

The Transdisciplinary Chair and the Mainstream Shadow: An Analysis Starting from the ADJURIS Volumes 1 and 2 through the HPTD-M Theory Perspective

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Abstract

The objective of this article is to compare the many approaches of TD presented in the 2024 ADJURIS Book Volumes 1 and 2 'For an International Transdisciplinary Chair', showing that the HPTD-M theory can dialogue with all of them and be used as a mediation tool. Considering the HPTD-M concepts of Analytic or Hard and Synthetic or Soft: the first is related to rational and empirical types of intelligence, and the second to emotional and intuitive. Through our analysis two TD mainstreams were found, regarding the dominance of one or another, but in the end TD is about the dialogue of the two complementarities, i.e., Analytic-Synthetic and Hard-Soft. From an emotional intelligence shadow perspective, it is not enough to induce transformation and paradigm shift through intellectual conviction. More than that, emotional acceptance is necessary on personal and collective levels. The findings in this text involve i) the connection of the mainstream emotional shadow with the reduction of Subject to Object, ii) a list of four dysfunctions in universities, and iii) the gap in awareness among Jungians in the USA and Europe about TD and among TD academics in these regions about Jungian Analytical Psychology, despite their convergence in many aspects. TD is not a mere theoretical framework but also a practical tool for addressing complex problems, as evidenced by the various HPTD-M schematic models. To conclude, some reflections on the main-

stream shadows through complementarities and reductionisms are demonstrated as fol-

lows. 1. Complementarities (dualities in interaction): 1.1 Subject and Object. 1.2 Analytic-Hard and Synthetic-Soft. 1.3 Generalists and Specialists. 1.4 Bureaucracy and Innovation. 1.5 Complexity and Simplicity. 2. Reductionism (broader concepts that tend to be in the shadow): 2.1 Understanding replaced by Knowing. 2.2 Ideas replaced by Ideologies. 2.3 Technoscience replaced by Scientism.

Keywords: HPTD-M, transdisciplinary chair, psychological shadow.

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1. Introduction

The objective of this article is to compare the many approaches of transdisciplinarity (TD), as shown in the 2024 ADJURIS Book Volume 1 (*For an International Transdisciplinary Chair: About the Dialogue Between Culture and Technoscience*) and Volume 2 (*For an International Transdisciplinary Chair: From Knowledge to the Future*), showing that the HPTD-M theory can dialogue with all of them and be used as a mediation tool, through the analysis made in the Conclusion section.

Our background of 15-year contact with colleagues who have M.Sc. and Ph.D. in public service has been meaningful, especially with a 12-year experience in coordinating work groups in the Brazilian federal public administration. The result of such an experience was a well succeeded 14-hour course for TD mediating managers given by this author in 2023 for the National School of Public Administration. The participants public managers with an average of 44 years old evaluated the course very well. So, the HPTD-M approach can be seen as an alternative tool, focused on the dialogue between the analytical and synthetic methods, especially through schematic models that can provoke insights for troubleshooting.

In that sense, Figures 1, 2, 3, and 4 schemas reflect the core of how we understand TD as a promoter of a paradigm shift in a new rising culture and construction of technoscience, not merely focused on scientism, envisaging concrete problem solving in universities, organizations, and civil society, starting from the personal in dialogue with the collective levels from a psychological perspective, i.e. subject in dialogue with the object in many levels of collectiveness.

Considering the HPTD-M concepts of ANALYTIC or HARD and SYNTHETIC or SOFT: the first is related to rational and empirical types of intelligence, and the second to emotional and intuitive. Through our analysis, two TD mainstreams were found, regarding the dominance of one or another, but in the end, TD is about the dialogue of the two complementarities, i.e., ANALYTIC-SYNTHETIC and HARD-SOFT (see HPTD-M model in Vol 1, p. 179).

So, the following comments are in the direction of exposing what we

understand can promote the mainstream confrontation of its own shadow, envisaging the effective international promotion of TD in universities, organizations, and civil society.

Like the personal psychological types in the MBTI System¹ and the Jungian taxonomy, by analogy there can be considered geographic psychological tendencies in some groups, as Dr. Marie-Louise von Franz demonstrated when explaining the Jungian typology². Besides, given the levels of collective unconscious approach demonstrated by HPTD-M (ADJURIS Vol. 1, p. 183), each geographical region tends to have its shadows. In this sense, also considering the mainstream rational hypertrophy, emotional intelligence is the shadow.

Here we need to review the psychological concept of shadow: It is the part of ourselves we don't know consciously or unconsciously repress because we are not fond of it. In Analytical Psychology there is nothing wrong in recognizing our shadows in personal levels, on the contrary, it is part of the consciousness development process, what Jung called individuation. In this sense, HPTD-M tried to map levels of shadows to be worked in various collective levels (Vol. 1, p. 183). Some of the findings in this text involve i) the connection of the mainstream emotional shadow with the reduction of subject to object, ii) a list of four dysfunctions in universities, and iii) the gap in awareness among Jungians in the USA and Europe about TD and among TD academics in these regions about Jungian Analytical Psychology, despite their convergence in many aspects.

2. Roberto Crema: *Understanding: Convergence Between Knowing and Being* (Vol. 1, pp. 136–151)

Roberto Crema, an anthropologist, psychologist creator of the Fifth Force in Therapy, group therapist, and dean of UNIPAZ in Brazil (excerpts taken from the whole text in sequence): *Hology refers to the rational path of study, critical reflection and experimentation of the holistic paradigm, aimed at the dimension of knowledge, while holopraxis consists of the experiential path of awakening to the holistic vision, through practices from the wisdom traditions of East and West, aimed at the dimension of being. Perhaps we can expand [...] by affirming the existence of a mega-factor that impedes understanding, which consists of what*

¹ Cherry, Kendra (2021). An overview of the Myers-Briggs Type Indicator (MBTI). Medically reviewed by David Susman, Ph.D. *Verywell Mind website*. <https://www.verywellmind.com/the-myers-briggs-type-indicator-2795583>; INSPIIRA (n.a.). The individual preferences model [O Modelo das Preferências Individuais]. <http://inspiira.org/teoria/modelo-das-preferencias-individuais/>; FDC – Fundação Dom Cabral (2017). Self-Leadership and Management Program: MBTI [Programa Autoliderança e Gestão: MBTI de 29 a 30.11.2017]. *Fundação Dom Cabral (FDC)*. Nova Lima-MG, Brazil.

² Franz, Marie-Louise von, Hillman, James (1971). *Lectures on Jung's typology*. Spring Publications. ISBN Stanford: 36,105,034,382,171; Franz, Marie-Louise von (1980). *Projection and re-collection in Jungian psychology: reflections of the soul*. Open Court Publishing.

Pierre Weil, Jean-Yves Leloup and this author call normosis, a pathology of normality. [...] ignorance and a priori judgements, with stereotypes, conformism and arrogant conventional ideas, what we can call the normosis of scientism. [...] The great teachers and educators of humanity have always warned us about the danger of judgement, which is the source of so many conflicts and tears. Understanding is an effective antidote to this destructive power struggle, because those who understand do not judge. Judgement is the failure of listening and understanding. [...] The Tao of understanding is the Alliance between knowledge and being. A realisable utopia, a path to peace. (Vol. 1, pp. 146–151)

