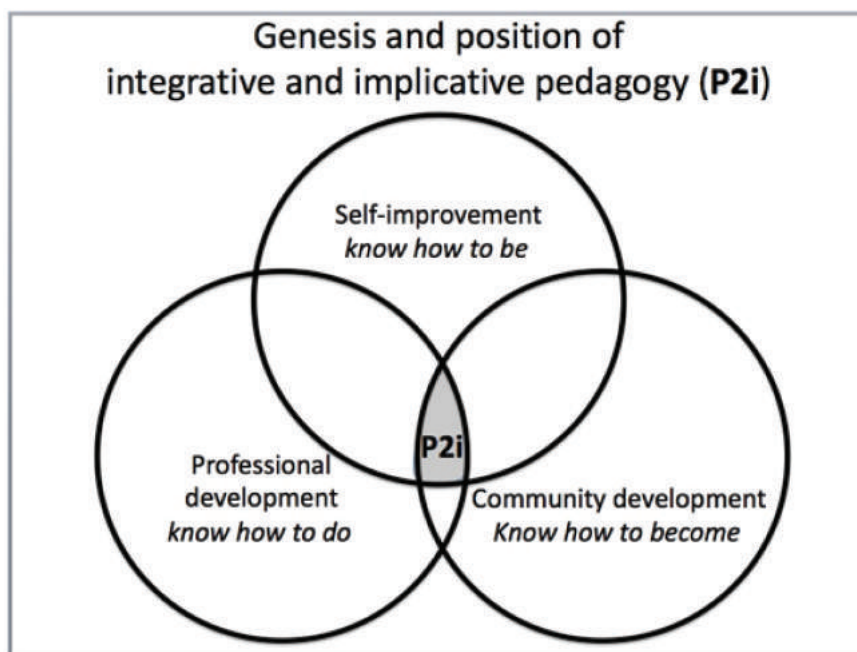
Genesis and position of integrative and implicative pedagogy (P2i)

Self-improvement
know how to be

Professional
development
know how to do

P2i

Community development
Know how to become

Figure 2.6: The Hidden Third as source of integrative and implicative pedagogy.

social development research: it might focus on the junction of "know how to do", "know how to be" and "know how to become" meanwhile it pursues at the same time emancipation and direct participation to the common ground.

We propose a pedagogy called "integrative" and "implicative". *Integrative* means that every form of transmission is useful depending on the moments and the contexts. *Implicative* signals that pupils are offered situations to become fully actors of the process of their learning.

What kind of consciousness is able to conduct this transdisciplinary pedagogy?

We must distinguish "natural information" from "spiritual information" and we have to join them through the transdisciplinary methodology.[14]

For this we can use information and communication technologies (ICT) but under some conditions. "Costech laboratory" ("Knowledge, organization and technical systems"), at the Technological University at Compiègne in France,[15] promotes this approach, by questioning methods and processes and not only objects. This means having a reflection not only in terms of disciplines, but also in terms of the transdisciplinary/complex approach.

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[14]Basarab Nicolescu, "The Hidden Third as the Unifier of Natural and Spiritual Information", op. cit.

[15]http://www.costech.utc.fr/spip.php?article95, Accessed on October 20, 2018.

Thus, we have to be very careful about the question of transhumanism.[16] There is here a huge confusion between intelligence and computation abilities. The goal of "technontology" (techno-ontology) is to empower human being for a better live.

Conclusion

In conclusion, a new pedagogy has to include: transdisciplinary approach and complex thinking, transdisciplinary consciousness, spirituality, the relation with nature and cosmos, creativity, practice of arts, transpersonal psychology and soft skills.

The use of new technologies has to be part of this investigation, as they can increase our awareness, creating a new field called techno-ontology (i. e. technique + ontology). Then, we will try to apply transdisciplinarity for our personal and collective lives, for a future of hope and fair sharing of the only planet we collectively need to take care of.

So now, what can we do? We should become members of *trans-communities* in the respect and for the increase of commons good: we must cooperate with artists, engineers, scientific researchers, practitioners, educators and every people who are open-minded to the other, to open science to culture, society and spirituality.[17]

About the Authors

Florent Pasquier, Associate Professor at Sorbonne University (Paris, France) . Following his university studies in social, environmental and human sciences, Florent Pasquier specialised in communication sciences, new technologies and educational sciences. This interdisciplinary approach facilitates his current global analysis of contemporary issues, including digital media creation and related teaching methods. After several years spent in consulting, research engineering activities and popular éducation, he is now particularly involved in the formation of future teachers. He conceives and implements an "integrative and implicative pedagogy". His current research emphasises transdisciplinarity, transpersonal psychology and digital humanities until technontologies.

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[16]Basarab Nicolescu, "The Dark Side of Technological Singularity: New Barbarism", Cybernetics and Human Knowing, Vol. 23 (2016), Number 4, p. 77-83. http://basarab-nicolescu.fr/Docs‿articles/CHK‿3.pdf Accessed on October 20, 2018.

[17]Basarab Nicolescu, *From Modernity to Cosmodernity: Science, Culture, and Spirituality,* State University of New York Press, 2014.

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