HPTD-M Comment # 1: Besides being a group therapist creator of the Fifth Force in therapy. Roberto Crema is the only living among the three creators of the holistic TD, in Brazil: Pierre Weil and Ubiratan D’Ambrosio are deceased. The concept of holopraxis influenced the HPTD-M with the focus of concrete problem solving through the practice of the whole, not only the study of the whole (holology). So, the name of the theory came from that view: *Holopraxis Transdisciplinary Management* (HPTD-M). Crema shows clearly that i) UNDERSTANDING is much more than KNOWING, ii) normosis as a TD concept, and iii) the idea of judgment as the failure of UNDERSTANDING. Besides, the author is the only living theorist of the original Brazilian holistic TD, which was influenced by the Analytical Psychology of Jung. The four epistemic ways of **technoscience, philosophy, tradition, and art** can be seen in combination with the Jungian four functions (**sensation, feeling, thinking, and intuition**), as the Brazilian holistic TD mapped. In turn, HPTD-M has established essentially the same correlation but instead of the Jungian functions used the four types of intelligence, i.e.: **1) technoscience – empirical and rational, 2) philosophy – rational and intuitive, 3) tradition – intuitive and emotional, and 4) art – emotional and empirical**. Just to corroborate the HPTD-M, the demonstration of what Crema says through a holistic TD: *According to the vast research of psychiatrists Carl Gustav Jung, there are four psychic functions inherent to human beings: thought, feeling, sensation and intuition. It’s not hard to see that the dialogue between thought (rationalism) and sensation (empiricism) gave rise to contemporary science. Just as the alliance between sensation and intuition gave rise to art; from thought and intuition, philosophy; and from feeling and intuition, mysticism, from the Wisdom Tradition. So, as far as the individual foundation is concerned, the four well-known classical epistemological fragments arise from the creative dynamics of our psychic functions. (Vol. 1, p. 141)*

HPTD-M Comment # 2: It is interesting to note that American and European Jungian analysts tend not to know TD and the TD academics vice versa. However, they converge, especially considering the archetypal quaternary structure in physics and psychology, which seems to be explored only by the Brazilian holistic TD in dialogue with Jung. Crema and HPTD-M are connected in that sense, especially when considering Jung the predecessor of TD in the first half of

the 20th century, although also having in mind Nicolescu's TD methodology developed in the late 1980s. Nicolescu, as a physicist, seems to have few connections to Jung, like the complementarity of subject and object, maybe because this view reflects Niels Bohr as a physicist in the first half of the 20th century. Bohr's view also shows a clear dialogue with Jung, as far as the conscious and unconscious are concerned³. In turn, Franz, the most well-known Jungian analyst, explains complementarity not only as a physics principle but in connection to the subject object and conscious unconscious⁴. Just to clarify: The subject object involves the inner-outer or personal-collective aspects. The idea is different from the subjective-objective duality in this text, as presented in the models of Figures 1, 2, 3, and 4, since the latter duality is connected to the emotional rational, as shown in the MBTI System, which considers the 'feeling' function subjective and 'thinking' objective⁵. As a final clarification: In physics, complementarity and duality are synonyms, practically speaking. So, De Broglie's particle-wave duality in physics has the same sense of the complementarity principle (Vol. 1, p. 163).

Finally, another important aspect of this article needs to be clarified: How could we effectively diagnosis the shadow of the mainstream in this text? The next excerpt from Crema, who is an experienced psychologist and group therapist, continues with the Jungian four functions: *In general, individuals only develop one or two of these functions, while the others remain atrophied and undifferentiated. The development of the deficient functions and their integration and harmonisation with the others leads, according to Jung, to a fifth function, which he called the Self, the intelligence of the psychic totality. The pioneering Jungian approach postulates, beyond mere healing, a process of individuation that can lead the individual, through an inner path and a movement of circumvolution, from the periphery of the ego to the centrality of the Self, which is the psychic instance from which real understanding emanates. This conception of psychic functions has guided us in the fundamental theory of the International University of Peace, UNIPAZ, since its founding event, the First International Holistic Congress – I CHI, which we held in Brasilia (1987), and is also at the heart of our well-established transdisciplinary project, Holistic Basic Training – FHB, which has been in fruitful practice for over twenty years.* (Vol. 1, p. 141)

HPTD-M Comment # 3: In this context, HPTD-M was created thinking about this Jungian quaternary structure of four elements balanced by a fifth, the *Self*. For HPTD-M, those are translated into the four types of intelligence, and the

³ Khrennikov, Andrei (2021). Quantum-like model for unconscious – conscious interaction and emotional coloring of perceptions and other conscious experiences. *ELSEVIER Biosystems Volume 208, October 2021, 104,471* <https://www.sciencedirect.com/science/article/pii/S0303264721001234>.

⁴ Franz, Marie-Louise von (1980). *Projection and re-collection in Jungian psychology: reflections of the soul*. Open Court Publishing.

⁵ NSPIIRA (n.a.). The individual preferences model [O Modelo das Preferências Individuais]. <http://inspiira.org/teoria/modelo-das-preferencias-individuais/>.

fifth element that is in search of integrating all others for concrete problem solving in individual and organizational levels is TD, as seen clearly in Figures 3 and 4. This quaternary structure is ancient and archetypal, as seen in Greek philosophy (since Empedocles) and European Alchemical Tradition (which declined after the 17th century) through the four principles of **earth, water, air, and fire**. Those can be connected to the physical states of matter, respectively **solid, liquid, gas, and plasma**, besides the Jungian psychological functions of **sensation, feeling, thinking, and intuition**, respectively (see Vol. 1, p. 154).

So, physics and Analytical Psychology configures a psychosomatic framework of four elements coming from ancient times. The archetypal four elements have also implications in mythology and concrete Jungian dream analysis for solving patient problems. After all, the Greeks created logic through mythology (see Vol. 1, p. 173). Jung is among the few who developed a pragmatic system to deal with symbolic archetypes, as a doctor and psychiatrist.

HPTD-M goes in the same direction through an engineer and manager, who is used to mapping processes in work groups, focused on organizational levels in integration with the personal levels. That is where the mainstream shadow analysis comes from. It is reasonable to assume that if rationality is dominant in a group, the emotional, its complementary opposite, will be in the shadow and may appear in destructive and uncontrolled ways if excessively repressed, like in Newton's action and reaction law. Another possible way to see the same complexity of human phenomena is through the HPTD-M levels of the collective unconscious (see Vol. 1, p. 183). In the example, this means the emotional is the unconscious level to balance the rational conscious level of the group.

3. Domingo Adame: Transformation of the Sense of Knowledge and the University Subject through the TD Chair (Vol. 2, p. 14-30)

Prof. Dr. Domingo Adame's article, from Mexico, described consolidated information about TD, clearly, didactically, and with simplicity, in our opinion. Adame explains that University knowledge can be applied or not, it is fragmented, and we need to integrate the subject, like effectiveness and affection, and the spiritual axis of Nicolescu. Since Adame only mentions KNOWING, not UNDERSTANDING, our article completes with the idea of UNDERSTANDING more than KNOWING. This view is corroborated by the article of psychologist Roberto Crema, dean of UNIPAZ in Brazil, and economist Manfred Max-Neef, quoted by this author (Vol. 1, pp. 152–200).

Adame mentions the TD of Nicolescu and Zurich, by the way. We understand important the following Adame's direct quotes. *The main objective of current education is to inculcate the desire to have control of reality and accumulate goods, in this lies triumph, success. There are disguises that hide the underlying truth and only rarely does a professor or researcher appear who questions dogmas, however established they may be, to energize the paralyzing and*

endemic behavior of the human species. That is why education in the 21st century, as **Jacques Delors** noted in his report to UNESCO, will have to be based on four pillars if we aspire to transform our present condition: **Learn to know, learn to do, learn to live together and learn to be.** [...] **Nicolescu** proposes a new way of conceiving thought and education based on four pillars (**learning to do, learning to live together, learning to learn, learning to be**) where the quality of what is taught is important, and not the enormous mass of assimilated ‘scientific knowledge’. (Vol. 2, p. 22, 23, **emphasis added.**)

HPTD-M Comment # 4: We did not know Nicolescu’s approach as shown by Adame but the HPTD-M article model (Vol. 1., pp. 152–200) shows the following correlation to the four types of intelligence and the complementarity of analytic hard vs. synthetic soft:

- **Learning to know (rational intelligence) – analytic hard.**
- **Learning to do (empirical intelligence) – analytic hard.**
- **Learning to live (emotional intelligence) – synthetic soft.**
- **Learning to be (intuitive intelligence) – synthetic soft.**
- **Learning to learn (the fifth element integrating the four in the circle – TD).**

The form of viewing Figure 1 by HPTD-M is based on Prof. Dr. Nita’s original design of four elements in the same sequence of quadrants (a new type of education he proposes for public administration). However, in Figure 1 three innovations of the HPTD-M view can be seen, as a new model: i) the connection between hard and soft skills, ii) the four types of intelligence, and iii) the idea of ‘Learning to Learn’ in the center as TD.

As per Nita⁶: *The International Commission of Education Report for the twenty-first century belonging to UNESCO, also known as the Delors Report, focuses on four pillars of a new type of education [...]: 1. to learn to know, 2. learning to do, 3. learning to live with the others, 4. learning to exist [...]. Note that the last pillar of the new type of education – learning to be – could determine the elimination of one of the fundamental tensions of the contemporary era, the one between spiritual and material [...].*

Just to be sure and compare Adame’s and Nita’s view, we checked the original 1996 UNESCO Report⁷. What is mentioned there: *to learn to live together, learn to live with others.* However, HPTD-M understands “learning to

⁶ Nita, Mircea Aurel (2013). Types of truth, transdisciplinarity and a new type of education in public administration. *Curentul Juridic*, 16, pp. 157-170. Available at: http://revcurentjur.ro/old/arhiva/attachments_201304/recjurid134_17F.pdf.

⁷ UNESCO (1996). *Learning: The Treasure Within*. Report to UNESCO of the International Commission on Education for the Twenty-first Century. Members of the Commission: Jacques Delors, Chairman, In’am Al Mufti, Isao Amagi, Roberto Carneiro, Fay Chung, Bronislaw Geremek, William Gorham, Aleksandra Kornhauser, Michael Manley, Marisela Padrón Quero, Marie-Angélique Savane, Karan Singh, Rodolfo Stavenhagen, Myong Won Suh, and Zhou Nanzhao. UNESCO Publishing. <https://unesdoc.unesco.org/ark:/48223/pf0000109590>.

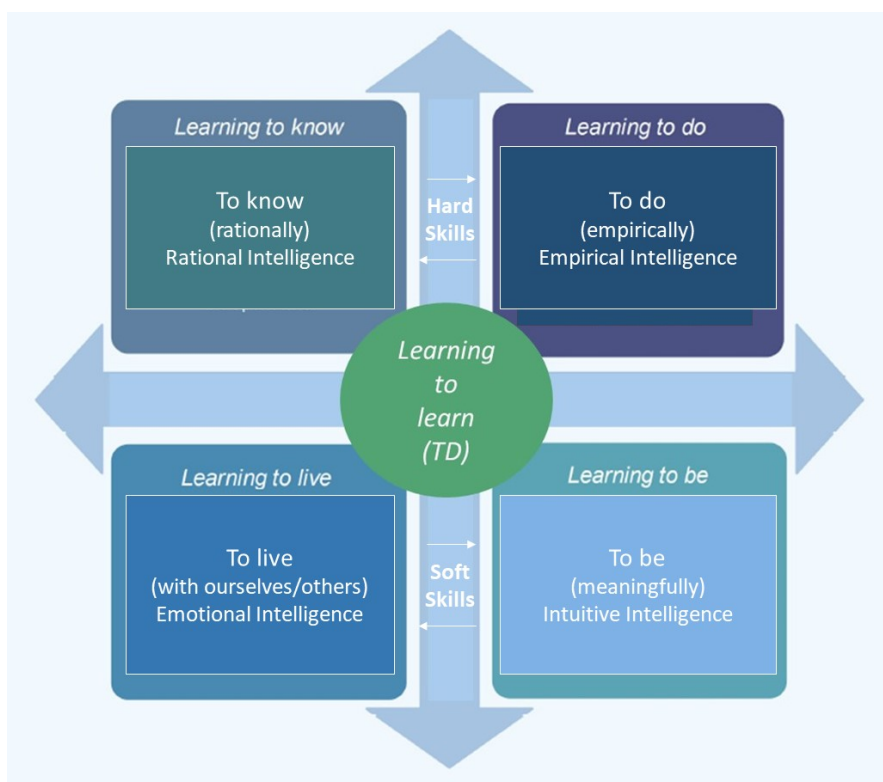
live” in a broader sense, through the context of emotional intelligence, i.e., learning to live with ourselves (subject) and others (object), not only live together and with others as UNESCO’s framework presents.

This means, in the HPTD-M view: Understanding and managing our emotions and behaviors (subject) is a condition sine qua non for developing relationship skills (object), thus there is a complementarity principle involved. This is evidence to corroborate the HPTD-M view for the mainstream shadow: The subject is reduced to object and learning to live with ourselves is not considered. Another way to see the mainstream emotional shadow, as diagnosed in this article.

Besides, Nicolescu’s view, as presented by Adame, has the difference of replacing ‘Learning to Know’ with ‘Learning to Learn’. Finally, HPTD-M improvement not only considers a fifth element of ‘Learning to Learn’ as TD, if compared to the quaternary view of UNESCO-Delors, Nita, and Nicolescu, but also establishes a connection with the four types of intelligence and hard skills vs. soft skills.

Figure 1: New Type of Education adapted and enhanced from Volume 1.

Source: Vol. 1, p. 176, HPTD-M model improved as shown in the schema



Another Adame's quote: *Zurich proposes the integration of academic experts and social actors, of scientific knowledge and nonscientists.* (Vol. 2, p. 23)

HPTD-M Comment # 5: We agree completely with Adame when saying he looked at other perspectives besides Nicolescu, so as not to be dogmatic, mentioning Zurich, a scientist approach in our opinion. Even being focused on science, it seems that Zurich shows signs of the complementarity view, as Adame observes (academics and non-academics, scientists and non-scientists). *It is urgent to establish an adequate relationship between science, art and spirituality within the university.* (Vol. 2, p. 23)

HPTD-M Comment # 6: We agree but HPTD-M can go beyond, i.e. not only science but technoscience, and not only spirituality but tradition which includes spirituality. Philosophy can also be included in this formula, as far as I can see in the four epistemic ways. *4) The International Transdisciplinary Chair will include scientists, technologists, humanists, musicians, poets and artists, working on different media and using new technologies, with the aim of founding university dialogue between different cultural visions, including interior experience.* (Vol. 2, p. 27)

HPTD-M Comment # 7: The statement perfectly in line with the HPTD-M approach. *Renounce finding a solution to a problem in terms of 'true' and 'false' of the binary logic. Also, the solution to a problem cannot be more than temporary reconciliation of opposites, re-likened at another level of Reality where contradictions are manifest.* (Vol. 2, p. 28)

HPTD-M Comment # 8: Reflection in line with the HPTD-M perspective. Our article (Vol. 1, pp. 152–200) goes beyond, when defining three levels of complexity for problem solving, i.e. the a.m. binary logic, feedback logic, and Included Third logic.

4. Éric Carrey: *Economics of Care and Meaningfulness for an International Transdisciplinary Chair* (Vol. 1, pp. 83–89)

Éric Carrey has an MBA in Economy and Management, member of the management committee of the French Red Cross: *The Economy of Care and Meaning expresses, in this spirit of going beyond classical economic theory, a philosophical approach based on solicitude, concern for the other or attention to the other, this other being a human being, a non-human living being or the planet as a whole. It was born in opposition to moral theories inherited from economic analysis, which are based on two central assumptions about human behaviour: the assumption of rationality and the existence of selfish preferences. As we have seen, these founding assumptions lie at the heart of the thinking of classical economists such as Adam Smith, David Ricardo, John Stuart Mill and later Leon Walras, Stanley Jevons and Vilfredo Pareto, and have made it possible to construct the figure of Homo oeconomicus.* (Vol. 1, p. 88)

HPTD-M Comment # 9: We will add two other excerpts from Crema's article and HPTD-M to help us analyze the question.

In Crema's article (Vol. 1, pp. 136-151): *On the occasion of the International Holistic Encounter in Mendoza, I came into contact with Manfred Max-Neef, an alternative Nobel Prize winner in economics. In his talk, this famous scientist said that, from an early age, he wondered what the unique characteristic of the human species was. Culture, intelligence, language? No, because other species also develop them. Was it humouring? When he met another scientist, Nobel laureate in ethology Konrad Lorenz, he learnt that it wasn't there are other humorous species. So, he continued with this enquiry until an unexpected moment when his father, a man for whom he had great respect, asked him: – My son, isn't it stupidity? Max-Neef said that at that moment a light went on and he became the first stupidologist! Stupidology is a science that needs to be studied with rigour and urgency. It is important to clarify that it differs from harmless imbecility in that it has a logical rationality and is exercised mainly through technical language.*

In our HPTD-M article (Vol. 1, pp. 152-200): [...] *Manfred Max-Neef (1932–2019), Economics and TD: — I was used to diagnosing and analyzing but not used to understand [...] the idea [...] of demonstrating what economics looked like behind its mask of supposedly exact, mathematical, and judgment-free science. [...] — Max-Neef: economist and academic, Alternative Nobel for his Barefoot Economics theory. As per Max-Neef, formal knowledge, linked to reason, is constructed according to the rules of method and causality, while understanding, more linked to intuition, regulates method and causality.*

Considering our experience in the Brazilian public service as the federal auditor of finance and control (AFFC), economic models may be rational, but, depending on the concrete case, not reasonable (no emotional intelligence) or feasible (empirical intelligence). Moreover, there may be a dialogue between reductionist (objective) quantitative econometric models and the psychology of economic agents' expectations (subjective). When the complexity of human phenomena enters the game, the binary logic is not enough, so in some cases the Included Third logic is the way for problem solving. For example: A work group of economists could hypothetically produce very rational public policy modeling, however, with an intolerable burden to society under the political aspect of reasonableness. No matter how rational this model is, it can be a risk to governability and therefore is unfeasible, considering other aspects of reality and human phenomena. In this context, there are limitations of economics as a hard science. Economics is a remarkable field of study but tends to be a very Cartesian and mechanistic science, to be applied according to its scope, not more or less. Eric Carrey's approach is different from the analytic mainstream not only in economics but also in TD. When talking about the economy of care and meaning, there is a clear correlation between meaning and intuitive intelligence, besides care and

emotional intelligence. Both are involved in the synthetic method, as demonstrated by HPTD-M. Carrey himself reflects on this concept, in opposition to the economy mainstream of analysis, so it is a mainly synthetic approach, more connected to Latin America and Japan in terms of TD, as far as we can see in Volumes 1 and 2 and will show in the next comments. By the way, Max-Neef, mentioned by Crema and the HPTD-M, was a Chilean economist with a similar approach.

5. *Éric Carrey & Hubert Landier: A Transdisciplinary Chair in the Service of an Economy of Care and Meaning (Vol. 2, p. 176-183)*

People's need for meaningful activities is not confined to their private lives; it also extends to their professional lives. In the workplace, when meaning is lacking, people resign. [...] The economy is based on entrepreneurship. Entrepreneurship is about finding solutions to problems. But human activity, as it was conceived and is experienced, has itself become a problem. Entrepreneurship must now be the entrepreneurship of care and meaning. That's why we're inviting you to move towards an economy of care and meaning. The creation of an international transdisciplinary chair would be an invaluable step in this direction.

HPTD-M Comment # 10: Ideological partisanship and dogmatic scientism are a mainstream bias in connection to rationalism, as demonstrated in the conclusions (see Figure 3). Both are similar in the sense of no space for reasonableness and meaning. Meaningfulness in HPTD-M models is an essential troubleshooting requirement, related to intuitive intelligence. If an idea has no meaning, i.e. if it does not make sense, it is useless for effective problem solving. Naturally, ideology and dogmatism reject new ideas, in a tendency to defend the status quo and keep power. So, HPTD-M converges with this idea of economy of care (related to emotional Intelligence) and meaning (related to intuitive intelligence). Both configure the soft skills, correlated to the synthetic method. However, in the mainstream the hypertrophy of analysis is a reality. Max-Neef observed this as a Stanford economy professor in the 1960s, before creating his *Barefoot Economics*, awarded with the Alternative Nobel, a theory also in line with the economy of care and meaning. Nor by coincidence, Max-Neef also wrote an article on the foundations of TD, which we commented on (Vol. 1, pp. 152–200): *[...] one of the options available to the West, as illustrated by Messire François's attitude to the wolf of Gubbio. It's the 12th century, and a terrible wolf is terrorizing the inhabitants of the small Italian town of Gubbio. Messire François, who is rumored to have the ability to talk to animals, arrives. What he's asked to do is to stop the wolf devouring the town's children, and to do that, it's thought, he must get rid of it. In fact, this is what Brother Dominic, a contemporary of Messire François, would have done. Instead, he went to find the wolf, spoke with him and returned to town with the following proposal: the wolf would stop devouring the little children, but in return, the townspeople would give him*

something to eat. Both parties are thus satisfied, and the townspeople even end up entrusting the wolf with the care of their children. But this is not the path followed by the West. The option most generally adopted is the one supported by Brother Dominic: to impose the point of view that claims to be true, and thus to impose a certain vision of the world [...] (Vol. 2, p. 179)

HPTD-M Comment # 11: The essential question of Landier's social audit theory, as seen indirectly through all his articles in Volumes 1 and 2, seem to be present in this excerpt. We refer here to mediation for concrete problem solving through the Included Third logic. Not by binary logic of true and false, good and evil, as the short-sighted dogmatic Brother Dominic looked at the wolf problem. This means the wolf was seen as an evil to be eliminated, not a possible partner that would be part of the community and take care of the children if some food was given to him.

6. Hubert Landier: *How to Deal with the Unthinkables of World Transformation: The Purpose of a TD Chair* (Vol, 2, p. 164-175)

Prof. Dr. Hubert Landier, one of the coordinating editors of this ADJURIS book Vol. 1 and 2.

On types of logic, considering Landier's view: *Classical logic would have dictated that they should appear either as a corpuscle or as a wave, but not both. After much trial and error, physicists had to go beyond the logic they had inherited [...]. We'll call this overcoming of the binary logic of the 'excluded third' the 'logic of the included third'. The three principles of what will come to be known as 'transdisciplinarity' are as follows:*

- *principle of the included third, as opposed to the principle of the excluded third, falsely attributed to Aristotle,*
- *the existence of different levels of reality from the one we are familiar with,*
- *principle of complexity, as the different parts of reality only exist through the relationships they maintain with each other, whether at the same level of reality or at different levels of reality.* (Vol. 2, p. 167)

HPTD-M Comment # 12: In the same direction goes our article, considering the Included Third concept based especially on De Broglie's wave-particle duality, which Landier described as incompatible to binary logic, since in physics nothing can be considered 'either as a corpuscle or as a wave': *De Broglie demonstrated the wave-particle duality and Einstein the convertibility between mass and energy ($E = mc^2$). All of this was intuitively already known by the Alchemical Tradition, as seen in the Ouroboros symbol and the Taoist Philosophy, through the circular Tai Chi symbol of Ying-Yang. The Tao means the way, i.e. the true way is not the true way (like in a Zen koan to provoke meditation through paradoxes). So, complementarity can be seen clearly through technoscience, philosophy, tradition, and art to demonstrate that binary logic can be applied only to*

certain contexts in practical terms. Complementarity also involves the balance of opposites. (Vol. 1, pp. 152–200)

7. Debora Santille: *Transdisciplinary Chair in the Context of Leadership in Organizations* (Vol. 1, pp. 216–234)

Debora Santille, an executive, business administrator, and accountant expert in governance and finance, also mentions metaphysics in the context of TD: [...] we can affirm that transdisciplinary is not tied to any discipline, and that in fact, this methodology seeks to rely on disciplines to better explain and make understanding the totality of knowledge. D' Ambrosio considers that: [...] *Transdisciplinary does not constitute a new philosophy. Not metaphysics. Not a science of sciences and much less, as some say, a new religious stance. Nor is it, as they insist on showing it, a fad. The essential thing about transdisciplinary lies in a stance of recognition where there is no privileged cultural space and time that allows us to judge and hierarchies – as more correct or truer – complexes of explanation and coexistence with the reality that surrounds us.* (Vol. 1, p. 218)

HPTD-M Comment # 13: As we have shown in our article (Vol. 1, pp. 152–200), D'Ambrosio was a mathematician and educator, cosignatory of the 1986 UNESCO Venice Charter, and one of the Brazilian TD theorists. At the end of the 1980^s, together with Pierre Weil and Roberto Crema, D'Ambrosio developed the holistic TD, parallel to Nicolescu's TD methodology in Europe, corroborating the soft approach perspective which is also the tendency of HPTD-M, especially through the four epistemic ways of technoscience, philosophy, tradition, and art, which are a perspective originally from Brazil.

8. Margaret Kimishima: *Shifting Beyond the World of Duality* (Vol. 2, pp. 116-128)

Margaret Kimishima, a holistic therapist from Japan, has impressed us in terms of alignment from a different perspective to the HPTD-M view, in a way that can be used to explain the difference of TD based on definitions (KNOWING) and TD based on concepts and ideas (UNDERSTANDING).

HPTD-M Comment # 14: The terms in bold letters, mentioned in her article, can provoke deep discussions:

- **Duality, dichotomy, polarities**, and the Tai Chi symbol (**Ying and Yang**) reflect the Eastern way of seeing reality as the balance of opposites (Kimishima is from Japan). In Modern Physics and Analytical Psychology the complementarity principle is the same, just defined, in other words. Nicolescu's Included Third or Hidden Third reflects the same idea of opposites in dialogue.

- **Metaphysics**, exposed by Kimishima as a holistic therapist, is in her view a mindset complementary to **science**. In that sense we would provoke all our readers with Descartes, the father of the mechanistic view who also had an

incredible TD aspect, presented by Capra through his systemic view (not yet TD) in a 1989 interview: In an allegory of a tree, Metaphysics is the root, physics, the trunk, and the other disciplines the branches⁸.

Kimishima sent us an e-mail on June 16 about the a.m. quote, showing her enthusiasm for our a.m. view. On June 19, she authorized us to publish her remark: *Wow, what a beautiful quote! Fascinating indeed. **Metaphysics** is the root, **physics** the trunk, and the **other disciplines** the branches. I was born in Europe and raised back and forth between Japan and Europe/US. I've experienced both perspectives like I had to study various versions of modern history and that of Christian teachings as someone from a strict Christian family with their westernized background. That's partly why I wanted to inspire someone to gain some 'transcended knowledge' as an Easterner.*

9. Vladimir Mokiy: Systems Transdisciplinarity Chair as Pathway to Fulfill Global 'Social Orders' (Vol. 2, pp. 31-39)

Prof. Dr. Vladimir Mokiy, from Russia (ITT), express through his text a clear TD approach connection to Europe (CIRET) and the USA (ATLAS and CGU): *Within the scope of 'transdisciplinarity for scientific research', as announced by Jean Piaget (Piaget, 1972) and later actively developed by B. Nicolescu (Nicolescu, 2006), it is assumed that transdisciplinarity should be the highest form of natural integration of disciplinary discourses, scientific and artistic cultures. The goals of this direction are achieved through the following activities:*

- forming actively subdisciplines that provide integration and syntheses of knowledge of complementary disciplines within a platform of basic discipline (such as economics, ecology, etc.). For example, ATLAS is working towards creating a subdiscipline that provides integration and syntheses of knowledge of complementary disciplines within the platform of engineering discipline⁹;

[...]

- implementing transdisciplinary innovations (special curricula) to develop general cultural competencies in students during their education at the universities. At Clermont Graduate University (CGU), for example, graduate students must complete a T-Course (transdisciplinary course) during the first two years of their curricula¹⁰.

Starting from 2023, this organizational work is being carried out through two international transdisciplinary projects in higher education and sustainable development (2023–2030). These projects are carried out by the Institute of

⁸ Capra, Fritjof (1989). The Emerging New Culture: 27-minute interview in the *New Thinking Allowed* show with Jeffrey Mishlove. Available at: <https://youtu.be/e-UQ1QqeTYs>.

⁹ ATLAS Transdisciplinarity: <https://theatlas.org/index.php/transdiscipline>.

¹⁰ CGU Transdisciplinary Studies (Claremont Graduate University): <https://my.cgu.edu/transdisciplinary>.

Transdisciplinary Technologies (ITT) in collaboration with International Center for Transdisciplinary Research (CIRET), as well as by teachers, academics, and researchers from different countries, who have provided the necessary informational and other support¹¹.

HPTD-M Comment # 16: Mokiy's article is evidence of similar TD approaches in the USA, Russia, and Europe in general. All of them tend to have a dominantly analytic and hard approach to TD, correlated to rational and empirical types of intelligence. Russia and the USA also tend to be more pragmatic. HPTD-M is also pragmatic but mainly synthetic, as seen by the schematic models, especially when appointing the need to integrate emotional and intuitive types of intelligence for concrete problem solving. So, here is the 'pragmatic' paradox as a direct example of Third Included logic and dialectics, i.e. a dialogue to be established between those two types of TD approaches. The first is harder, more analytic, and involves science and education (Russia, USA, and Europe). The second, like HPTD-M focused on the mediating management for concrete problem solving, seems to be softer and more synthetic. Also, in connection to the second we have already commented on authors from Latin America and Japan, which tend to follow the same dominant synthetic and soft approach. A European exception to this pattern is Éric Carrey's economy of care and meaning, besides Hubert Landier, for his background as an economist, social auditor, and mediator. Both also seem to be keen on synthetic and soft approaches.

10. Hubert Landier: *A Transdisciplinary Chair to Save the University* (Vol. 2, pp. 40-47)

Prof. Dr. Hubert Landier is one of the coordinating editors of this ADJURIS book Vol. 1 and 2.

Some of Landier's reflections about the university in France in connection to management: [...] *it's safe to say that this is a major danger for the university. Implicitly, it is being asked to serve society as it is, and no longer, or no longer only, to think about it independently and, if necessary, critically, by pre-judging what it might become beyond the majority doxa and the interests that dominate it. [...] For knowledge to qualify as scientific, it is not enough to survey the academic 'literature' published in peer-reviewed journals on the problem under examination, and then present the results of a generally very limited survey, always accompanied by supposedly convincing statistical precautions, to produce a work that would be truly scientific. The scientific approach, in fact, does not consist in accumulating details. It is also, and even primarily, about questioning what is held to be true, and questioning the meaning of the results obtained on the basis of knowledge that cannot be merely academic, but must appeal*

¹¹ ITT and CIRET Information Letter – International Systems Transdisciplinary Projects (2023–2030): http://www.td-science.ru/images/kart/Information_letter_2026_2030.pdf.

to the vision of the world, of cultural essence, in which it takes place. [...] increasing specialization: marketing experts or management controllers. This compartmentalization means that researchers are unable to go beyond what is taken for granted, regardless of what they think. The institution is reduced to a place for reproducing what already exists. Transdisciplinarity rebels against this compartmentalization and enclosure in the commonly accepted existing. Its aim is to open windows onto what lies beyond the village, and therefore beyond the university institution. Such would be the ambition of a transdisciplinary chair, whether in a university or in any other place recognized for ensuring freedom of the mind. (Vol. 2, pp. 47)

HPTD-M Comment # 17: In our perspective, Landier's remarks, as quoted, can reflect the problem of universities in general, not only management-related universities. The HPTD-M identified four main university issues in which TD could help:

a) replicating KNOWLEDGE through the perpetuation of authors liked and accepted by the university mainstream instead of stimulating UNDERSTANDING through the comparison with new authors outside the university-accepted perspective.

b) promoting dogmatic scientism instead of understanding the feedback process between technology and science through the epistemic form of technoscience (see Figure 2). In this sense, a 2013 video of a 17-minute talk by Prof. Dr. Rupert Sheldrake can provoke insights¹².

c) promoting ideologies instead of accepting new ideas that can create new research fields.

d) considering (b) and (c), a feedback process between ideology and dogmatic science can be created to manipulate information through 'science' and eventually defend certain types of ideology, partisanship, or groups of interest. As we have already mentioned in Brazil through a 14-hour mediating manager course with TD tools, reflected in a 2023 publication in Portuguese: *The HPTD-M proposes the understanding of how the four epistemic ways are imbalanced nowadays, in the sense that the epistemic form of tradition has been distorted into pernicious ideology, while technoscience tends to become reduced to a bureaucratized and self-centered science, which disregards individual professionals and lived experience, only considering the publications of those who, if not careful, may assume the role of 'editors of society'. This situation suppresses philosophical reflection and the expression of creativity for solutions through art*¹³.

¹² Sheldrake, Rupert (2013). Science Delusion. Seventeen-minute talk. *TEDx Whitechapel 2013*. <https://youtu.be/sF03FN37i5w?si=wHstjpMKcJldMy>.

¹³ Costa, L. S. G. M. (2023). Skills of the transdisciplinary mediator [Habilidades do mediador transdisciplinar]. *Centro de Educação Transdisciplinar (CETRANS)*. CETRANS INTER@TIVO 56, Ano XIV, 2023 (article attached, p. 7, translated by the author). <http://dx.doi.org/10.13140/RG.2.2.20330.29124>.

11. Mariana Thieriot: *A Plea for a Transdisciplinary Chair: Tradition and Innovation* (Vol. 2, pp. 184-197)

HPTD-M will comment on two direct-quote sequences from Dr. Mariana Thieriot, who has postdoc research in philosophy and technoscience. *Research in the field of philosopher training has shown that the unintentional and involuntary attitudes that emerge during a human relationship are sometimes experienced as problematic, because they reveal a contradiction between the desires or subjectivity of both parties and the very complex problems encountered during a training course [...] In fact, the increasingly mechanical, impersonal, pragmatic and fragmented way in which scientific knowledge is produced and retransmitted, the lack of space for the development of individual subjectivity in contemporary societies, the impoverishment of meaning due to the reductive levelling of cultural content transmitted without ever being questioned, the lack of problematisation that is often found in highly standardising and moralising scientific projects [...] Our constitutive plasticity means that we can learn to deal with our unintentional and involuntary attitudes. The unintentional attitudes aroused by subjectivity or by the unconscious can, thanks to the dialogue that will signal our know-how with subjectivity, allow the interaction of the desire that is expressed with the intention and the explicit and objectified project of elaborating knowledge. [...] During a training course, our emotions can come into conflict with the intention of learning to live together. It is necessary to perceive these emotions and identify the nature of the conflict in order to resolve it. [...] Transdisciplinary dialogue is essential for promoting deep and reflective understanding across various disciplines. Such dialogue can contribute to the development of a more inclusive and collaborative academic environment. Education should avoid the pitfalls of dehumanizing relationships and conditioning behavior, focusing instead on personal development through the promotion of dialogue and mutual understanding.*

HPTD-M Comment # 18: Reflecting the deep philosopher the author is, this excerpt is correlated with Intuitive Intelligence or “Learning to Be” when she mentions “meaning”. HPTD-M understands “meaning” in such way: The most abstract troubleshooting requirement (see Figure 1 combined with Vol 1, p. 179). When talking about the need of subjectivity, Thieriot refers indirectly to Emotional Intelligence or “Learning to Live” as it can be seen in Figure 1, learning to live with ourselves, not only with others, as HPTD-M innovates with this model, an improvement from UNESCO-Delors’ view of “Learning to Live Together”. Thieriot also corroborates the HPTD-M conscious and unconscious complementarity through her Grey Zone Theory, shown in her article by the idea of the “unintentional” as the unconscious. The mainstream emotional shadow is demonstrated philosophically, corroborating what HPTD-M has already described. Just to remember: The shadow is what is consciously unknown or unconsciously repressed. Considering the mainstream Objective and Rational bias, the shadow is

complementary, i.e., Subjective and Emotional, in line with what Thieriot presents. Finally, she mentions dialogue as the place of philosophy in TD groups, i.e., very similar to what HPTD-M defends: Dialectics as the most abstract problem-solving attribute in work groups, one of the four in the quaternary-complementarities framework (see Vol 1, p. 179). *Training that should enable people to acquire, through sometimes ancient traditional knowledge, the ability to think and live on their own and together [...] the subject who is supposed to know does not dare to question the knowledge inherited from tradition... One speaks, another thinks in secret, another act as if everything is fine and the conscience hibernates, anaesthetised or intimidated by the volume of information.*

HPTD-M Comment # 19: The article's title demonstrates the complementarity between tradition and innovation, i.e., a mere ancient knowledge replication does not promote a TD paradigm shift. The author uses "tradition" not in the sense of one of the four TD epistemic ways involving spirituality and religion, but as the authors considered "traditional" in their disciplines. So, an analogy between tradition-innovation and bureaucracy-innovation can be made. Empirical Intelligence (sensation, based on facts and concreteness) is manifested through procedures and bureaucracy, based on the traditional authors and antecessors in the educational process or management activities. In turn, Intuitive Intelligence (intuition, based on meaning and abstraction) is the agent of new ideas and innovation. Those two complementary functions are defined by Jungian Psychology and the MBTI System as Perception Functions. HPTD-M understands that those must be balanced for management optimization. In public administration, for example, there is a tendency of bureaucratic excess, especially of controls before managerial discretion, which limits innovation initiatives. In addition, managers currently lack incentives to exercise their creativity and take advantageous initiatives, through discretionary acts. Bureaucracy is necessary to establish the standardization of processes, but it cannot be used as a punishment or constraint to any kind of innovation. The risk is that only the binding acts of the Administration will remain. The same can be applied to education in the TD Chair: It cannot be based only on the traditional author's definitions, it must go beyond, with new ideas to establish new concepts for effective problem solving of complex problems, in organizations and civil society.

12. Synthesis of the HPTD-M in dialogue with the TD mainstream

Just to clarify: The HPTD-M comments have no personal preference for an article or author whatsoever: Those simply reflect an analysis based on AD-JURIS Vol. 1 and 2 quotes we understood as relevant for explaining in a summarized way what follows.

In the HPTD-M view, **TD means 'beyond and through disciplines'** but many other definitions are possible. UNDERSTANDING essential concepts is

more important than KNOWING formal definitions. Transdisciplinarity (or **holistic view**) is the answer to problem-solving processes that demand complexity of variables beyond the (i) binary logic – mechanistic view for machines and (ii) feedback logic – systemic view for environment/biology, i.e. we are dealing with (iii) **Included Third logic and dialectics** for human phenomena, the most sophisticated tool in concrete cases that (i) and (ii) are not enough for troubleshooting. Unfortunately, the mainstream mind tends to be focused on binary logic (true and false, right and wrong, 0 and 1).

As seen through the HPTD-M theory (Vol. 1, pp. 152–200), the dialogue with Nicolescu's three TD principles can be demonstrated, now with the HPTD-M View the same items pointed out by Landier:

- **Complexity**: Our framework understands TD as a response to complexity for problem solving, considering the complementarity between complexity and simplicity. Just to remember what some scientists said about simplicity i) da Vinci - the ultimate sophistication, ii) Newton - nature is pleased with, and iii) Einstein - everything should be made as simple as possible, but no simpler. So, in the HPTD-M view, TD is the answer to questions that cannot be solved by the mechanistic paradigm – machine approach and systemic approach – environment/biology. TD is the third level of complexity for problem solving, considering the human phenomena.

- **Included Third**: HPTD-M sees three types of logic, respectively according to the a.m. levels of complexity, i.e. (i) binary logic (ii) feedback logic, and (iii) Included Third Logic. After all, all three mental models are mere approximations of reality.

- **Levels of Reality**: There are many possible ways to understand this principle, in our opinion, especially through quantum physics. One of them (not the only) can be the four types of intelligence as levels of understanding reality: 1) intuitive/abstract, 2) rational/objective, 3) emotional/subjective, and 4) empirical/concrete. This framework sequence is more complex and involves the quaternary complementarities established by HPTD-M.

Finally, The ADJURIS book Volume 1 presents two concepts in connection, as seen in the Introduction (pp. 12–15) and the article about our HPTD-M theory (pp. 152–200):

- **Complementarity**: A principle of Modern Physics and Analytical Psychology, i.e. transdisciplinarity represents the dialogue between specialists and generalists, respectively disciplinarity and transdisciplinarity.

- **CULTURE and TECHNOSCIENCE**: Considering the interaction of theory and praxis, CULTURE (philosophy, tradition, and art) needs to dialogue with TECHNOSCIENCE (technology in interaction with science).

Especially considering this duality of CULTURE and TECHNOSCIENCE, Figure 2 establishes a dialogue between HPTD-M and the cover of the ADJURIS book, which symbology is described in the Volume 1 Cover Description (p. 5) and Introduction (p. 15).

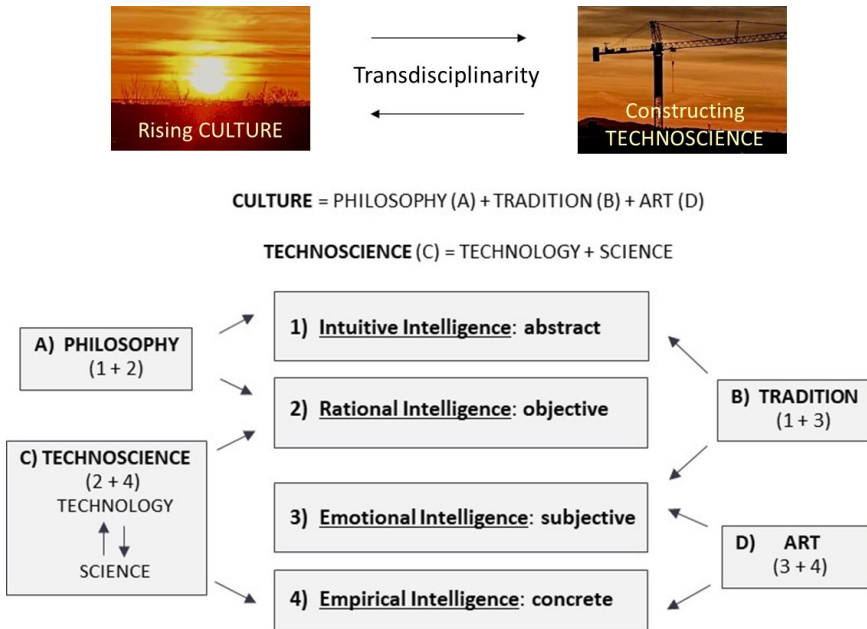
Figure 2 is presented in an analytic form, with arrows, and its view can be complemented through the synthetic schemas of Figures 3 and 4.

Figure 3 shows the current mainstream, i.e. the dominance of polarization and dichotomy through the indiscriminate use of binary logic. Then, most of the civil society tends to be unaware of the feedback processes between opposites (represented by the arrows in Figure 4, absent in Figure 3). Even worse, as this text demonstrated, few people have an idea of the Third Included concept, which is the most sophisticated type of logic for complex problem solving, as we have shown. This means part of the mainstream culture still doesn't understand the complementarity principle and the balance of opposites.

The quaternary-complementarities synthetic model of HPTD-M presented in the ADJURIS Volume 1 (p. 181) is in Figure 3: It can provoke insights into dogmatic science and ideology. Furthermore, the corroboration of the schematic structure in Figures 3 and 4 comes from six articles published on the HPTD-M from 2022 to 2024 in the USA through the ATLAS Transdisciplinary Journal of Engineering and Science.

Figure 2: TD as Culture and Technoscience Complementarity in the HPTD-M Quaternary View

Source: Cover of the ADJURIS Book in conjunction with the HPTD-M quaternary framework



Finally, here are the basic complementarities as shown in the schema of Figures 3 and 4 which reflects a synthesis of the HPTD-M. There can be more combinations two by two:

- **Judgment vs. Perception (red horizontal axis and blue vertical**

axis).

- **Rational Intelligence vs. Emotional Intelligence (complementarity in Judgment).**

- **Intuitive Intelligence vs. Empirical Intelligence (complementarity in Perception).**

- **Analytic vs. Synthetic.**

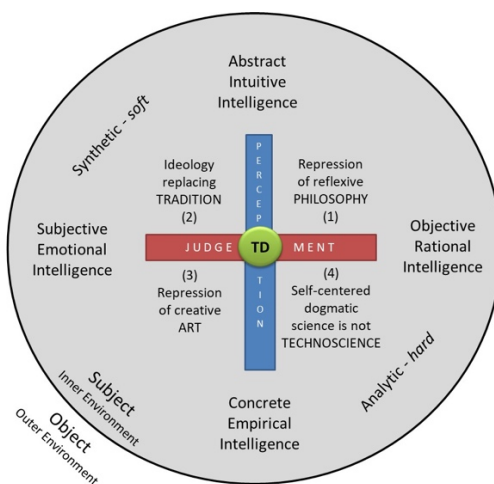
- **Hard vs. Soft (Skills).**

- **Subject vs. Object (inner vs. outer environment of each person or collective level).**

- **Culture (Philosophy, Tradition, and Art) vs. Technoscience (Technology and Science).**

Figure 3: HPTD-M Model for the Mainstream Ideological Dogmatism Imbalance in the Four Epistemic Ways (1) to (4)

Source: Adapted from the model published by CETRANS in Portuguese¹⁴

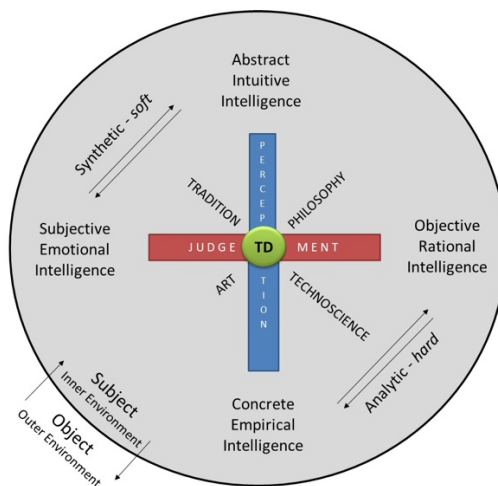


The result of such reflections was a well-evaluated 14-hour transdisciplinary mediating manager course given by us in the Brazilian Government National School of Public Administration – ENAP (2023). In the course, this author presented the models of Figures 3 and 4. The schemas were well received by the participants, mainly public service managers with a 44-year-old average. The course content was not institutional and reflected this author's independent opinion through the HPTD-M¹⁵.

¹⁴ Costa, L. S. G. M. (2023). Skills of the transdisciplinary mediator [Habilidades do mediador transdisciplinar]. *Centro de Educação Transdisciplinar (CETRANS)*. CETRANS INTER@TIVO 56, Ano XIV, 2023 (article attached, p. 9, translated by the author). <http://dx.doi.org/10.13140/RG.2.2.20330.29124>.

¹⁵ Costa, L. S. G. M. (2023). The mediating manager. A course of transdisciplinary tools applied to organizations, based on the HPTD-M theory and the new conception of mediation and leadership. *Brazilian National School of Public Administration (ENAP)*. <https://suap.enap.gov.br/portaldoad>

Figure 4: HPTD-M Model for the Paradigm Shift Promoted by TD Theory and Praxis.
 Source: Adapted from the TD model for the MBTI System – published by ATLAS-TJES¹⁶



13. Conclusion

Through our analysis, the shadow can be seen simply as what our consciousness does not perceive. In his 1928-1930 seminars on dream analysis, Jung made an analogy: Consciousness is like a headlight that travels across the field; only the illuminated points are conscious. The unconscious, or dark side, the habitually unconscious part, is the sphere of the shadow¹⁷.

This means the shadow, in line with the TD approach, has also a complementarity in its concept: The unknown part of the conscious and the unconsciously rejected or repressed part.

The mainstream tends to reduce the subject to object, instead of considering the subject-object complementarity: This helps to detect the mainstream emotional shadow, especially considering emotional intelligence is subjective, and supposed to be in dialogue with objective rational intelligence. Moreover, the subject is the inner or individual environment and the object is the outer or collective one. So, the 1996 UNECO's view is focused on the object, i.e., in the

uno/curso/2136/?area=16. The ENAP certificate is in the following link, which also explains the course's main topics through translation from Portuguese to English. <http://dx.doi.org/10.13140/RG.2.2.28025.54884>.

¹⁶ Costa, L. S. G. M. (2023). The mediating manager for effective troubleshooting in organizations: A transdisciplinary view from HPTD-M. *Transdisciplinary Journal of Engineering & Science (ATLAS-TJES)* 14, p. 177. <https://www.atlas-tjes.org/index.php/tjes/article/view/619/342>.

¹⁷ Jung, Carl Gustav (1984). *Dream analysis: notes of the seminar given in 1928-1930*. Princeton University Press, 757 p.

collectiveness (Learning to Live Together, with Others). Figure 1 is clear by evidencing the HTPD-M view of Learning to Live (subject and object) as demonstrated.

From an emotional intelligence shadow perspective, it is not enough to create a TD chair and induce transformation or paradigm shift through intellectual convincement. More than that, emotional acceptance is necessary on personal and collective levels, as corroborated by our 12-year experience in coordinating work groups in the Brazilian public service.

Our experience includes contact with specialists, colleagues with M.Sc. and Ph.D., many of them university professors besides public servants. Through the HPTD-M view, the academy needs a generalist formation to enable a complementary dialogue between specialists and generalists, like the "dual career ladder" or "dual career path". Those are a career development model that allows one to advance either as a technical expert (specialist) or as a manager (generalist), providing parallel pathways for progression within an organization. For example: some Brazilian public institutions have adopted this organizational system.

So, we need to interact subject and object besides generalists and specialists as a TD Chair is supposed to work. By analyzing Figures 1, 2, 3, and 4 in terms of quaternary complementarities, emotional intelligence is the mainstream shadow, as HPTD-M demonstrated in the final model of psychosomatics presented in the USA ATLAS Publishing book of 2024: *Artificial Intelligence and Human Mediation*.¹⁸ In this connection, our analysis understands the mainstream shadow contributing to the following university dysfunctions in which TD can help. The rational bias tends to focus on KNOWING instead of UNDERSTANDING, and the shadow of merely KNOWING is dogmatic science and ideology which hinders the dialectics and UNDERSTANDING that the TD paradigm and the HPTD-M defends:

a) replication of KNOWLEDGE through the perpetuation of authors that are liked and accepted by the university mainstream **instead of stimulating UNDERSTANDING** through the comparison with new authors outside the university accepted perspective.

b) promotion of dogmatic scientism instead of understanding the feedback process between technology and science through the epistemic form of technoscience, as seen in Figure 2.

c) promotion of ideologies instead of accepting new ideas that can create new research fields.

d) considering (b) and (c), a possible negative feedback process between ideology and dogmatic science can be created to manipulate information through 'science' and eventually defend certain types of ideology, partisanship,

¹⁸ Costa, L.S.G.M., Loisel, M.T., et al. (2024). *Artificial Intelligence and Human Mediation* (Editors and co-authors among 12 authors: Leonardo da Silva Guimarães Martins da Costa & Mariana Thieriot Loisel). ATLAS Publishing. ISBN: 978-0-9998733-8-0 (PDF), p. 25. <https://theatlas.org/index.php/td-teaching-materials/td-books>.

or groups of interest.

A discussion involving this author's 16-year experience with business administration and international trading may help in this context (before public administration, since 2009). After reading the draft of this paper, Debora Santille, the only author from the corporate world in the ADJURIS Volumes 1 and 2, understands that the practice of replicating and promoting the same individuals is not exclusive to the academic segment or universities; it's prevalent across various industries. This practice involves substantial marketing efforts, including investment in various media, publicity, and promotional channels. These investments are intended to sustain promotional activities until resources are depleted (an idea referred to as 'billing') to achieve scalability. This product sales model is applied across all sectors and segments. However, as this approach tends to block new entrants, its effectiveness vs. its ethical implications needs to be questioned.

So, one possible way to promote TD in universities, organizations, and civil society, in our opinion, is the honest dialectics process, not excluding any actor, otherwise the shadows of the mainstream will remain through the incapacity of effective problem solving in higher collective levels or instances.

In summary, the HPTD-M understands the levels of reality through the quaternary complementarities, i.e. the four types of intelligence and the four epistemic ways need to be balanced two by two. In the mainstream concrete case, the dominance of rational intelligence puts emotional intelligence in the shadow, as an opposite in terms of judgment function (see the red axis in Figures 3 and 4). Also, in this context of balance two by two, Figure 3 shows the complementarity between SYNTHETIC-SOFT and ANALYTIC-HARD as different TD styles of approach already commented. In our opinion, a dialogue between the two is a necessary condition for being TD.

So, HPTD-M is not only a theory but also an effective tool for problem-solving in practice. As evidence:

- **Dialogue with the authors of ADJURIS Volumes 1 and 2.**
- **Application of the three widely accepted principles of TD:** Included Third, complexity, and levels of reality.
- **Dialogue with Brazilian holistic TD**, which considers the four epistemic ways correlated to Jungian functions.

All that said, a relevant finding of this study comes from the analytical-hard dominance of TD in Europe, USA, and Russia, as already demonstrated. The Brazilian holistic TD, synthetic and softer, is not very well known outside Latin America. Then emerges as a leading gap in awareness among Jungians in the USA and Europe about TD and among TD academics in these regions about Jungian Analytical Psychology, despite their convergence in many aspects. As mentioned, Jung is considered a predecessor of TD by our HPTD-M and by Brazilian holistic TD theorist and psychologist Roberto Crema.

To conclude, **TD is not a mere theoretical framework but also a practical tool** for addressing complex problems, as evidenced by the various HPTD-M schematic models. In the quest for an effective TD Chair, some reflections on the mainstream shadow through complementarities and reductionisms are demonstrated.

1. Complementarities (dualities in interaction)

1.1 Subject and Object are in a feedback process and cannot be reduced to Object, as seen in the idea of *Learning to Live* (with ourselves and others), in connection with emotional intelligence.

1.2 Analytic-Hard and Synthetic-Soft views must dialogue for effective problem solving, as demonstrated in the HPTD-M schematic model of Vol 1 p. 179.

1.3 Generalists and Specialists must work together in the organizations if effective results are pursued, as seen formally in the "dual career ladder" or "dual career path" systems.

1.4 Bureaucracy and Innovation need to dialogue, i.e., traditional authors who established previous definitions can be updated by new ones in terms of concepts. Principles are more important than formal definitions for problem solving, as HPTD-M understands.

1.5 Complexity and Simplicity to deal concretely with problem solving, i.e., the binary logic has valuable applications in mechanistic variables but needs to be complemented by the third included logic of TD (when the complexity of human phenomena is involved).

2. Reductionisms (broader concepts that tend to be in the shadow)

2.1 Understanding (through the four types of intelligence and epistemic ways) **cannot be replaced by Knowing** (merely rationally).

2.2 Ideas cannot be replaced by Ideologies otherwise no innovative research or new theories will emerge.

2.3 Technoscience cannot be replaced by Scientism because dogmatism does not solve problems concretely and empirically.

Acknowledgments and Conflicts of Interest

The author wishes to thank the three co-editors for this opportunity of learning, i.e. Cris Popa Tache, Hubert Landier, and Mariana Thieriot Loisel. The different and complementary profiles of a lawyer researcher, an economist mediator, a philosopher educator, and this author as engineer managers were fruitful, reflecting concretely the spirit of TD. Everybody discussed the issues involving the process of elaboration and publication as a synergic working group for concrete problem solving. This article reflects the author's opinion, not necessarily any public or private institution's view. The HPTD-M theory and praxis were developed by the author independently: The first article was published in 2022 and there has been no financial support from any public or private institution. So,

the author has no conflicts of interest with respect to the research, authorship, and/or publication of this article. Any errors or omissions are his own.

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